PROFESSIONAL KNOWLEDGE CONSTRUCTION THROUGH REFLECTIVE PRACTICE AND TUTORIAL SUPERVISION

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Resumo

No presente artigo procura dar-se conta dos resultados encontrados pela pesquisa desenvolvida sobre o impacto do modelo de formação implementado na Escola Superior de Educação de Santarém desde 2001, designadamente no curso de Professores do Ensino Básico- 1º Ciclo, no que se refere ao desenvolvimento de uma prática profissional reflexiva e construção do conhecimento profissional. O foco analítico incide sobre os procedimentos relativos à análise reflexiva, ao *feedback* a essa análise e à supervisão desenvolvida no âmbito do curso de formação inicial.Os dados apresentados resultam de um estudo exploratório longitudinal desenvolvido em torno de um grupo de sujeitos que à época do primeiro estudo se encontravam a frequentar o curso de formação inicial, e que no segundo estudo se encontravam já em início de carreira. Metodologicamente foram analisados os textos escritos de autoria dos alunos, as reflexões, produzidas no âmbito da iniciação à prática profissional, assim como os feedbacks dos supervisores responsáveis pelos estágios (estudo 1). Complementarmente realizaram-se entrevistas aos professores em início de carreira (estudo 2) seleccionados a partir do grupo de sujeitos do estudo anterior.

Palavras-Chave: Conhecimento Profissional; Professores em Início de Carreira; Formação Inicial de Professores do Ensino Básico – 1º Ciclo; Prática Reflexiva; Supervisão.

Abstract

In this paper the implications of the primary school teachers' education model implemented at the School of Education of Santarém from 2001 up till now are analysed with respect to the perceived implications of the experienced model on their

professional knowledge and practice as beginner teachers. The focus of the research goes to the procedures of *reflective analysis*, *feedback* and *supervision* developed during the *practicum* throughout the whole training curriculum. Some data are presented and analyzed from a longitudinal exploratory study that has been developed focusing on a sample of beginner teachers who experienced the model, initiating their activity: a) Analysis of individual written reflections produced regularly by students (5 per year), within the *practicum,* and of their interaction with written feedbacks provided by the supervisor's team on those reflective writings; b) Semi-structured interviews to a smaller sample within this group in order to deepen the understanding of the same issues.

Teachers' Professional Knowledge: Theoretical References

The recognition of a specific professional knowledge is fundamental for teacher's professional activity definition. Lately, teachers' professional knowledge investigation and discussion had been high disseminated, especially since the 90's, as some theoretical and empirical research noticeable (Tochon, 2000; Nunes, 2001; Borges & Tardiff, 2001; Tardiff, 2004).

The high concentration of studies about future teachers and beginner teachers has implicitly that teacher initial training programmes have as central aim to learn how to teach (Montero, 2005). Teachers' professional activity transitions are rich periods to understand the professional knowledge construction process (Montero, 2005). This conception underlines the richness that transition period such as beginning professional activity can represent to understand the professional knowledge construction process.

Teachers' professional knowledge construction process is the research central question presented in this paper. Beginner teachers and their professional knowledge construction process perceptions' are here considered as fundamental and defined the investigation object. Methodological implications and procedures will be explained in the next section of this paper.

The definition of what the knowledge *corpus* is has not been consensual through the theoretical domains. Several proposals are well known as Elbaz, Shon, Shulman among others (Montero, 2005). Because the discussion around these and others proposals is not a priority for this presentation, we suggest the reading of some authors that have accomplished interesting systematizations around this scientific problematic (Fernstermacher, 1994; Tardiff, 2004; Montero, 2005).

The research presented here has as theoretical frame references Shon's and Shulman's proposals. Schon (1983, 1987, 1992) under Dewey's inspiration in his studies results about professional activities (such as architects, engineers, musicians and others) defined what is recognized nowadays as the *reflexive professional*, and *reflexive teacher* (Montero, 2005). His works, and others from researchers that followed him, turn operative and sustained the conceptualization of teachers as professionals doted with reflexive ability developed in and through their professional practice. This capacity has not circumscription on classroom situation (period and place), is larger than that. That takes us to the critical, analytical and theoretical professional practice conception, and the belief that these capacities are able to produce professional knowledge.

Shulman's teachers' professional knowledge taxonomy is other reference for data analyses too. Specifically author's consideration around the different types of knowledge required for teaching. Teachers must, has Shulman's argues, not only know *how* to teach, but also *what* to teach and *why* (Shulman, 1994).

Shulman (1987) defend the need of a Knowledge base about teachers' professional knowledge discussion. To the present study data analysis' categories emerge from the adaptation of Shulman's teachers' professional knowledge taxonomy. In his taxonomy he distinguished the types of knowledge:

First category is *Content knowledge*, presented in 1994 as *Subject matter content knowledge*", but generically coincident with the *Content knowledge* presented in 1987. As Shulman pointed, "This refers to the amount and organisation of knowledge *per se* in the mind of the teacher. In the different subject matter areas, the ways of discussing the content structure differ. To think properly about content knowledge requires going beyond knowledge of the facts of a domain. It requires understanding the structures of the subject matter" (Shulman, 1994, p. 84).

Secondly, a more generic knowledge category is considered *General pedagogical knowledge*, "with special reference to those broad principles and

strategies of classroom management and organization that appear to transcend subject matter" (Shulman, 1987, p. 8). *Curriculum knowledge* is the third category. Curriculum here understood as Shulman's pointed: "with particular grasp of the materials and programs that serve as "tools of the trade" for teachers (Shulman, 1987, p. 8). The fourth analytical category is linked to "The ways of representing and formulating the subject that make it comprehensible to others (…)" (Shulman, 1994, p. 85), the *Pedagogical content knowledge*, "the special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding". Shulman complete this definition later, specifying that Pedagogical content knowledge "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" (Shulman, 1994, p. 85).

The last three categories are referent to different dimensions. One refers to *Knowledge of learners and their characteristics*. Other is related to the *Knowledge of educational contexts*, which includes "ranging from the workings of the group or classroom, the governance and financing of school districts, to the character of communities and cultures" (Shulman, 1987, p. 8). And a last one is the *Knowledge of educational ends, purposes, and values, and their philosophical and historical grounds* (Shulman, 1987, p. 8). Shulman systemetized what he considered as the major teaching knowledge base sources (1987, p. 8): *Schoolarship in content disciplines*; *Formal educational scholarship*; *Educational materials and structures*; and *Wisdom of practice* itself. Related to knowledge resources Alarcão (1996) emphasized the importance that teachers' interaction with it can assume in their professional knowledge construction process.

Longitudinal Study (Study 1 and Study 2) Presentation: Methodological Procedures

The primary school teachers' education model implemented at the School of Education of Santarém has been studied in the last years. In this presentation we intent to discuss the results of a longitudinal exploratory study developed during 2006, as an upgrade of a previous study (first study) focused on a sample of beginner teachers who experienced that model, through out their evolution from the 2nd to 4th year of the programme.

The main goal of the first study was to understand the curricular reorganization

and supervising process around the professional practice initiation influence on the initial teachers training course development. The focus of the research was the impact of *reflective analysis* and *supervision feedback* developed during the *practicum* throughout the whole initial training programme.

The study had focused on transformations on different levels, such as: *Beginner teachers* (Students from the programme); *Cooperating-teachers* (Teachers from the cooperating schools); *Supervisors* (Teachers from the programme); *Formative contexts* (Cooperating schools) and *Inter-institutional contexts.*

The study had a methodologically interpretative approach and developed diverse procedures of collecting data. From this first study the contribution for the development of longitudinal, we choose only the first level of analyses, referent to the students. From students' level interests for this presentation the analyses focused on the Reflections. These are individual written reflective texts produced regularly by students during their professional practice initiation. This reflections' production are oriented by a Guideline that is given to each student in the scholar year starting point, and discussed with supervisors. In that document the main formative objectives are clarified. Essentially it reports to the professional learning process auto-analyses, specifically *what* students identify as that, and *when* they understand it, with their confronting with previous moments of their formative trajectories. Students are counselling to consider and mobilize in their analyses every relevant element to their learning-teaching process to become a teacher, such as: experience, supervision, readings, research, and supervisors' feedbacks for previous reflections.

The students' sample was recruited among three distinct years, which results in three cohorts. The first cohort refers to students that finished the programme in 2003; the second and third ones in 2004 and 2005, respectively. Because programme reconstruction started on 2002/03, the first cohort had a programme immersion of one year only, on their 4th year (last one). The others had three and four years of immersion, initiating their immersion on their 2nd and 1st year in the programme.

For the first cohort were selected 18 students, and for the second and third one only 14, corresponding to half of the totality of each group. The sample criteria selection was organized by two central principles. First was related to the evenly distribution by the 3 levels of reaching (Very Good, Good and With Restrictions). The second was the equally distribution between supervision groups, guaranteeing that all supervisors, for each year of programme, were represented. The collected Reflections

were chosen for each year from the 5 written reflections that students have to complete. For the study were considered only two for each year, the 2nd and the 5th. It means that Reflections were from specific moments of the scholar year, 1st and 2nd semester.

Table 1 – Cohorts distribution: by Programme Years

Date	Programme Year				Cohorts
2001/2002	1st year	2nd year			
2002/2003	1st year	2nd year	3rd year	4th year	1st Cohort: finished in 2002/03
2003/2004		2nd year	3rd year	4th year	2nd Cohort: finished in 2003/04
2004/2005			3rd year	4th year	3rd Cohort: finished in 2004/05
2005/06				4th year	4th Cohort: finished in 2005/06

For the development of the longitudinal study (second study), initiated in 2006, the sample definition considered beginner teachers from the three previous cohorts that initiated their professional activity in 2003, 2004 and 2005. To distinguish the stages of the formative process we will refer to these as beginner teachers, or novice, recruiting here Berliner's proposal around the professional stages to become an expert teacher. As Berliner (1994) considered beginners are the teachers that experience their first 5 years of professional activity.

Semi-structured interviews were the central data sources in this second study in order to deepen the understanding of some issues of the first study. To its development a smaller sample was chosen from the beginner teachers that had initiated their professional activity. To select them previously had been necessary to collect information about their professional situations.

As Table 2 shows there are a significant number of non-answers, in a total of 23. But, considering the transition that this life stage can represent (with change of residence in result of professional initiating, or/and emancipation from parents place, sometimes associated with marriage project) it came as an obstacle to find some of them. Other reason refers to their present situation, for some of them being unemployed or working in a different occupational area are a shamed, and probably they do not consider their answers valid for the study.   The indication to this explanation emerges from unemployed and working in a different occupational area answers' analyses. In this cases they didn't fill up the diagnosis' file (where were

asked about their present professional situation, and previous experiences) that were send to them, by email, some of them only gave a short answer considering their condition as a "non considerable person" for the study. Nevertheless, methodologically these results have enough consistence, as Alves (2005) pointed 30% is the boarder line in this kind of researches.

Table 2 – Beginner Teachers' Cohorts distribution: Professional Situation

Professional Situation		2003	2004	2005	Total
Regular Schools	Public	14	6	3	23
	Private	2	5	0	7
Adult Education / Second Chance School		0	1	1	2
Special Care Schools		1	1	0	2
Other Educational Activities	Supportive lessons	1	1	4	6
	Extra-Curricular Activities	1	3	4	8
	Library	0	0	2	2
	Others	1	1	1	3
Other Occupational Activities		1	2	8	11
Unemployed		4	0	0	4
	Total of answers	25	20	23	68
	Didn't answer	11	2	10	23
	Total	36	22	33	91

In Portugal, nowadays, there are commonly references to the teachers professional insertion vulnerability, media transmits often an "unemployment guaranteed position" perspective about the students that graduated in Educational Studies, specifically those who intent to have as occupation the teaching activity. Despite this scenario the results shows that a significant number has teaching responsibilities and some others work in Other Educational Activities, with children, such as Supportive lessons, or Library intervention (as a Cultural Animation actions). These results shows the highest difficult for those who started recently, which is not a surprise.

From the diverse situations that were founded, in previous research, other principles to sample definition were considered. One principle was connected to the nature of teaching responsibility, and other with the pupils' profile. Referring to the schools' system type, the sample selection tried to guarantee an evenly distribution between private and public schools (Table 3).

From the obtained results were selected three teachers from each cohort, and were considered only those with teaching responsibility in schools.

In Portuguese school system at this level, 1st Grade of Basic Compulsory Education, each class has a teacher, the focal one (Table 4). If there are special cases

identified a Supportive Teacher will help the Class Teacher with those pupils. The Supportive Teachers are mainly specialized teachers in Supportive Education, but some of them are novice. This is the reason why is possible to find so many beginner teachers with this school functions, majority in the public schools' system.

Table 3 – Beginner Teachers' Cohorts distribution: schools' system type

School System	2003	2004	2005	Total
Public Schools	2		3	5
Private Schools	1	3		4
Total	3	3	3	9

Table 4 – Beginner Teachers' Cohorts distribution: teaching responsibility

Teaching responsibility	2003	2004	2005	Total
Class Teacher	3	2	1	6
Supportive Teacher		1	2	3
Total	3	3	3	9

The majority of teachers from this sample are from the Regular Schools. Proportionally there were considered the more exceptional contexts, such as Special Care Schools and the Second Chance Schools, organized as Adult Education, in this specific case with two distinguished groups: daily class with pupils from 70 to 80 and older years, and the night class with a gipsy group (Table 5).

Table 5 – Beginner Teachers' Cohorts distribution: pupil's profile

School Functions	2003	2004	2005	Total
Regular Schools	3	2	2	7
Adult Education / Second Chance School			1	1
Special Care Schools		1		1
Total	3	3	3	9

Gender was considered in the sample selection too. Despite the high feminization of the profession for the total of 9 teachers, two are male, and the rest female.

The instruments for data collecting were design specifically for its development. Firstly, the diagnosis' inquiry instrument was design to actualized and characterized the professional trajectories of the beginner teachers. With the results obtained a database construction was accomplished. For this presentation only the results about the present situation were considered.

Semi-structured interviews were the central instrument. For its conception different questioning blocks were defined. Initiating Stage in Teacher Training Course, which objectives were: to know the motives for this professional area choice and institution; identify previous representations about teachers professional knowledge. A second section refers to Teacher Training Course Process, which objectives were: identify types and areas of knowledge considered by them as the most significant and relevant for teacher professional activity, during their initial formation. The third section oriented the questioning for a different moment of their professional trajectory, the Beginning of Professional Activity, the central objectives were: identify which knowledge is considered by them as fundamental for their professional practice, specifying what they need to acquire and developed (and which are the sources considered by them). The last block had the characterization of their present and previous professional situation as main objective. Only partial data analyses and results from this instrument use are presented in this paper.

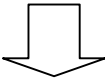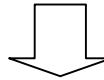**Data Analyses: Longitudinal Study Results**

The first study considered a larger questioning spectre, but for longitudinal study only the results upon students from the programme and their Reflections' analyses were considered, as was marked previously. The study categories' refer to the Supervision Process Quality (Students' Perceptions), read in the Supervision Process Quality on Identity (Re) Construction Impact Expressed, and desegregated in specific others. For the present research only Professional Knowledge Constructing Process (Impact) is considered. As initially was explained data analyses' categories for professional knowledge were adapted from Shulman's teachers' professional knowledge taxonomy.

Written Reflections and supervisors' Feedbacks importance is by 2003's Cohort students' highlight as crucial for a reflexive attitude development, by all students. Professional practice critic and reflective capacity promotion is perceived as a quality mark, too. Students underlined this aspect referring its importance as a way to

understand the motives for professional practice failures and errors or well succeed situations. This reflective and critical attitude is considered as an impulse for professional development by deconstructing professional practice situations, transversally considered for all professional knowledge categories. Two of the total students make reference to this, but in rhetoric mode, revelling an external relation to it; isn't incorporated by them yet.

Table 6 - Analysis's categories- Supervision Process Quality (Students' Perceptions)

Supervision Process	2003	2004	2005
Supervision Process Quality on Identity (Re) Construction Impact Expressed	Positive	Very Positive	Very Positive
Professional Knowledge Constructing Process (Impact)	More visible on Professional Knowledge	More visible on Professional Knowledge ⬇ Professional practice (action) investment	More visible on Professional Knowledge Analytical capacity ⬇ Professional Knowledge consistence

Programme reflective process valorisation emergence is concreted in others aspects: (1) the result on high demanded and auto-demanded on a performance; (2) the correspondent difficulty for a very good/excellent professional practice accomplishment, and the need of theoretical knowledge research and production for the process; (3) and represented by only one student the perception of theory-practice relation as a knowledge process more than dichotomy relation supported by an application model. About this process students' perceptions pointed another aspect, the relevance that interaction with different partners (other colleagues, cooperating teachers and supervisors) assume in this process.

As supervision process consequence, the knowledge categories' analyses

resulted in these distribution: Pupils' diversity and their needs recognition and consequently the search for adequate teaching strategies to assure that they (all) learn this conception that is present in the written Reflections of all students (referring to the first two categories), with significant level of references; *Pedagogical Content Knowledge* and *Content Knowledge* references are few and diffuse.

From data analyses a fifth category emerge linked to the ethical and social dimension expressed in professional responsibility, connected not only to the pupils' learning questions but also to the civic and formative dimensions of teachers social functions, referred by 3 students.

For 2004 Cohort's reflection is clearly incorporated by all the students and expressed in their perceptions of it as the "common way" of being a teacher. They perceived it associated to an analytical perspective with professional practice implications. This perspective is identify by them as the way to assure a professional development, in its diverse dimensions, as a process sustained by a permanent questioning attitude. Reflection is perceived by them as the instrument to regulate their professional performance, too.

The importance of supervisors' feedbacks is pointed by all students, in diverse ways: for/on practice performance; for/on their class plans; and for/on bibliographic references suggestions, as deconstruction and understanding support pillars for their professional knowledge development process.

The references around *Curriculum Knowledge* are highly concentrated on evaluation as learning regulate instrument, two of the students expressed the need of pupil's auto-evaluation promotion. Five of the students make considerations about the relevance of pupils as teaching process centre; two of them refer the importance of task bases learning and other on cooperative learning.

Pedagogical Content Knowledge references emerge associated to the effective ways of teaching the Portuguese Language and Mathematics, specifically the reading ability development, pointed by 7 teachers, and conceptual distinction between problematic situation and mathematics' exercises, pointed by 2 teachers. Finally, *Content Knowledge* has few references marked only by one student.

The majority of the students from 2005's Cohort refers, in an assertive style, that written reflexions have a fundamental role on the development of reflective perspective. Again, as for the cohort before, with a clear association with the

supervision model implemented by this programme, centred on professional practice, with propos of auto-consciousness and meta-analyses ability acquisition as basic skills for future teachers. It isn't surprising that there are several references for all students, which considered practice questioning as central. In this cohort there are references that expressed a more consistence appropriation of reflective perspective. Other indicator is the expression of the importance of being in cooperating schools and the support of cooperating teachers as professional development factor. But, these references are associated to a significant criticism to the educational structures and practices, too.

About supervisors' feedbacks 10 students remarked its importance for the professional knowledge process. As Zellermeyer & Mergolin (2005) underlined from their observations of a similar process, "Among the student-teachers the transition from conceiving knowledge as an object to conceiving knowledge as a process is expressed mainly in the need from experience and to relate to feedback in constructive way (Zellermeyer & Mergolin, 2005, p. 167).

Curriculum Knowledge and Knowledge of learners and their characteristics is dominant in the students, about 9 of them make several references oriented for curriculum and pupils understanding, specifically need to understand and correctly react to pupil's learning difficulties. *Pedagogical Content Knowledge* appears associated to a questioning attitude and teaching strategies deconstructing (a very used terminology on these written Reflections). *Content Knowledge* is, again, few referenced, only by two teachers and to express they lack of *Content Knowledge*, specifically the scientific conceptual support.

Second Study

Generally all the beginner teachers considered as fundamental for their professional practice the reflective perspective as regulate instrument/mechanism of their performance. There's a significant continuity about reflective practice from their previous perceptions as students, as was marked, to their present beliefs and practices, now as professionals. It is clear to them the analytical, critical and reflective perspective implications' to professional practice. But there are some interesting variations. Teacher professional knowledge construction process analyses' appeared as an approach to turn explicit those variations. The results' presentation of those analyses occupied this last part of the paper. To facilitate the results reading a previous

professionals' beginner teachers' profile is systematised.

Table 7 – Beginner teachers' professional profiles

Cohort	Tea-cher	Gen-der	Teacher's responsibility		School System Type		School Function		
			Class	Supporti ve	Public	Private	Regular	Adults	Special
2003	T1	F	√		√		√		
	T2	F	√		√		√		
	T3	F	√			√	√		
2004	T4	M		√		√	√		
	T5	F	√			√	√		
	T6	M	√			√			√
2005	T7	F		√	√		√		
	T8	F		√	√		√		
	T9	F	√		√			√	

Data analyses results from Teacher Knowledge Categories taxonomy operative presentation does not follow Shulman's order, but the relevance that each category got in the beginner teachers' speeches.

Pedagogical content knowledge is the most referenced knowledge category, by all the beginner teachers, which is not a surprise if considered their professional trajectories steps; as Shulman argues: "Among those categories, pedagogical content knowledge is of special interest because it identifies the distinctive bodies of knowledge for teaching" (Shulman, 1987). As beginner teachers they expressed their major difficulties associated to the teaching process. For those who had first years of schooling the pedagogical content knowledge dimensions refereed were connected to the teaching and learning of writing and reading introduction, specially the methods' techniques and procedures, pointed by 5 teachers (T1, T2, T3, T4, T8). Mathematics' bases seem to be difficult too, but pointed by 3 teachers (T3, T4, T5). For those who have supportive functions on teaching this references are linked to specific learning problems, as T7, T8 pointed. Variations between teachers' references appeared associated with different referents. Associated to pedagogical materials are the beginner teachers (T3, T4 and T5) that expressed a fragile professional knowledge weakly sustained by an external relation with reflective practice. Associated to pedagogical strategies were expressed, more often, by those who showed a more

consistent professional knowledge sustained by a systematic reflective practice T1, T2, T7 e T8. Directly depended from the pupils' profile and school function T5, in Special School Care and T9 with Adults Education, expressed the need for pedagogical materials' use showing, however a more consistent professional knowledge sustained by a systematic reflective practice too, as the last ones. Here the variable explanation can bee found, partially, related to the levels of reaching, the lower ones of the beginner teacher sample.

Curiously, *Content knowledge* is the second more referred professional knowledge category, in clear discontinuity with the previous study. There are two reasons for these. First one results from methodological difference between the two studies. First study had documental analyses has central procedure upon the written Reflections, a production that was not ask to be produce for that goal. On the second study, the speech analyses has interviews as source, the teachers knew what was the propos for it, the accomplishment of the present research. And it has to be emphasized that was semi-structured interviews, which means that they all were directly asked about professional knowledge characteristics. Second reason is related to their professional initiating difficulties, some of the teachers remarked that their knowledge lacks on scientific knowledge, *e.g.* in mathematics T3, T4 and T5. The others have references allied to the need of more information linked to their professional development, specifically T6, T7, T8 and T9. Teachers from the first cohort didn't express this need yet, here in clear continuity to the results of previous study. On the opposite teachers from the last cohort – those who had a longer period in the programme - underlined the importance of scientific and content knowledge in the actuality.

Knowledge of learners and their characteristics is the third more referred professional knowledge category, more often considered by T1, T2, T6, T7, T8, and T9 teachers. Part of these considerations marked the initiating difficulties that these beginner teachers felt. These learners and their characteristics' references distribution point a clear distinguish between beginner teachers that work in public school system T1, T2, T7, T8 and T9, only T6 is from private school, a Special Care School. These first teachers' group considered learners' characteristics as learning obstacles: the individuals, as cognitive and physical incapacity problems, and the social-cultural aspects. For teachers T1 and T2 these references appeared very often associated to the learners' contexts - Knowledge of educational. These teachers started their professional activity in school contexts localized in poor neighbourhoods, with families

with high level of unemployment, low level of school degrees, some dysfunctional situations associated to marginality and criminal activities, and significant number of immigrant descendents, with no Portuguese language as first language domination. In their descriptions was remarked the distance between these pupils and their families' culture and school culture.

In the case of supportive teachers T7 and T8 responsibilities the references to the learners' characteristics were more often marked as individual aspects, but significantly associated to their contexts. For teachers T6 and T9 the references to this category were clearly associated to the individuals and group characteristics, such as pathological and disability conditions, for T6, and the age of students, up from 70 to 84 years old, and adult gipsy class, with significant ethnic and cultural aspects, for T9.

Private School teachers, T3 and T5, even the supportive teacher T4, considered the learners' characteristics not as a learning obstacle but more as a behaviour problem. In their class situations' descriptions the group control appeared as professional difficulty for them. They consider as problematic pupils those who disturb class, characterise them as "spoiled children by their families". A social class tension emerges from their speeches, especially for those who work in private elite school, confessional and bilingual school, T3 and T4.

General pedagogical knowledge and Curriculum knowledge categories have diffuse and not objective references. Implicitly in teachers' speeches there are *General Pedagogical and Curriculum* aspects but that aren't recognise as a knowledge aspect by them.   Only the public supportive teachers, T7 and T8, considered specific documentation and material use as a professional knowledge need.

The last category *Knowledge of educational ends, purposes, and values, and their philosophical and historical grounds* has as the previous ones a diffuse and non-direct references. From the data analyses emerged, as at the first study, an ethical and social dimension, expressed as professional responsibility. For teachers from public school system T1, T2, T7, T8, T9 there was marks about their feelings and beliefs around their professional activity social function. Some of them defended the public service need sustained by ideological grounded. Professional activity is by these teachers perceived as a social mission with personal costs, like being far way from their communities, but clearly priority to them. This positions can be deepen understand if considered the educational contexts were these beginner teachers started their professional activity.

Teaching Knowledge base resources' data analyses were sustained on Shulman's (1987) systematisation. In this section the knowledge sources' information is crossed with the information supports. The Scholarship in content disciplines' references is not significantly comparing to others sources. It is as if the beginner teachers don't need more scientific and theoretical knowledge. The few considerations about this source were connected with information lacks that these teachers experienced during class preparation or from a pupil's questions. As information supports considered for this knowledge source were the initial teacher training materials, books, articles and lessons' notes, from the programme disciplines, (re)visited by some of the teachers.

Formal educational scholarship references are weakly connected to management classroom. The sample characteristics may sustain this result. Some explanations can be advanced: the classroom management is not their strongest difficulty because they experienced a long term of practicum during their initial training programme. Specifically at the 4th year, they spent the all school year, assuming class teacher responsibility, in presence of cooperating teacher, and with weakly supervision in classroom presence, and at programme school supervision meeting. In their testimonies about professional practice initiating emerge as more significant difficulties pedagogical content problems and peers relations connected to their practice style performance associated to their age.

The identification of these last difficulties conducted the analysis to the next source - *Educational materials and structures* – through its connection with explicit and implicit system rules and roles, and institutions hierarchies' dimensions. The situations' descriptions by beginner teachers analyses resulted in this distribution: teachers from private system that schools have a consistent educational and curricular project T3, T4 and T6 experienced a positive integration. For them school peers are considered a support to their practice is common for them to discuss classroom problems and exchange pedagogical materials. From private but with a weak pedagogical and curricular project T5 doesn't have this experience, quite the opposite she felts alone and very disappointed. She refers a very aggressive environment school. In this context her initial condition, associated to her age, she's the youngest; seem to be another organizational integration obstacle.

On public schools system the age seem to be an important variable too, to T1 and T2 the peers recognition were more easily than for the others, these two teachers

are beginner teachers, as the others, but older, which seem to be a facilitating factor. For the others, T7 and T8 age associated to their supportive teaching position resulted in organizational school integration as central difficulty of their professional initiating.

As Shulman refers, "Teaching is conducted without an audience of peers" (Shulman, 1987: 12). This explains, partially, why *Wisdom of practice* is so individually referenced. Is in this context that reflective practice and fundamental importance emerge. That's why these teachers dedicate a significant effort on very detailed class preparation, to get security, which they can't find in scholar community. That's no surprising that as information support, for these last sources, only these teachers, T3 and T4, pointed scholar materials.

For all teachers the references information supports for these last sources were connected more to professional sociability's networks. For emotional support ex-colleagues from teachers initial training programme were identified. For pedagogical discussions and emotional support too, cooperating teachers consult and other older and experienced teachers were pointed. For pedagogical content and scientific references beginner teachers considered teachers from initial training programme, from pedagogical content disciplines more than the practicum supervision tutorial team teachers.

Final Notes

Primary school teachers' education analysed model resulted in significant implications on beginner teachers' professional knowledge, both in its construction process and in its development in practice. The comparing exercise that longitudinal study allows us to do shows that there are stronger continuities than discontinuities between the first study and the second study results. This is centrally referred to three aspects. First, reflexions are perceived as professional performance regulation instrument. Secondly, reflective and critical attitude considered as a professional development stimulus and tool for deconstruction of professional practice situations. And the third aspect: teachers' that had experienced education model had significant implications on their actual professional performance, emphasizing the importance to tutorial supervision with respect to: (a) Written reflections and feedback as a tool for significant learning; and (b) Supervisor's feedbacks.

Consistent professional knowledge construction process seems to be an essential aspect on teachers training and professional development. But the impact of

the model appears as more significant to 2004 and 2005 teachers' cohort, explained by the programme longer immersion. As Zellermeyer & Mergolin found in a similar research "Knowledge was *gradually built* from reflection, criticism and doubt that came out of the collaborative learning-teaching process" (2005, p. 167).

Nevertheless, school context and professional culture were referred as a heavy influence in professional initiating process, often with conflicts for beginner teachers' perspectives. There is a higher disappointment for those who were, as students better qualified, and now more exigent and critical teachers. As Lopes (2005) argues: "the shock with reality or the shocking reality".

A tiny line separates the occupational activity/attitude from the professional activity/attitude – professional knowledge appears to make the difference.

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