Using the Project Approach in a Teacher Education Practicum

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Abstract

This paper describes the early childhood teacher training program and the role of the Project Approach in the final practicum for student teachers in the Lisbon School of Education, Portugal. Student teachers, cooperating teachers, university supervisors, and instructors of teaching methods worked together to involve young children in interesting projects. This cooperation provided an opportunity for innovation and experimentation and, especially, a context for teacher educators to deepen their understanding of their roles and to improve their teaching strategies. As a consequence, the final practicum became central to the teacher education program. The article concludes with seven lessons learned as a result of this process.

The Lisbon School of Education

Context

The Lisbon School of Education (Polytechnic Institute) has a long tradition in teacher training since the beginnings of the Portuguese Republic in 1910. During the movement of *Escola Nova* (Progressive School Movement) in Europe, the Normal School of Education of Lisbon, as it was then known, was considered one of the most progressive teacher education institutions in Europe, with internationally known teacher educators such as Abreu Lima, Aurélio da Costa Ferreira, Faria de Vasconcelos, Irene Lisboa, and Ilda Moreira. In addition to training primary school teachers, because of the growing interest in the ideas of pedagogues such as Froebel and, later, Montessori, Décroly, and Dewey, specialized programs for early childhood teacher education were introduced.

Irene Lisboa and Ilda Moreira, leaders of the Progressive School Movement in Portugal, were initially trained as primary school teachers. They traveled throughout Europe and visited Montessori schools in Italy, Décroly schools in Belgium, and *la Maison des Petits* of the Jean-Jacques Rousseau Institute in Geneva, Switzerland, where Jean Piaget initiated his work. After opening the first public preschools in Lisbon, creating a special program for 3- to 6-year-olds called *A Escola Atraente* (the Attractive School),they were appointed to start a special course to train early childhood teachers at the Normal School of Education in Lisbon (Vasconcelos, 2005). Irene Lisboa was the first Portuguese pedagogue to spread information on the Project Method promoted by William Kilpatrick, Dewey's disciple (Lisboa, 1942).

Today, the Lisbon School of Education trains teachers at the university level (a four-year teacher education program) and offers master of arts degrees in special education. In the near future, it will also offer a training program in educational supervision and school administration, as well as in math education. The Lisbon School of Education is presently adapting its training curricula to the Bologna Declaration. This declaration, subscribed to by all European countries, works toward a cross-national standardization of degrees in European Union countries, enabling the mobility of both students and teacher educators.

In this article, we describe a pre-Bologna Declaration program at the Lisbon School of Education. In the 2007/08 academic year, the Lisbon School of Education program will conform to the Bologna framework. It will then be a four-year university degree program in early childhood education, following 12 years of compulsory school.

The Training Program

The training program for early childhood teachers includes courses in mathematics, science, social sciences, and language arts. Early in their first year of training, students study educational subjects including child development (I and II), sociology, the sociology of childhood, pedagogy, and the history of education, designed to guide the students and provide a foundation for their future profession. Practicum experiences are spread throughout the four years of training. They include observations in crèches (settings for children birth to 3 years old), kindergartens (settings for children 3 to 6 years old), child care centers, primary schools, after-school programs, and nonformal programs for children who do not have access to formal settings but are observed in settings such as playgroups, playrooms, and public libraries.

By the second year of their training, students participate in a four-week practicum in a crèche in connection with a formal course geared toward working with children birth to 3 years old.

In the first semester of the third year of their training, students participate in a five-week practicum in a kindergarten (children from 3 to 6 years old) offered alongside a course on curriculum development in early childhood settings. After their first experience in a kindergarten, they take methods courses in subjects that include language arts, mathematics, science, social science, arts, and a general course on curriculum models in early childhood education.

In the first semester of their fourth year of training, students take courses on professional ethics, research methods, evaluation, mainstreaming, and special education.

Later in this article, the final practicum and the interdisciplinary seminar that are the core of this program are discussed.

The Final Practicum

The final practicum is a crucial component of the process of teacher education, having as its ultimate goal preparation of students for entrance into the profession of teaching. As stated by Formosinho (2001), the final practicum "clearly leads to a profession." Yet, teacher educators, in general, seem to have considered the practicum to be a relatively "marginal component" of the overall teacher education process (Campos, 2001; Canário, 2001).

As an experienced teacher educator, I believe that the final practicum is crucial to a teacher education program. The practicum can help to restructure the teacher education program by reconceptualizing it as a component of the program with a clear sense of direction, instead of seeing it as a small piece of a "mosaic" in a teacher education program, or just one part of a juxtaposition of disciplines (Roldão, 2001, p. 15). I believe that a teacher education program can be structured to help prepare teachers (in this case, early childhood teachers) as "agents of human development" (Roldão, 2001), and not as just traditional technically well-prepared teachers.

Teachers' daily activities entail "technical dimensions" but also "craftsmanship-related, intellectual, and artistic dimensions" (Formosinho, 2001, p. 62). In fact, it is in the pedagogical acts involved in the final practicum that all disciplinary knowledge that students possess comes together—it is in the pedagogical act that students synthesize this knowledge. Perrenoud (2001) notes that teaching practice (i.e., the practicum) is the locus of knowing "how to do it in action." Based on the work of Le Boterf, Perrenoud (2001) considers the practicum in teacher education as "knowledge capable of mobilizing in appropriate ways and at the appropriate moment, in the context of a work situation" (p. 35). The practicum provides a context in which to assess the competencies acquired by a student that will help her to become a good teacher. By participating in meaningful situations in their final practica, the student teachers can develop a positive image of themselves as professionals. By emphasizing the final practicum, a teacher education program engages in an ongoing process of self-reflection and evaluation because the

practicum experiences provide feedback that informs the overall teacher education program.

The Tradition of Project Work in Portugal

Incorporating projects into the curriculum has a long tradition in Portuguese pedagogy. As explained earlier, Irene Lisboa introduced Kilpatrick's Project Method in 1942. Vasconcelos (1998) describes how Irene Lisboa spread Kilpatrick and Dewey's ideas on Progressive Education through the Project Method. Yet, this experiment was always very localized because Portuguese totalitarian regimes did not appreciate Irene Lisboa's progressive ideas. Many years later, after the democratic opening brought about by the April 25, 1974, revolution, an experimental training-of-trainers course was developed by a research office of the Ministry of Education, with the help of Stockholm University, in which teachers at all school levels were trained to implement project work with their students. From that training, experimenting with project work at all school levels became more mainstreamed.

This training of trainers had a strong influence in the field of early childhood, because two trained inspectors trained other inspectors in the field. Because not all early childhood teachers in public kindergarten went through formal training, not all projects developed with young children were "real" projects—many were closer to "interest centers" in a Décroly style or "thematic units." In other words, the children did not investigate problems with the help of their teachers. The Modern School Movement in Portugal, which applied the French pedagogue Freinet's progressive ideas, also introduced *project work* in the 1980s as part of its curriculum model. The Reggio Emilia approach to working with young children also has been widely spread in Portugal since the early 1990s (Vasconcelos, 1994, 1991), and student teachers usually are familiar with information on how projects are developed in Reggio Emilia pre-primary schools.

The Interdisciplinary Project Seminar

Overview

As mentioned previously, the final practicum is a crucial component of the process of teacher education. Working to improve the final practicum, the Lisbon School of Education created an integrated seminar that prepared and followed student teachers into settings where their final practica took place. The aim of this seminar was to encourage student teachers, their cooperating teachers, university supervisors, and university methods instructors to undertake project work (Katz & Chard, 2000) with young children. Good project work engages children in extended investigations of worthwhile topics. In the final practicum, the Project Approach functioned as a guiding structure for all persons involved, to help them to clarify their aims and to contribute to the process of implementing innovation in classrooms.

In their initial training, student teachers take methods courses in subjects such as mathematics, social studies, science, and language arts from instructors who specialize in those subjects. The interdisciplinary seminar has a different approach to these courses, yet it incorporates them. During the first semester of their fourth year of training, and also while they are in their final practicum in the second semester of the fourth year, the students register for the interdisciplinary seminar and start meeting with their practice-teaching supervisors and their methods instructors every two weeks—all of which is coordinated by the author, who is responsible for the final practicum.

Together, the students and instructors view videotapes of examples of good project work conducted with young children (in Portugal and abroad), deepen their understanding of the Project Approach from a long list of readings, and discuss project work. The teacher educator who conducts the seminar is a "generalist specialist": that is, a generalist with respect to the early childhood curriculum and a specialist on how to implement the Project Approach (Katz &

Chard, 2000). Because she is also a university supervisor for the practicum and an inservice teacher educator for cooperating teachers, this teacher educator is also responsible for the integration of the entire curriculum at the practicum sites.

Student teachers are trained to develop and implement project work by conducting projects among themselves in an intensive week-long practical course, integrated into the general seminar program. At the same time, cooperating teachers have the opportunity to learn about project work through brief sessions, and those members of the teacher education faculty who teach methods courses also learn about the Project Approach as a way of integrating the curriculum by attending these sessions when possible.

The interdisciplinary project seminar prepares for and also follows the final practicum. Student teachers, methods instructors, university supervisors, and, when possible, cooperating teachers are all involved and participate. This interdisciplinary seminar has a number of goals:

- To provide a real integration of the final practicum experience into the larger teacher training program.
- To develop partnerships with cooperating schools and cooperating teachers in providing innovative practices, contributing to the improvement of their pedagogical quality, and also making them an important part of the teacher education program.
- To help to reconstruct the role of the final practicum in teacher education by helping the teacher educators to be professionally involved and to learn through that same practicum.
- To help instructors of methods courses to reformulate their courses in order to provide a more integrated teacher education curriculum approach.
- To help student teachers, cooperating teachers, university supervisors, and methods instructors to coordinate and cooperate with each other, by introducing "project work" with young children.

Dynamics of the Seminar

The metaphor of *a construction site* can help readers better understand the multiple dimensions of this approach and the key role of the interdisciplinary seminar in the overall teacher education program. The *foundations* of the building are the participants who are learning about the Project Approach (Katz & Chard, 2000). The participants include, as explained above, student teachers, cooperating teachers, university supervisors, methods course instructors, and the author of this paper as the overall coordinator.

The general aim is to introduce project work in classrooms where student teachers develop their practica with the help of their cooperating teachers. As explained before, a week of in-depth practical training for student teachers is provided, during which they develop projects as adults, among themselves, through research and group work, using the Project Approach as taught by Lilian Katz and Sylvia Chard (2000).

Student teachers develop projects that could be conducted with young children. They work together, following the traditional phases of project work. They investigate a problem and develop final presentations attended by the teaching methods instructors who discuss the students' project work with them.

Because they usually have other courses to teach, methods course instructors cannot participate on a full-time basis, but they are present at the final presentation of the projects developed by student teachers. Right after the week-long practical course, student teachers start their semester-long final practicum. They will work with their cooperating teachers in classrooms using the Project Approach. As part of the formal cooperating agreement signed with the Lisbon School of Education, cooperating teachers allow student teachers to develop at least one project with

the children in their classroom, even if the cooperating teachers are not used to conducting projects with young children.

Based on problems emerging from the process of developing and implementing projects in the classrooms,*scaffolding* becomes an essential supervisory principle for the university supervisors: framing, providing support, and providing guided participation (Rogoff, 1990). The *plumb line* is used to frame the construction of the site and to maintain its level of faithfulness to the original plan. The "generalist specialist" (the overall coordinator of this process, who, herself, visits classrooms) is "the engineer" who maintains the plumb line in its correct position in order to:

- Guarantee the integrity of the philosophy of the Project Approach (Katz & Chard, 2000).
- Negotiate the different contributions of the methods specialists in each project, and in each setting, according to their specialties.
- Supervise the practicum so that, through the help of the methods instructor, each classroom project, conducted by the teachers who offer their sites for the practicum, goes deeper into one or more of the disciplines (e.g., math, science, language arts) that are introduced in the methods courses.
- Look at indicators of curriculum coherence.

Depending on the topics of the projects and the need for working more deeply in the different curriculum subject areas (e.g., math, science, language arts), the student teachers interact with the methods instructors and invite them to observe the development of the projects in their classrooms. Methods instructors bring their *expertise*into the projects. The students may also be in touch with them by email, and they come to the School of Education for individual or group tutoring sessions. The roles of the different participants—students, classroom teachers, methods course instructors—are redefined in contrast to the traditional way of functioning (i.e., theoretical courses followed by practical implementation). Teacher educators visit students at their practicum sites, provide support according to their expertise, and challenge student teachers and cooperating teachers by encouraging them to work in their *zones of proximal development* (Vygotsky, 1978).

By teaching in the students' zones of proximal development, teacher educators provide a "scaffold" so that their students are capable of developing projects with young children by learning how to incorporate children's questions and ideas, their suppositions and hypotheses. A "good project" is one that puzzles not only the children, but also their teachers.

At this point in the semester, student teachers come to the School of Education looking for individual support through large- or small-group seminars lead by the coordinator or by one of the methods instructors. They have access to documentation, resources, pedagogical materials, and other information related to the topic of the project. The teacher educator responsible for the *plumb line* supervises the overall process, negotiates the specific role of the methods instructors in each specific project, and encourages cooperating teachers to be involved in the training—guaranteeing an integrated curriculum in each classroom (Vasconcelos, 2006).

Examples of Projects

One of the projects, developed with 4- and 5-year-old children in one of Lisbon's socially challenging neighborhoods, was about the moon and the lunar month. The project started when the children were eating cookies at snack time, and one of the children, picking up a round cookie, said, "It is the moon." Another child, picking up half of a cookie, said, "This is the moon, too!" The student teacher turned the children's interest into a project by helping them explore the different shapes of the moon during the month. With the support of a science methods instructor from the university, the children studied the lunar month and prepared models of the different shapes of the moon during the lunar month. In this way, the children were helped to

begin to understand the different shapes of the moon.

Using the Internet as a research tool, the children discovered that there were moonfish in Australia, and they located this continent on a large map. They also noticed that there was a *capoeira* (an Afro-Brazilian dance) position that was called "half moon," and they invited a local *capoeira* instructor to show them how to perform the *capoeira.*

With adult assistance, the children prepared a Powerpoint presentation for their parents at the end of the school year. The families were impressed with how much the children had learned about the moon—recognizing lunar month phases, drawing the moon, and making models of an astronaut and a spaceship. The author of this paper, who was present at the session, heard an African Portuguese young mother stunned with the idea that her son had searched on the Internet about a "moon fish": "Where is Australia exactly located?" she asked, and her son pointed to Australia on the map hanging on the classroom wall.

It is difficult to describe this project in a few words. By using the "cookies" as a representation of the moon, the children created a problem: does the moon look like a half of a cookie or a whole cookie? The student teachers understood that the problem could become a project by providing the children with the opportunity to look for the answers. Since it was difficult to observe the moon at night, the science methods instructor prepared a model and helped the children to understand how the sun illuminates the moon. The cooperating teacher provided an important resource—an old videotape showing the first arrival of men on the moon. The parents were interested not only in the information being explored by the children, but also in the knowledge their children demonstrated and in how motivated the children were. Parents became resourceful and supportive by providing their children with new information they had at home.

Another project in a classroom in the same school developed around the study of rain. Since it had been a dry year, 3-, 4-, and 5-year-olds were motivated to study the reasons for the lack of water. They periodically measured rainfall and kept records with bar graphs showing how much it had rained in their area. They developed documentation about the effects of too little rain. They studied various ways to save water in their classroom, for example, by turning off the faucet completely, by washing dishes with less water, and by watering plants with "used" water. All of these activities were documented, and the children prepared flyers describing how water could be saved in their daily lives. They went out to the community distributing flyers in the streets and inviting people to save water and to find new ways to do so.

The math methods instructor helped the children develop charts and graphs. The science methods instructor helped the children find different ways to measure water and make water flow from one place to another.

In another school for middle-class children, where the book area in a particular classroom was very poorly maintained, a project developed that involved 4- and 5-year-old children, the student teacher, and the head teacher in improving the area where the books were kept. The student teacher raised the issue, questioned the children and the cooperating teacher, and then suggested that they visit the children's section in the public library nearby. The children learned with the help of the librarian how to organize and protect the books, and they learned the library rules. The children inventoried their classroom books, organized them by subjects or topics, and repaired those that were in poor condition. Finally, they voted on a set of rules. A language arts methods instructor from the School of Education was directly involved in helping the class with this project.

The project became "How to Create a Library in Our Classroom." By making repeated visits to the public library and interviewing the librarian and people who used the library, the children learned a lot about the organization of books. They found criteria by which to organize the books in their classroom "library," similar to the one in the public library. They created readers' cards by which they kept track of each book that was checked out. They made graphs and charts showing what kinds of books were more frequently checked out. They created a home-reading

schedule with the help of their families, and each child had an attractive personal bag in which to bring home one book each week.

Voices of Participants

In an interview, a cooperating teacher commented about how the work among teachers and student teachers developed:

> This encounter, repeated every year, involves a person who is an experienced professional (the teacher) and another one who is still learning how to become a professional (the student). The cooperating teacher guarantees to the student teacher the appropriate conditions so that he or she can be responsible for his or her own development and provides the conditions for them to develop interesting projects with young children.

According to the cooperating teacher, "the cooperating teacher has to maintain, simultaneously, a clear*proximity* with the student teacher, but also a healthy *distance*." Questioned about what she meant by that comment, she explains:

> *Proximity* with the student teachers is needed on our part in order to cooperate, to facilitate the work, to improve practice, to analyze, to evaluate, and to reformulate the strategies to be used: We create together a path, ways of working, methods. It is important to reinforce a student teacher's capabilities, to make her believe that changes are possible, despite being difficult. By critically thinking about her practice of today or of yesterday, she can reformulate it. But there is the need for openness to change.… Changing is accepting the different, without losing ourselves as a person or as an individual—our very personal ways of relating to each other, to children, and to work.

When asked what she meant by "distance," she explains:

> *Distance* is needed so that the student teacher can feel that the group of children is under her responsibility despite having the guidance of the cooperating teacher. She needs autonomy in order to become more responsible, more committed. We cannot forget that, by the end of the year, she will become a professional and will have to work by herself, hopefully in a supportive environment!

The cooperating teacher believed that by developing projects with young children the student teacher can become more autonomous, take initiative, develop ideas, and take the risk to develop innovations in the classroom. Paulo Freire (1997) insists that respect for each person's autonomy and dignity is an ethical issue. It is important, then, that the student understands that her intervention in classroom routines and implementation of projects is going to provoke changes in the daily life of the classroom and significant transformations in the way teachers work. Therefore, the student teachers are co-producers of new knowledge and of innovation (Bruner, 1996) with their cooperating teachers.

An instructor of a language methods course describes her work as "being one of the most gratifying actions since she became a teacher educator." And she explains how she developed as a methods instructor: "Through my participation in this seminar, I understood better the content and ways of the methods course I teach, discovering more appropriate strategies to use while I teach." For example, this methods instructor developed a way of reformulating her course by inviting student teachers to develop new materials and resources to respond to the emerging project in the classroom.

Another cooperating teacher said:

> The student teacher … when she comes to the setting, she needs to know what the teacher, the teacher's aide, the team, and the parents are expecting of her, since she will become one more resource for the setting…. She will bring energy into the team, through innovation and the enrichment of interactions. It is important that the student teacher understands that her contribution will bring change and a significant transformation!

Developing project work with young children in settings that do not usually use this teaching method becomes a "scaffold" (Wood, Bruner, & Ross, 1976) for improving pedagogical practices and creating innovation in preschool classrooms (Vasconcelos, 1999).

Lessons Learned from the Interdisciplinary Project Seminar and the Practicum

As a result of this work involving student teachers, cooperating teachers, university supervisors, methods instructors, and the practicum coordinator, these findings emerged:

Lesson #1: It is in the pedagogical act that teacher educators, but also cooperating teachers and student teachers, come to better understand the uses of different teaching methods.

> If one accepts this statement, the importance of the seminar and practicum in the teacher education program becomes clear. It is crucial to ensure the coordinated work of all the people involved—the cooperating teachers, the students, the methods instructors, and the practicum supervisor. Recognition of this fact ensures that the practicum addresses—in a deeply coordinated way—all aspects of teaching young children. The result is that through a project, student teachers, as well as cooperating teachers and methods instructors, come to understand better how interdisciplinary work can occur in an educational setting for young children. This coordination also ensures curriculum coherence in the teacher training program.

Lesson #2: It is in the context of the interdisciplinary project seminar and practicum that methods instructors understand better the content and processes that students need to learn in the specific disciplines (math, science, language arts).

> The coordinated seminar and practicum contribute to the professional development of teacher educators in general and methods instructors in particular. The methods instructors through their involvement with project work with the children can find meaningful and less-formal ways to teach their courses. University supervisors of student teaching can enrich their own knowledge of specific curriculum areas. Also, cooperating teachers will understand how project work brings innovation into their classrooms.

Lesson #3: The interdisciplinary project seminar and practicum are difficult to prepare, to negotiate, and to coordinate, and can be seen as working in the zone of proximal development (Vygotsky, 1978) of all involved.

> Project work presents problems not only for children to solve, but also for the adults involved. For student teachers, cooperating teachers, and teacher educators who do not have experience with the Project Approach, project work may entail operating above their level of development. All participants work together in a systematic process of negotiation—looking critically at and changing their own specific practices.

Lesson #4: The use of the Project Approach in student teaching can help the student teacher understand that a very important part of professional development occurs in the context of the actual work setting—an important principle of lifelong learning.

> The student teacher can come to understand that every early childhood setting can and should become a "learning community." The student teacher, interacting with teacher educators and cooperating teachers, becomes the center of her own development process, author and subject of her own professional development (Bruner, 1996; Wesley & Buysse, 2001; Billett, 2002).

Lesson #5: This process of professional development emerges as a dynamic kind of participation, a spiral of complexity, therefore offering opportunities for the empowerment of all participants (Freire, 1997).

> The cooperating teacher in particular can clearly be empowered through this process, becoming,*really,* a teacher educator, part of the university staff. In a process of guided participation (Rogoff, 1990), he or she is part of a team of trainers and becomes a key element in the overall program of teacher education.

Lesson #6: New knowledge emerges from participation in the practicum and seminar experiences.

> This knowledge transcends the sum of disciplinary knowledge (competencies required for teaching different subjects). The final practicum becomes a *transdisciplinary* process (Nicolescu, 2000) and a source of new knowledge. This new knowledge results from the interaction of disciplinary knowledge with the process of project work. Project work functions, in Nicolescu's terms (2000), as the "third" included, a result that is more than just the sum of its parts. It is dynamic and participatory, generating new forms of being present in the training process. Teacher educators feel gratified, and student teachers understand the role of the trainer as a support to their development. According to Roland Barthes (1984):
>
> > Interdisciplinary work, so present nowadays, is not about confronting the different existing disciplines (none of them, in fact, having the disposition of stopping existing). In order to create something in interdisciplinary ways it is not enough to choose a subject or a "theme" and join around it two or three sciences. *Interdisciplinarity* consists of a new object that belongs to no one. (p. 12)

Lesson #7: From the practicum and seminar experience, an ethic of mutual responsibility emerges, especially among teacher educators, which evolves beyond principles and regulations and inscribes itself in an "ethic of care" (Moss & Petrie, 2002) in the training of teachers-to-be.

> Beyond regulations, all participants are co-responsible, as Paulo Freire (1975) says: "Nobody educates anybody, we all educate each other 'mediated' by the world" (p. 81). In this case, the Project Approach serves as a "scaffold" for higher-order teacher education.

In sum, through the processes described above, the final practicum becomes a central element in teacher education, mobilizing disconnected disciplines or methods toward a training program "monitored" and interrogated by the practicum (Sim-Sim, 2001), the training program becoming itself a project and not a "mosaic" (Roldão, 2001). The final practicum is no longer a "marginal component" (Campos, 2001) of preservice teacher education. It is now a major element in preservice teacher education, providing continuous training for cooperating teachers and enhancing teacher educators' professional development.

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