Teachers for the Knowledge Society

Building pedagogical content knowledge in visual arts curricular didactic: an empirical study

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Abstract

This paper focuses on the relevance of building “pedagogical content knowledge” (PCK) (Shulman, 1986) during the training of Portuguese visual arts teachers. Visual arts teachers in Portugal are visual artists who do not explicitly acquire, during their formal education, a pedagogical knowledge of what they are meant to teach. The gap between artistic knowledge and pedagogical knowledge has always characterized Portuguese visual arts teacher education (Sousa, 2007). In order to help student-teachers to bridge this gap, some workshops were designed to promote PCK, based on a constructivist view. In this paper we present those workshops and the findings we achieved.

Keywords: visual arts teacher education; pedagogical content knowledge; subject-specific didactic.

1. Rationale

Throughout the 20th century, the distinction between teachers’ subject matter knowledge and teachers’ knowledge of general pedagogical principles and practices had enormous repercussions for Portuguese teacher education. Teacher education programs were organized according to the assumption that prospective teachers would acquire subject matter knowledge in courses taken in their specific fields, and pedagogical knowledge in separate classes taken first in literature colleges and latter in schools of education. Although internationally the separation of these two areas began to fade ever since the 1980’s, Portuguese teacher education programs have persisted in separating teachers’ subject matter knowledge and teachers’ pedagogical knowledge until today. This common separation of content knowledge and pedagogical knowledge has been put into question by the dissemination of the concept of “pedagogical content knowledge” (PCK), created by Shulman (1986).

To build PCK means to be able to articulate the content knowledge – the knowledge teachers possess in their academic domains; with general pedagogical knowledge that teachers learn in several subjects commonly integrated on teacher education programs (such as History of Education or Psychology of Education), in order to achieve ways of teaching and learning that are meaningful for their students. According to Shulman (1986), PCK is professional knowledge that teachers build while they are facing the challenge of transforming their subject matter knowledge into a form of knowledge appropriate to the students they are teaching. Despite PCK being built upon the knowledge of their subject matter and the knowledge of general principles of pedagogy, it is different from them. PCK entails,
among other things: a) awareness of how to structure and represent subject matter content in order to teach it to students; b) awareness of the common conceptions, misconceptions, and difficulties that students come across while they are learning specific content; and c) awareness of the specific teaching strategies that can be applied to address students’ learning needs in particular classroom settings. In Shulman’s (1987) view, PCK builds on other forms of professional knowledge, and is therefore a critical constitutive element in the knowledge base of teaching.

2. Problem Statement

The construction of PCK is something truly challenging for Portuguese visual arts teachers, who are mostly graduated in specific artistic domains. In Portugal, to become a visual arts teacher it is necessary, after completing a degree course in the visual arts field, to complete a masters degree in visual arts teaching. In fact, Portuguese visual artists (painters, sculptors, designers and architects, those who became visual arts teachers) do not have, during their professional courses, any contact with general or specific pedagogical knowledge (Sousa, 2007). Most of them complete their degree courses in which they acquire the content knowledge, start working in their respective fields, and, a few years later, decide to become teachers. So, the classes they have during the masters degree are their first contact with explicit educational knowledge. Thus, most of their thinking about their own practices as teachers, rather than being based on pedagogical theories, is a reflection of their own educational experiences as students, leading to an uncritical view of visual arts teaching and learning. If this is valid for teachers of all subjects (Doyle, 1990), it is especially valid for Portuguese visual arts teachers, since visual arts knowledge and pedagogical knowledge have been treated as mutually exclusive domains for almost the entire history of visual arts teacher education. This situation has led to the enormous difficulty that Portuguese visual arts teachers feel in adapting what they have learned to the specific reality of teaching visual arts.

As a result of this, some questions arose during our research: What and how are visual arts teachers teaching in Portuguese schools today? Upon what knowledge do visual arts teachers base their teaching? Exactly how is the content, methodology and strategy for its application chosen? Are visual arts teaching and learning practices determined by the experiences that visual arts teachers lived through as students? Are these practices applied consciously? Would the student-teachers be able to construct PCK based on a serious analysis of some of their most significant educational experiences, as students and as teachers? Will remembering, writing and becoming aware of those experiences, looking at them from other perspectives of knowledge trigger an intention by student-teachers to transform their teaching practices? Is that possible in this teacher education model?

Although the structure and content of the masters degree in visual arts teaching maintains the historical distinction between teachers’ subject matter knowledge and teachers’ pedagogical knowledge, we realized, during our research, that a break could be found in subject-specific didactic, such as Visual Arts Didactic, that could provide students with the opportunity to connect these two kinds of knowledge. The masters degree consists mostly of general pedagogical courses (such as Education and Society, Curriculum and Evaluation, School as an Educative Organization, and Educational Process, Development and Learning), but some subject-specific methods courses could potentially provide an environment for constructing PCK.

3. Purpose of Study

The purpose of this study is to find out if Portuguese visual arts teachers can develop PCK in the context of subject-specific didactic, and how to improve this development. The long-term purpose of the research, in which this study is integrated, is to design tools, strategies and means that are pedagogically powerful so that Portuguese visual arts teachers can conscientiously develop PCK. We believe that this kind of approach to visual arts teacher education could play an important role in overcoming the gap between teachers’ artistic and pedagogical training, and consequently in improving their teaching practices in the future. However, this last potential purpose is beyond this single study and we could only find out its effects through longitudinal research.
4. Procedures

In order to address this problem, we have been developing a set of workshops designed to promote visual arts teachers’ construction of PCK, which were implemented in the context of methods classes being conducted in the masters degree in visual arts teaching of the University of Lisbon, during the last semester (February to July 2010).

The workshops are based on specific research into art teacher education (Galbraith, 1995; Hernandez & Oliveira, 2005; Irwin & Grauer, 1997), and are designed within a constructivist methodology, which take the psychological theories of narrativity (Gonçalves, 2000) and the neuroscientific knowledge (Damásio, 2000, 2010) as a theoretical framework. According to Gonçalves (2000) our knowledge is built and rebuilt upon the narrative of our experiences, which shape who we are. According to Damásio (2010), the consciousness is the key to the cognitive process, which implicates the use of memory, based not only on words but also on images we collect throughout our lives; and the learning process sets in motion our feelings, which embody our knowledge (Damasio & Immordino-Yang, 2007).

We began by “re-conceptualising” the role of the subject Visual Arts Didactic in teacher education for the students. It is necessary to explain that Visual Arts Didactic has been treated until now, in Portugal, as a subject matter more centred on the transmission of content knowledge than on the transformation of that knowledge into ways of teaching and learning that are meaningful for students. So, we started changing the “pre-conception” that student-teachers had about the subject, presenting some examples about how didactic has been defined over time, how didactic is defined in the present day, and how it is represented in current teacher education programs. Based on contemporary research on didactic, we presented the subject – the “curricular didactic” (“didactic as a learning course of study in teacher education programs”) – as a place between “research didactic” (“the research into teaching and learning, which is seen as the research component of didactic”) and “professional didactic” (“what teachers do when they teach, which is referred to as the professional component of didactic”), leading us to the “didactic triptych”, a concept defined by Alarcão (1997, p. 227). This means that we will deal, on the one hand, with the rational knowledge of visual arts didactic produced in the visual arts education research field, and, on the other hand, with the empirical knowledge of visual arts didactic produced by the students, already teachers, in their own professional daily lives of teaching. Furthermore, and since this last one relates intrinsically to their life experiences as students, these were also valued in a constructive perspective of teacher education.

According to Grauer (1997, p. 78), “pedagogical knowledge cannot be taught in isolation from the prior backgrounds, beliefs and knowledge that beginning teachers bring with them into teacher education programs.” Therefore, as she suggests, the student-teachers were invited to bring their own “backgrounds, beliefs and knowledge” into the classes. All the workshops started within an experienced-based writing activity. The first one was the writing of a letter to a teacher who had been significant to them; the second was the writing (with words and images) of the student-teachers autobiographic narratives; the third was the description and reflection on two works of visual arts created by them during their own secondary and superior education, respectively; and the fourth and final was the description and reflection on one didactic unit or one project recently developed by them, as teachers, with their students. Grauer (1997, p. 76) also argues that “if art teachers should be aware of the facts, principles and concepts that form the domain of art education, then it is imperative that this form of subject matter knowledge is available and explicit in teacher education programs”. In order to provide this specific art education knowledge to the students, some contents such as teacher education paradigms and their teachers profiles (e.g. Zeichner, 1983), art education paradigms, history and methodologies (e.g. Efland, 1979, 1995) and theories of art education and human development (e.g. Gardner, 1990) were introduced in the workshops.

All the workshops had a common conceptual framework and followed the same structure, divided into six moments: 1) the presentation of the problematic to the students; 2) the individual process of remembering the personal experiences, collecting information (photographs, images, texts, objects) about it, and putting it into words; 3) the collective experience of sharing the letters, narratives, descriptions and reflections with each other; 4) the presentation to the students of different conceptual perspectives (in terms of art education history, philosophy, psychology and sociology) about the themes developed or suggested by them; 5) the individual writing of their own reflections, reconfiguring the experiences described before, by complementing them with the subject-specific pedagogical knowledge introduced in the previous moment; and 6) the group discussion of these reflections. Throughout this process we intend student-teachers to begin “walking the talk” (Grauer, 1997, pp. 73-80), which
means developing “the capacity of a teacher to transform the content knowledge that he or she possesses into forms that are pedagogical powerful and yet adaptive to the students” (Shulman, 1987, p. 15).

5. Findings, Results and Conclusions

While student-teachers were engaged in the cognitive process of remembering, describing and sharing some of their own educational experiences of visual arts, they started making connections between visual arts knowledge and pedagogical knowledge, research knowledge and empirical knowledge, past and present concepts of art and education, being artists and being teachers, being students and being teachers, and so on. They often made connections (on average two or three per student in each experienced-based writing activity) between those experiences and the way they teach today. It was interesting to conclude that the experiences they lived through as secondary level students were more significant for them, in pragmatic terms, than the experiences lived as university students, which were the most significant for them in the construction of a theoretical framework of visual arts thinking. The kind of projects developed with their students often show similarities, in terms of structure, content and ways of teaching and learning, to the kind of projects they developed as secondary level students. Even when these similarities are not present, there is still an inverse relationship between the kinds of projects. Thus, we can conclude that, implicitly, they construct a PCK based on their own experiences, especially those which correspond to the level they are currently teaching. It was also interesting to find out that some of the student-teachers (11/20) experienced an inner conflict, unknown to them, between what they believed art education should be and their own teaching practices of art education. This conflict was revealed especially in the last workshop while they were identifying and justifying the art education paradigm or paradigms in which their teaching practices fit. If it was very easy for them to identify the art education paradigms implicit in the experiences they went through as students – all of them did it correctly during the third workshop – most of them revealed some difficulties in recognizing the art education paradigm or paradigms they follow as teachers in the fourth workshop. A few student-teachers achieved an awareness of that conflict on their own (4/20), but some of them needed some help to do so (7/20). An example of this conflict was the lack of coherence between the images of the projects developed with their students (shown by student-teachers in their reflexive portfolios) and the pedagogical discourse they use to describe and justify those projects. However, at the end all student-teachers became aware of the conceptions of art and education implicated in their previous significant experiences, which continue to influence them when they make choices and take decisions related to the teaching and learning of visual arts in their professional lives.

Thus, we conclude that, although student-teachers are always constructing PCK, the awareness or lack of awareness of that PCK plays an important role in the changing or conserving of their teaching practices. The workshops helped student-teachers not only to construct PCK, but also to become aware of what would otherwise remain an occult knowledge. Despite difficulties revealed by some of them (7/20) and their resistance classifying and reflecting about their own teaching practices, the participation in the workshops, at least, lead them to start a process of questioning those practices. They were motivated to think further, enlarge and enrich their knowledge artistically and pedagogically, make connections they would not do, and start a cognitive process of transformation that does not end at the conclusion of the workshops. This was true for all of the student-teachers.

Finally, we also concluded that the individual stories told by each student-teacher are no more than part of a collective story in which all of them can recognize themselves and are able to act upon. What this study infers is that building PCK is relevant for the achievement of high levels of awareness about the concepts that embody teaching practices, and, regarding to that, the ability to re-invent those practices, through narratives, which, being constructed at the present moment, simultaneously reconfigure the past (Goodson, 2000) and draw a potential future (Ferreira-Alves & Gonçalves, 2001).

6. Recommendations

We would like these workshops to be performed within a different framework of teacher education. Despite all the positive feedback we received from the student-teachers during this experience, we know that it was the result of the concerted effort of both students and the professor in a single subject-specific methods course. The student-teachers referred to the artist knowledge acquired years before, or more recently, as the fruit of their own search for knowledge; and the professor also made an enormous effort in order to promote the learning of the structural
principles, paradigms and teaching practices of the visual arts education field, unknown to the student-teachers until then, and taught in approximately only thirty hours. PCK could be developed further and in better conditions if there was a shared engagement by all the subjects involved in the masters degree to do so. The current structure of the Portuguese teacher education does not promote the improvement of PCK. We believe that content knowledge and pedagogical knowledge should be learned simultaneously through an integrated view of teacher education, in which they walk together, hand in hand. The professional education of the ‘teachers for the knowledge society’ should promote cognitive processes that make them able to deal with a more diversified range of knowledge at the same point in their training. It seems to us very difficult, if not impossible, to prepare the “teachers for the knowledge society”, when their own education persists in separating knowledge into parts, based on a modernistic view, which should already have been replaced by a more holistic post-modernistic one. Until then, we will continue to be engaged in promoting PCK the best we can with the real possibilities we have.

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