# Sharing Drawings with Smartphones in the Classroom

## Art-Based Education in Social Sciences

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**Abstract—**This article identifies the factors that indicate the opportunity of reviewing the methods in teaching economics in order to overcome the traditional teaching-learning scheme that overvalues wrote learning and find formulas that facilitate the development of analytical skills. On the other hand, this work points out the importance of developing creative competences. One way to do this is to introduce artistic practices in the classroom, even in non-artistic subjects. In this work an experience of education based on the arts is presented. Thanks to smartphone cameras, students can share and project drawings in the classroom immediately to facilitate group learning. The proposal is to represent the economic problems of the third world through drawings made by students of Sociology at the University of Valencia (Spain). The experience shows positive results in terms of students' engagement and creativity development.

**Keywords—**Educational innovation, creativity, artistic practice, smartphones, drawing.

## 1 Something to Change in Higher Education

Our experience as teachers of economics, using different educational tools such as lectures, text comments, class discussions, student presentations, press analysis, etc., has made us consider the opportunity of reviewing the teaching methods with the aim of overcoming the teaching-learning scheme that overvalues memory skills. We have been able to verify that the mere accumulation of information is not enough to be able to interpret the economic phenomena.

The transformations that have occurred in our environment also point in the direction of reviewing teaching methods. Since the beginning of the process of convergence towards the European Higher Education Area, the problem of how to teach has come to occupy a central place in European universities. One of the main challenges in this process is to transform pedagogical practices to promote competency-based

teaching that pursues the development of skills, abilities and values through different teaching methodologies, as stated in [1].

In a world characterized by job and life trajectories mobility and diversification, they are required capacities to perform "creative and original multimedia work in complex project-oriented teams in which problems, tasks, players, roles and processes are in flux and, often, distributed over considerable geographic and cultural distances" as stated in [2]. All of this suggests rethinking pedagogical approaches in the sense of converting students into active participants and co-producers of learning resources rather than passive consumers of content.

In this direction, the idea of granting creativity a central role in teaching-learning processes in the university environment is fundamental. Creativity is more and more important in different areas of life. This requires the development of certain personal competencies, especially being able to adapt creatively. In reality, creativity is an essential dimension of a set of competencies that prepares people to take their place in the knowledge society, as stated in [3]. This demand for greater creativity and innovation in education does not come only from the university community, but from the demands of the global economy, technological advances and the permanent need for change, as stated in [4].

The incorporation of Internet, especially the Web 2.0 applications, facilitates processes of pedagogical renewal that had been developing for years. The irruption of Web 2.0 has multiplied the opportunities offered by ICT for teaching and learning, as stated in [5]. These technological advances create a scenario in which students can become active participants and co-producers of knowledge. This way, opportunities are created for the development of horizontal educational contexts, as stated in [6].

## 2 Artistic Practices and Smartphones in Classroom for Promoting Creativity

In this direction, creativity has to play a central role in teaching-learning processes in the university environment. Creativity is increasingly important in different areas of life. Our societies are increasingly diverse. The importance of repetitive industrial work and the skills necessary to carry it out are becoming smaller. The way we communicate evolves at great speed and personal, social and work relationships and structures change faster than anyone would have imagined just five years ago. This requires the development of certain personal competencies, especially being able to adapt creatively. In reality, creativity is an essential dimension of a set of competencies that prepares people to take their place in the knowledge society, as stated in [3].

Art is the field of development of creativity par excellence. For this reason, the usefulness of artistic practice in education, more intensely in primary and secondary education and lately also in the University, has recently begun to be investigated. As Camnitzer points out in [7], "art is a place where you can think things that are not thinkable in other places". In short, aspects that connect centrally with the new competencies identified as important in university education.

Artistic practices also facilitate meaningful learning. As stated in [8], "we can only learn from activities that are interesting and understandable to us, that is, from activities that are satisfactory. If not, only inefficient learning or memorization is possible and its oblivion is inevitable". The quality of learning improves when the student finds a personal understanding of the subject.

There is little literature on the usefulness of drawing as a pedagogical tool in higher education. We can highlight the works by [9] that offers examples of how drawing can facilitate thinking skills, [10] who underlines drawing as a driver of creativity, or [11] who presents evidence of the value of drawing as a medium for learning.

On the other hand, the use of technologies in the classroom has been widely studied. Their possibilities for improving the quality of teaching and learning results are enormous. As stated in [12], both teachers and students had a positive attitude towards the use of educational technologies. In this framework, smartphones also offer room to facilitate active learning and collaborative work. For example, as stated in [13], there is positive impact of interaction and informal learning in WhatsApp groups. The use of both resources, art and smartphones, in the classroom has been little studied. Examples of experiences mixing artistic and technological elements include [14] who created different tasks with art elements in teaching for improving creative thinking.

## 3 An Artistic Experience in the Classroom: Drawing the Problems of the Third World

The didactic experience presented has been carried out with students of the last year of the course Development and North-South Relations, of the degree of Sociology of the University of Valencia, during the course 2017-18. The students had to present, as a class work, a drawing representing the economic problems of the Third World. The students had total freedom to choose the format and type of drawing. The only restriction is that the work should be done in class. Next, there are some of the works presented by the students. Two of the draws represent some of the problems of the world as a kind of map (figures 1 and 2).

**Fig. 1.** Example of drawing

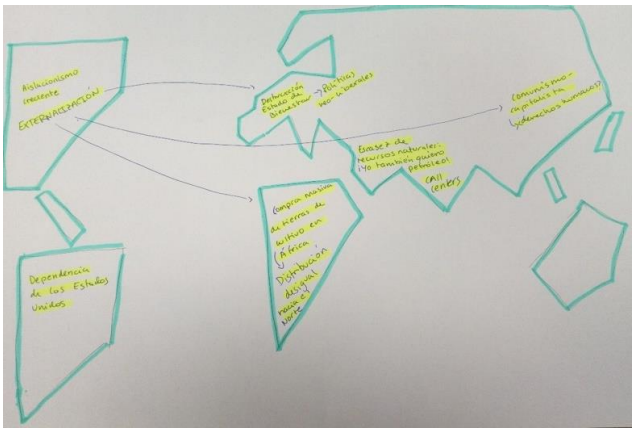


**Fig. 2.** Example of drawing

Other works are drawings created from nature images, such as flowers or trees, as in figures 3 and 4.

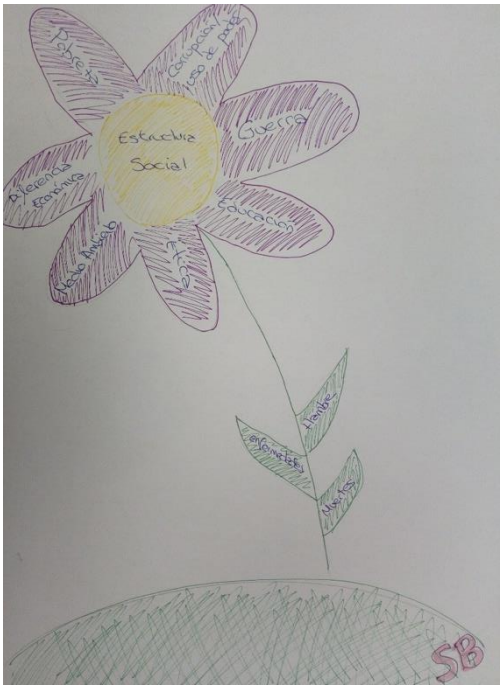


**Fig. 3.** Example of drawing

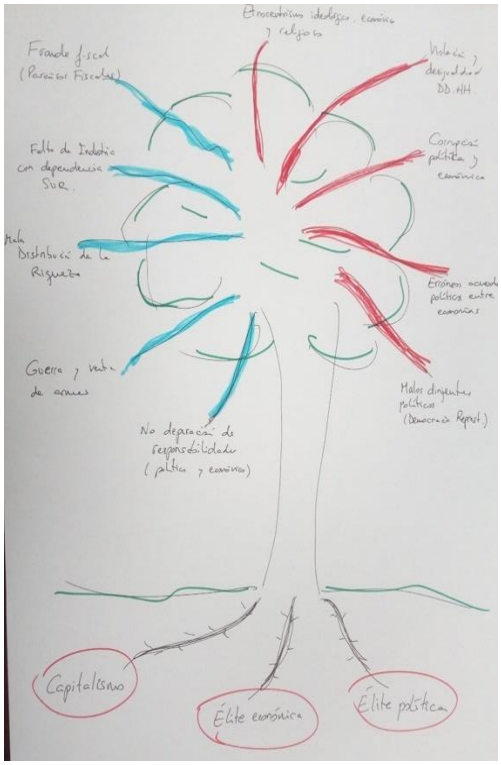


**Fig. 4.** Example of drawing

Figure 5 represents the problems of North-South relations as a small urban landscape that represents a neighborhood where very different neighbors live, rich countries and poor countries.

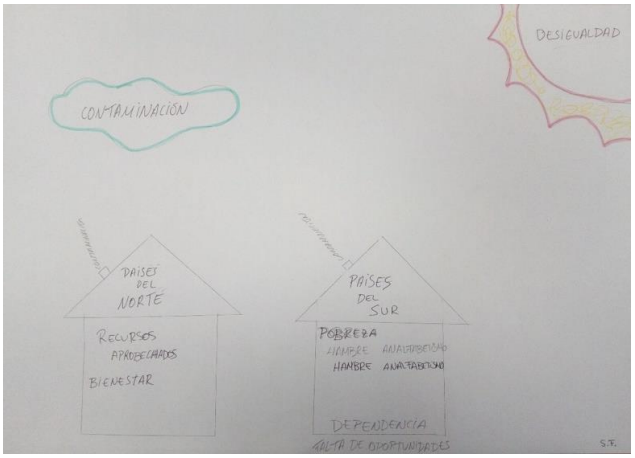


**Fig. 5.** Example of drawing

Another type of drawing that the students made reflects the dominance relationship that powerful groups have over poor countries as an explanation of the problems of underdevelopment (figure 6).

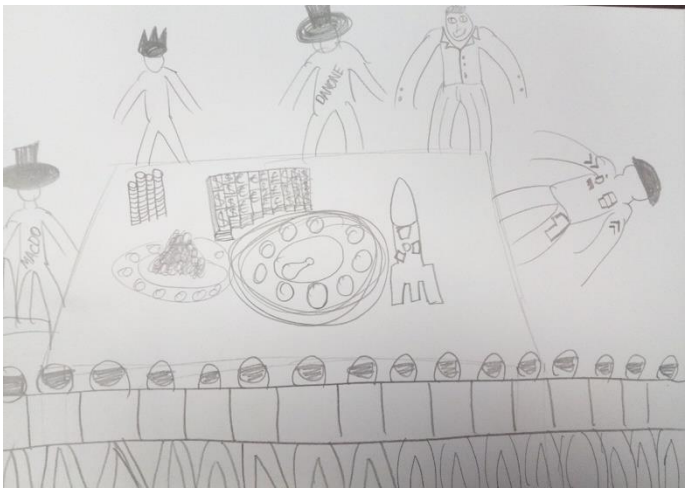

**Fig. 6.** Example of drawing

This is only a selection of the works. Actually, not all students presented drawings in the strict sense. Some of them represented more traditional concept maps, such as the one shown in figure 7.

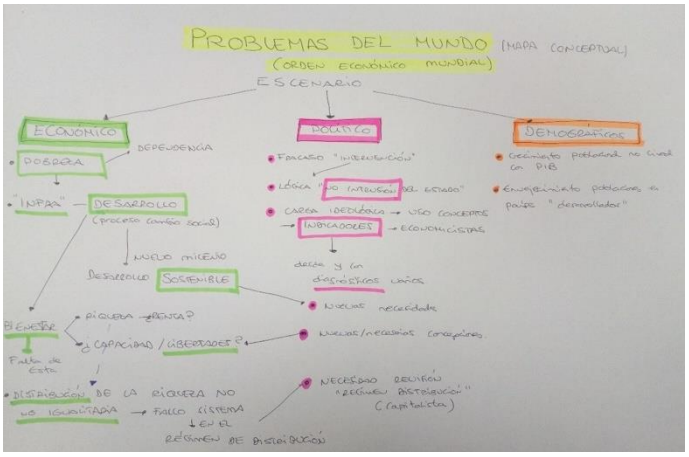


**Fig. 7.** Example of drawing

More specifically, out of a total of 28 papers presented, only 10 students made drawings and 18 presented conceptual maps. It is striking that most students preferred to make a concept map rather than a drawing. This was expected. Students who do not

have the ability to draw do not feel safe doing an activity that can give them a negative assessment. However, those who chose to draw show less fear of doing more innovative and creative activities. After the drawings were completed, the students photographed the drawings with their smartphones and sent them to the teacher. This allowed to project the drawings in the classroom and share the work with all the students.

## 4 Conclusion

This work explores the factors that indicate the convenience of reviewing teaching methods with the aim of overcoming the teaching-learning scheme that overvalues memory skills and facilitate the development of reflective skills. The activities of artistic creation, in which students become the active protagonists of a creative process, are useful for the development of didactic competences of a higher order, such as creativity.

However, we have found that not all students submitted a drawing. On the contrary, others presented traditional conceptual maps reflecting the economic problems in a conventional way. This shows that there is not always a good predisposition when it comes to assuming riskier or unconventional practices with which students feel not totally comfortable.

The use of smartphone cameras in the classroom allows students to share and project drawings in the classroom immediately to facilitate group learning. In any case, the realization of this type of activity improves the creative competence of the students and their ability to critically assess the economic phenomena of the world economy

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