

From the first lesson to one year later: reflection of a French student-teacher

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ABSTRACT

The research presented in this paper aims to investigate a student-teacher reflection using the medium of video. To promote a reflective activity, we invited a teacher-student to verbalize about her own activity in a recording of a lesson carried out by the same teacher one year earlier. The lesson was performed in a vocational high school, followed by a meeting with the teacher and a university tutor. Qualitative analysis is used. This study supports the integration of video into teacher-student training as a tool of reflection.

KEYWORDS

Video, teachers-student, teacher training, reflection

RÉSUMÉ

Le travail de recherche présenté dans cet article vise à étudier les réflexions d'un enseignant stagiaire à partir d'un enregistrement vidéo. Dans l'objectif de promouvoir une activité réflexive, un stagiaire enseignant a été invité à parler de sa propre activité à partir d'un enregistrement d'une leçon conduite par ce même enseignant une année plus tôt. La leçon a été menée dans un lycée professionnel, suivi d'un entretien entre l'enseignant et un tuteur universitaire. Une analyse qualitative a été faite. Cette étude encourage l'intégration de vidéos dans la formation des enseignants stagiaires comme outil de réflexion.

MOTS-CLÉS

Vidéo, stagiaire enseignants, formation des enseignants, réflexion

THEORETICAL FRAMEWORK

From theory to teacher practice

The teaching training provides student-teachers with knowledge and educative practices but also give them opportunity to take on a new professional role, shifting from student to a teacher role. Indeed, the teacher-student has to start building and realize what is generally called a teacher professional identity. We consider that a central moment to start to shape teacher professional

identity for a student-teacher is to link theory and practice, a central issue for teacher education (Falkenberg, Goodnough & MacDonald, 2014). The integration of theory and practice in initial teacher education is well expressed in practical experience during field experience, making visible the invisible of learning (Mitton-Kukner, Murray Orr, 2014). During the first experiences in the classroom, teacher-students have the opportunity to confront themselves with practical questions and problems. In this way the first teaching experiences connect education and professional setting (Lambert, 2003).

Reflection of practice thought the video

Self-reflection is considered useful in increasing professional skills and in promoting professional development (Alsup, 2005). These reflective processes have to take place before, during and after professional actions, helping in identifying the strengths and weaknesses of teaching practice and improving it (Vloet, 2009; Ahmed & Al-Khalili, 2013). To help student-teachers understand how practice fits theory it could be interesting to discuss the impact of student-teachers' reflections on their own classroom discourse (Orland-Barak & Hayuta, 2007). In this case the interaction of the novice with the expert is of great importance (Korthagen & Vasalos, 2005). We consider that reflective practice should be promoted by the educational system in a systematic and organized way (Brockbank & McGill, 2007), the interaction of the novice with the expert is of great importance.

A technological tool that has gained emphasis in teaching training is the digital video (Rosaen, et al., 2008; Santagata & Angelici, 2010; Koc, 2011). It is especially useful for increasing pre-service's and novice teachers' ability to relate their university learning to their classroom practice and bridge the gap between theory and practice (Cannings, Talley, Redmond, & Georgi 2002; Abell & Cennamo, 2004; Gaudin & Chaliès, 2012; Seidel, Blomberg & Renkl, 2013). In the following section, we present the context of the teaching education in France in order to introduce our research.

Teacher Education in France

Since 2013, to become teacher in France a Master's degree called "*Métiers de l'enseignement, de l'éducation et de la formation*", provided by the Higher Schools of Teaching and Education (in the following, ESPE) is a prerequisite for teaching. This specific teaching training is based on theoretical and practical experiences and enables student-teachers to build competencies related to the knowledge taught in the different teaching units throughout the curriculum.

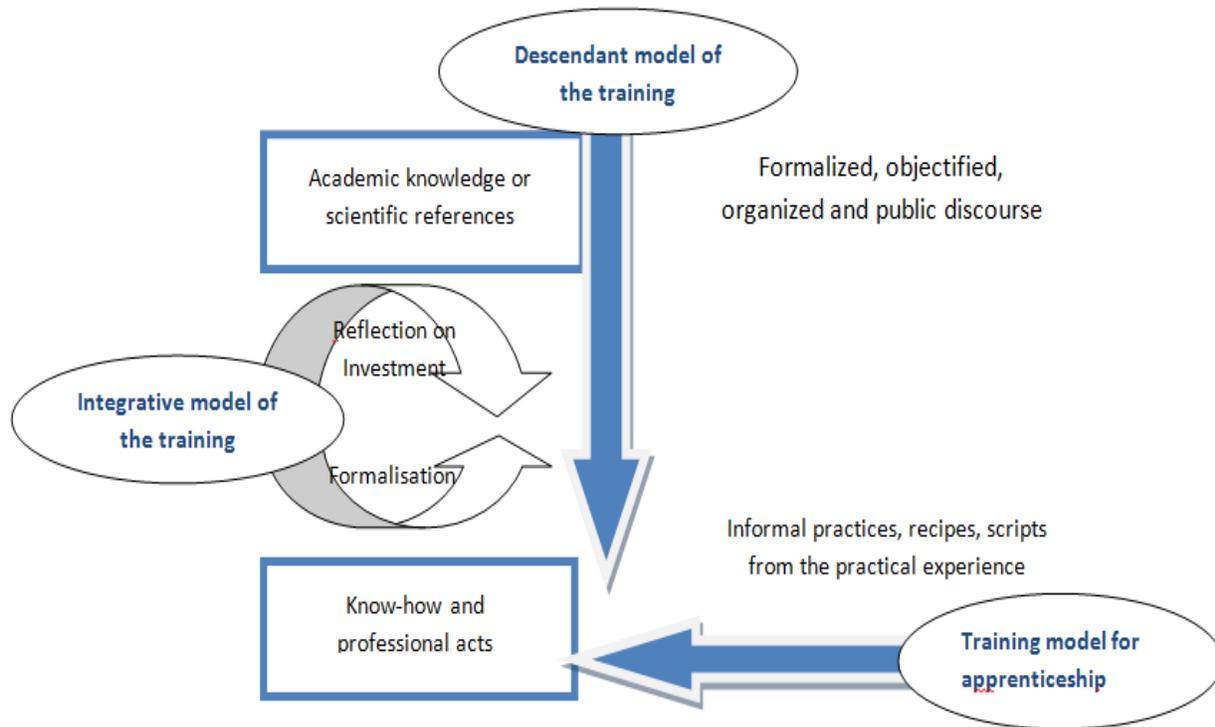
In the first year of the Master's degree, practical experience is based on observation, aimed at the development of skills for a first professional simulation. The student-teachers have to actively participate in the organization of teaching sequences, considering the respective subject areas. These goals are achieved in close collaboration with the teaching staff of the ESPE and under the guided supervision of the teacher in charge.

In the second year of the Master's degree, the student teachers, those have passed the national examination, have the status of official trainees and can undertake practical experience in classroom, corresponding to part-time in-service teaching. In this new status, the teacher participates in all activities concerning the life of the school, in terms of teaching (preparing lessons, assessment, etc.), academic support, and institutional involvement (participation in school projects, etc.).

The Aix Marseille ESPE has implemented a specific training experience called "Travaux Dirigés" (TD - guided works unit). The aim is to move from a descendant approach (where the acquisition of knowledge comes before the professional learning) to an integrative model of

education, where knowledge and professional skills are closely combined with the contexts of practice and scientific/didactic approaches. A schematic representation of this model is shown in Figure 1.

FIGURE 1



A schematic representation of the descendant model of the training

Two steps guide the organization of the TD. Firstly, there is the practical experience of the student in the classroom setting, carried out in the presence of a teacher and tutor. Secondly, the teacher and tutor perform an interview with the pre-service teacher to assess and interpret the first professional practice elements and make the connection between knowledge and professional practices.

The research presented below is based on the teaching training in France and in particular during the interplay between theory and practices during the TD. We consider that teaching training plays a fundamental role in forming the base for initial and continuing professional development (Flores & Day, 2006). In this training formation, two basic elements of discussion are considered the ability to shift from theory to practice (Goodson & Cole, 1994; Bullough, & Gitlin, 2001) and the possibility for teachers to apply critical reflection on their own practice (Schön, 1991; Cunliffe, 2009; Wentzel, 2010). In this way, student-teachers can successfully link pedagogical knowledge to classroom practice (Borko, Liston, & Whitcomb, 2006). However, many student-teachers struggle when trying to integrate knowledge into the practical context of a classroom (Blomberg, Stürmer & Seidel, 2011), finding it difficult to pay attention to key elements of classroom instruction and to deal with the complexity of classroom interactions (Stokking, Leenders, de Jong & van Tartwijk, 2003; Star & Strickland, 2008).

Considering this, we will analyse the first lesson performed during the teaching training and the teacher-student revision of her lesson video after one year.

Objectives of the research

The research aims to examine the professionalization of a student-teacher from the first lesson during teaching practice to one year later. What criteria of effective teaching does a student teacher provide after a year of professional experience?

To answer this question, we observed a teacher-student performing a lesson during the teaching training. Then, we collected the reflections of the teacher-student on the own video lesson after a year. The focus is the individual perspective of a teacher-student's reflection through video along a temporal axis from the first real lesson as a student teacher to a part-time in-service teacher position a year later.

METHODOLOGICAL FRAMEWORK

Participant

L. was a 23 years old student-teacher of at the first time that we contacted her. She was in the second year of the MEEF and trained to become a teacher in electrical engineering. Before, she gained a bachelor degree in Industry, Technology and Electrical Engineering (2010), a Higher National Diploma in electrical engineering (2012) and a professional degree as 'Technical Coordinator for Electrical Installations' (2013). In 2014, she finished the MEEF master and she exceeded the national competition in obtaining the official qualification to become a teacher in France. So she was an in-service part-time teacher at the moment of the interview.

Data collection

First session: lesson and confrontation

The first data was collected when L. was in the second years of the master in teaching training. The existing experience of L. at the moment of the lesson was four weeks training conducted as part of the training curriculum in the first semester of the course.

The observed lesson was conducted by L. in a class of first-year students on the Bachelor Professional Electronics, Energy and Communication course (called in French 'Bac Pro ELEEC'). Twelve students were present, all male, aged about 18 years old. The discipline was 'Industrial Science and Technology' in technological and scientific training. This subject is the heart of training for future electricians. The observed lesson titled 'Pipeline section and protection of installations' aimed to bring future electricians to calculate the section of a power line and the protection of the pipeline.

The lesson was organized under the direction of a university trainer specialized in energy engineering business and a school tutor specialized in electronic engineering. L. presented her lecture with the aid of a PC linked to a projector and a blackboard. The computer screen of the teacher was projected on the wall in front of the students to enable them to follow. After obtaining the necessary informed consent of the students, a researcher recorded the lesson using a semi-mobile video camera for a total of 60 minutes.

Right after the lesson in the same class, L. conducted a confrontation between the university trainer (about 20 minutes in total) and school tutor (about 10 minutes). These moments are also recorded by the researcher. The same researcher was present in all three sessions.

Second session: reviewing of the lesson

L. was contacted after one year to watch and comment her first lesson. In the year since the lesson being videotaped, L. was employed as teacher in a school. So, at the time of interview, she had one year of professional experience as teacher.

L. was invited to review the video of the classroom and to decide the points at which to stop and comment on classroom events (Jacobs & Morita, 2002). At the same time, the researcher also proposed some questions as prompt to discussion (What are your feelings as you watch during the viewing of your lesson? What aspects do you think you have improved in the educational and pedagogic dimensions?; Do you consider yourself a more expert teacher today?). This situation is referred as “auto-confrontation” in the educational literature, particularly spread in French literature (Clot & Faïta, 2000; Clot, Faïta, Fernandez & Scheller., 2000). In this situation the participant verbalizes about the recording of her own activity. The interview was carried out in a quiet room by one of the researchers involved in this study. The session was videotaped and lasted about two hours.

So, the total corpus of the data obtained consists of: 1) the lesson and confrontation video recordings relating to lesson and confrontations (for a total of 113 minutes of video); 2) the recording video of the reviewing of the lesson (two hours).

Data analysis

The data analysis was qualitative in nature considering the data of the research. We performed the following steps: a) All the video data was viewed more than once, in order to identify episodes that can provide useful elements to answer our research question; b) Significant episodes were identified. These have the features of being homogeneous and relevant to our objectives, with recognizable moments of a beginning and end, in which it was possible to recognize indicators of the learning trajectory; c) Once episodes had been chosen, we proceeded to the transcript of verbal interventions using the Jefferson code (2004). All sections were analyzed by all the researchers involved who discussed and agreed on all stages of the analysis, reaching total agreement. Then, the researchers carried out a linguistic analysis in order to identify the typology and themes in relation to professional development.

In particular we have identified three dimensions, which reflect those identified by Beijaard, Meijer and Verloop (2004):

1. Pedagogical expertise;
2. Educational expertise;
3. Subject matter expertise.
4. To this, we also added the emotional expertise.

Then, we focused on the changes highlighted by the teacher-student when compared to her experience, considering the four dimensions. For this, we considered linguistic indicators concerning time (like *now*, *today*, *before*, *in that moment*, etc.) that express the discontinuity between the first lesson and the today experience.

FINDINGS

To answer to our research question about the elements of professionalization that a teacher-student recognize and identify in her own professional development, we present a general description of the two sessions to focus more deeply on the elements emerged.

Analysis of the two video-recorded sessions

1. *About Pedagogical expertise*, we can see that L. starts the lesson showing the format and explaining the learning task. During this first phase (about the first 10 minutes of the lesson), L. is constantly facing the whiteboard and projection on the wall; she does not address any questions to the students or attempt to interact with them. Her attention is directed to the technological (blackboard, projection, pc) and semiotic artefacts (mathematical formulas, scheme etc.) that become the main interaction with the students. Then, from about 10 to 40 minutes, the relationship with the class evolves and the student-teacher uses the questions as her main pedagogical strategy. She begins to pose more questions of a different type (rhetoric, to probe understanding or draw attention) to students and speaks more to them (for example, “Do you all understand the formulas or not?; Is it ok until now? What will we choose in this table?; So, what does the delivery tell us?”). In the last part of the lesson (from 40 to 60 minutes), L. introduces a final pedagogical strategy: she goes directly in the bench to probe and stimulate the student learning. At the end of the lesson, L. is more open to the relationship and interaction with the students, using a more direct approach with them.
2. *About Educational expertise* it emerges in the confrontation of the lesson between L. and the university trainer. The university trainer was leading the student-teacher to an awareness of the importance of the rules which the teacher should monitor compliance (silence and attention) to make the students in condition to take advantage of the learning. Also, it emerges the importance of giving an objective to the students about the learning that is taking place during the lesson, showing the importance of the meaning of learning. About this L. express the difficulty to connect her lesson to meaningful experience for the students (“for me, the problem is that I know that in real life this is not useful because it is done by the automatic software with all the formulas ... and so ...”).
3. *About subject expertise*, it emerges on the discussion on content during the discussion with the school teacher. The position of the student-teacher was still uncertain but oriented to changing, recognizing areas for improvement (“It is true, I have to improve this etc.”). In general, in the first session emerges a vision of a teacher who plays a very central role in the conducting of activities, trying to keep control through the use of artefacts and a highly structured task.
4. *About the emotional expertise*, during the reviewing of the lesson video recording one year later, L. commented several times that she felt stressed carrying out her first lesson. She noted that the stress was manifested by a rigidity of movement and the position of her body. Indeed, she remained behind the chair for most of the lesson and moved around the artefacts (computer and blackboard). Stress becomes less evident towards the end of the video, when she starts to move between the students (“I move quickly in the end, I became more and more relaxed”). From the comments, it appears that the reason for this stress lies in the presence in the classroom of the university tutor and the teacher in charge of the lesson to observe and evaluate her performance. She believes that she was not adequately prepared for such a situation. L. highlights some aspects of interaction with students that she failed to manage during the lesson, such as eye contact and verbal communication (“Firstly, I do not watch the students at all. Here is a student who I just didn’t see. I think I didn’t have the right attitude”). The reasons can be traced to the rigidity of action and the lack of listening skills, L. seeming to be ‘cold’. Finally, with regard to the viewing of the video, she reports that “It is hard to watch myself take the lesson”. But still she comments positively some aspects, for example she considers strong

and clear her voice during the lesson and that her gestures and posture are better than she thought.

Changes highlighted by the teacher-student after one year

1. *About pedagogical and educational expertise*, L. expresses to have done a significant improvement when compared to a year previously. An element of reflection is about the checking of students' understanding and the difficult questions asked by the students ("I have not asked if they understood, this is something I do all the time now. Today, sometimes it happens that I ask if they have understood, but when I look at the written task, I wonder why they told me 'yes' but have not given the correct answer so I ask them to explain better ... Today, if they ask me a question that I don't know the answer to, I say that I do not know...").
2. *About Educational expertise*, L. underlines some problems she had with the artefacts during the lesson, such as the form with the instructions to perform the exercise, the computer connected to the projector, and the blackboard ("Today I would not use this type of form because students do not follow it. I remember, it was a big problem to fit all the information on only five pages! Today, in my lectures, I don't use the projector for that. Students use computers directly in their hand or their iPads. Today, the only thing I project is the results of the test or a correction of their homework").
3. *About subject expertise*, L. considers how she is now better able to adapt the lesson to her class, due to experience with students ("I think I have learned how to bridge the gap between theoretical knowledge and the ability to put it into practice. There are many things I know how to do quickly. But this year I became aware that I could not explain it in a clear way. So I learned how to explain it. And I have to explain it to students who never heard about it before. Before, I explained it as though I was reading it for me. I learned this aspect for myself and not from the teacher training. I think that this skill is now learned thanks to my students. Now I provide many concrete examples").
4. *About the emotional expertise* she comments ("Now I have realised this, I do not just read the text and I am no longer in a 'breathing space'. I am able to say a full sentence [laughs]. I go into the topic and everything becomes easier. Also there I felt protected behind the chair but now I do not feel this!").

DISCUSSION AND CONCLUSION

In this paper we analyzed a case-study of a teacher-student in a longitudinal perspective from her first lesson to a year later, focusing on the individual perspective in teaching process (Prabjandee, 2014).

From the analysis we can consider that the student-teacher, in her first lesson, found difficulties in giving attention to key elements of classroom instruction and dealing with the complexity of classroom interaction (Stokking, Leenders, de Jong & Van Tartwijk, 2003; Star & Strickland, 2008). She seemed to implemented to have used a traditional lecture format, very formal and inappropriate for the context, delivering to the students more than guiding them.

After one year of teaching, the teacher considered herself able to identify the key elements of classroom management, and showed a higher level of pedagogical, educational, subject and emotional expertise (Putnam & Borko, 2000). In particular, L. became more aware of the interests and needs of her students, taking under consideration of their feelings and emotions and

focusing on the communication with them. At the same time, she affirmed to become more able to manage her emotional aspects (Doudin, & Curchod-Ruedi, 2008; Gendron, 2011). This last point is particularly important for an early career teacher, often in a condition of stress in the professional transition (from student to teacher role), activating cognitive and emotional resources for the new professional identity (Akkerman & Meijer, 2011). The practical experience acquired in one year allowed her to dive in the future community of professional teachers, assimilating languages, practices and processes of signification (Wenger, 1998).

The results show the importance of the reflection, useful for enhancing skills and for constructing and negotiating meaning. The reflection on teaching practices can help to improve teaching expertise, like the ability to notice and interpret classroom situations, analyze and make good use of them. The use of the video can be considered a tool of learning and reflection, developing observation and analysis. The revision of their own lesson video recording could help teachers to improve classroom management, identify situations that are relevant to learning, and engage them in knowledge-based reasoning about teaching and learning processes (Orland-Barak & Hayuta, 2007). The use of video in student-teaching training is still a new practice therefore a larger and critical adaptation is necessary (Santagata, Zannoni, & Stigler, 2007; Santagata, 2014). The revision of a classroom video is not effective in itself but has to be contextualized and supported by a tutor for an effective development of teaching expertise (Jacobs, Kawanaka & Stigler, 1999; van Es, 2009). Indeed, a structured reflection on video lesson in teaching training supports the acquisition of knowledge and competence, connecting theory and practice (Bullough & Gitlin, 2001). Actually, the introduction and use of video in teaching training received particularly attention in France (Saussez, 2014). Example of this discussion is the French platform Néopass@ction (Durant, 2014; Leblanc & Ria, 2014). It is a professional network to share video about problems, difficulties and different experiences of early career teacher, sharing video in teaching communities (Rich & Hannafin, 2008).

From a methodological point of view, the specific situation of data collection of “auto-confrontation” (Clot & Fajta, 2000; Clot et al., 2000) is revealed to be a suitable instrument for our intended purpose. Indeed, in this study, the pre-service teacher had the possibility to concentrate deeply on her activity, becoming analysts of her activity, with the narrative support of the researcher. For these reasons, our research could help design a more structured path to improve the reflection of student-teachers with the support of video material. Also, such research gives us some suggestions about the teaching models in the French teaching training context and in particular about the training experiences of the Guided works unit, supporting the importance of the intertwinement between practical experience and the teacher training curriculum for the professionalization of teaching.

Future research has to be addressed on the effect of reflections of early career teacher on own video and, at the same time, the importance of sharing these reflections on lesson video with the teaching community.

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