

A New Teaching Method for Teaching Economics in Secondary Education

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Abstract: *The research evaluates an interdisciplinary approach to teaching economics through an innovative teaching method, in the context of Greek Senior High School. The research uses art, cooperative and experiential learning and project method in teaching the lesson Social Studies in the 1st year of senior high school. The purpose of the research is to observe the attitudes and perceptions of students, when implementing this teaching process and to investigate the extent to which this method can contribute to the improvement of teaching and learning.*

Keywords: *teaching economics, interdisciplinary, art, project method, cooperative and experiential learning, critical though, effective teaching.*

I. Introduction

The complexity and interaction of phenomena that take place in everyday life requires the cooperation of different disciplines. Prerequisite for this cooperation is the complementarity of the sciences in order to achieve scientific advances but also to interpret the world (Brinia & Vikas, 2014). Interdisciplinary starts at first in the level of scientific research and then it extends to the field of education (Matsagouras, 2004). Moreover, according to Kouzelis (2005), the field of both Epistemology and Teaching coincides to a large extent, as both sectors are investigating the process by which knowledge is built or formed. Interdisciplinary is becoming very popular in teaching Economic Sciences.

When teaching Economics in Senior High School, teachers are often facing various problems related on how they can make their students understand basic economic phenomena, relevant terms and their application in everyday life. In order to overcome such problems, teachers must discover and apply new teaching methods which are compatible with the needs, the interests and the abilities of their students.

Our proposing method is a combination of teaching through art, cooperative and experiential learning and project method. The proposed method is based on a research that was carried out in a senior high school and has remarkable results regarding the didactic methodology. The purpose of this paper is to present this innovative method, to investigate the perceptions and attitudes of students during this teaching process and to examine the extent to which this method can contribute to the improvement of teaching and learning.

II. Literature Review

The establishment of a pedagogical approach on the basis of which it is possible to design the proposing teaching methodology is essential. The pedagogical approach in which this paper is based is relying on the following points:

Art: Art can be implemented in the teaching process as a stimulus for attracting students' interest. Art can be a valuable for the education because artworks are not just an expression of the artist, but a creation with educational value (Vrettos, 1999). This integration does not aim to overwhelm the student with knowledge, but to motivate in order to observe, investigate, experiment, imagine and make his/her own associations, through emotions. It aims in promoting reflection, critique, creative thinking and aesthetic experience to the student in order to develop the student's system of values (Trilianos, 2009: 114-115). The use of Art in the teaching process can be characterized as a didactic framework that completes the analytical curriculum because in order to be interpreted, it must be parallel with the corresponding historical, social and cultural environment. The artworks are not only simple illustrations or representations, but they stir the interest, because they offer the opportunity to complete the students' knowledge of different subjects and correlate issues related to individual and social self, such as ethics, love, friendship, family, justice, social environment etc. (Efland, 2002).

Cooperative learning: Without denying the value of traditional teaching methods in undergraduate education, a substantial number of teachers are recognizing the significance of collaborative work in learning (Davis, 1999). It has been called "structuring positive interdependence" (Sugeng, 2012). According to this method, all students must work in groups in order to complete tasks collectively towards academic goals. Groups may be assigned by

the teacher or by the students themselves, but the key factor for the success of the method is the required interdependence, in order to accomplish the task and the fact that no student can complete the assignment by himself (Chiu, 2008).

Project method: The Project method is an experiential teaching method utilized in education and helps students develop many skills. It is a modern form of teaching, starting with specific considerations on a theme and aims to achieve a goal through collaboration between the students and their active participation, focusing on the participation, rather than the final result (Brinia, 2007). In particular, it supports and encourages the cooperation and multi-sensory approach in learning (Chissafides, 1994). Since this is a cooperative approach, it offers the chance to the students to take part in the management and implementation of "complex work plans, thus developing, critical thinking and collaborative skills", through social interaction between the classmates, the teacher and the broader social environment (Matsagouras, 2000).

Experiential learning: "Experiential learning is a philosophy and methodology in which educators purposefully engage with students in direct experience and focused reflection in order to increase knowledge, develop skills, and clarify values" (Association for Experiential Education). Unlike traditional classroom situations where students may have to compete with each another or may have to remain uninvolved or unmotivated and where the teaching is more highly structured, students in experiential learning situations have the chance to cooperate and learn from each another in a more semi-structured approach. Teaching is designed to engage students with direct experiences which are closely tied to real world problems and real life situations. The teacher is more a facilitator rather than a director of student progress. "The focus of Experiential learning is placed on the process of learning and not on the product of learning" (UC Davis, 2011). Supporters of experiential learning state that students are going to be more motivated to learn when they have a personal experience regarding the subject rather than being assigned to study and review a topic or read a textbook chapter. In Experiential learning the phases of experiencing (doing), reflection and applying must be present. In addition, "the stages of reflection and application are what make experiential learning different and more powerful than other models commonly referred to as "learn-by-doing" or "hands-on learning" (UC Davis, 2011).

Interdisciplinary: The term refers to the teaching principle which seeks the approach of school knowledge through global study and process of issues (Matsagouras, 2004) that are selected and organized according to the interests and perceptual skills of the child (Matsagouras, 2003). The priority that is given to review important issues for children and the investigative process of processing issues make interdisciplinary approach child-centered both in terms of content and methodological approach (Matsagouras, 2003).

Constructivism: The constructivism is a pedagogical approach according to which the knowledge is not passed on from teacher to student but it is constructed in a social environment of the student itself, on the basis of the pre-existing cognitive structures which the student enhances, enriches or modifies (Raptis, 2002). Afterwards, the student relies on existing knowledge, experiences, beliefs and personal theories in order to comprehend new subjects, a process that is facilitated through an environment of interaction and cooperation with adults and peers (Raptis, 2002).

The current research is the first attempt for teaching economics through a combination of these techniques in secondary education in Greece. The research utilizes the principles of the above methods and theories in teaching the teaching unit "The Stock Market", in the first year of Senior High School, in order to clarify basic economic terms to students, enhance teamwork and describe ways of implementing this teaching approach.

III. Teaching methodology

The proposed teaching methodology consists of five steps, which are the following:

1. Stimulation Of Students' Interest

The first step of our method is to integrate art as part of the teaching process. Specifically, art can be used as a stimulus for drawing students' attention, enhancing their aesthetic experience and critical thought. Art can be included in the teaching process by selecting the appropriate and relevant artworks from music, painting, literature, cinema etc. in order to combine them with the teaching process. The teacher has to take into consideration that the selected artworks will be relevant to students' interests.

2. Presentation Of Teaching Material

The second step is the presentation of the didactic material. The teacher has to present the course in class by using the traditional lecture with combination of digital presentation tools or other teaching means to

draw the students' attention. It is important for the students to be familiar with the teaching material in order to integrate it into the activities.

3. Team Formation And Activities' Determination

The third step consists of team formation according to the total number of students in class. In this step, the teacher has to determine the teams' activities and inform the students about what they have to do. The activities can include processing of artwork and ideas from experiential learning with methods such as role-playing.

4. Conduction Of Activities

The fourth step is the conduction of activities in class. During this step, students have to analyze the teaching material and implement it during the proposed activities. The teacher has to supervise the whole process and provide guidelines to students, due to the little experience of students.

5. Discussion And Assessment

The last step is the discussion in the class about the whole process and the expression of students' emotions and thoughts. Afterwards, an assessment of the teamwork and the teaching process has to take place. The teacher distributes a questionnaire to the students with questions related to the abilities that they enhanced during the process, the benefits of the process and ways of improving the procedure (Brinia, 2007). Consequently, the teaching approach is evaluated and the benefits for the students are rising up.

IV. Research Methodology

Qualitative Research

The methodology for the data collection is closely related to the purpose and the objectives of the research (Bird et al., 1999; Faulkner et al., 1999). The research approach that has been considered as the more suitable for achieving the research objectives is the qualitative, because it allows an in-depth analysis and interpretation of attitudes, views and intends to clarify processes through the analytical induction (Bird et al, 1999).

The qualitative data will be presented as follows:

1. Formulation of research questions.
2. Description of the research theme and instruments.
3. Description of the research sample.
4. Presentation of research process.
5. Presentation of research results.

Research Questions

The research questions that were: investigated touch on whether this teaching method for the subject of Stock Market:

- a) Does the method contribute to the stimulation of the students' interest and motivation in order to increase their participation?
- b) Does the method help the students to better understand the operation of the stock market and the economic concepts related with it?

V. Research Instruments

Convenient Sampling

In this type of sampling, each member of the population has the same probability to be selected and each option is completely independent of the other. A key advantage of this sampling method is the convenience when applying it. However, there are disadvantages related with this method. Initially, it does not create representative samples, which leads to limited research results and errors in assessment (Zafiroopoulos, 2005). This method is often used in the early stages of research, in order to create an estimation of the results.

The Questionnaire

In order to collect the necessary information to assess the effectiveness of the applied teaching method at senior high schools, we chose to make use of a questionnaire. More specifically, we chose the data collection method using a questionnaire because, with this tool the researcher studies various types of questions, formulates the proper questions and organizes the outline of the questionnaire, according to the research main requirements (Siomkos & Mavros, 2008). Afterwards, the main objective is the conversion of the required information to specific and appropriate questions.

Semi-Structured Interviews Based On Qualitative Questions

It is the most flexible type of interview because it permits the deepest analysis of facts. The order and the structure of questions can easily change and the researchers can develop a keen understanding of the topic which is necessary for developing meaningful and relevant semi-structured questions (Robert Wood Johnson Foundation). It is used mostly in pilot research.

Sample

The research sample consists of 26 students of the 1st year of Senior High School (aged between 15 and 16 years old). It was conducted in the first semester of the school year 2015-2016 (September - December). The school is located in the center of Athens (capital of Greece). The research lasted one week and was conducted during the school program (three hours of teaching).

1. Research Process

Before the start of the research, the teacher explained to the students about the new teaching methodology that was about to be followed in the next few didactic hours. The students accepted with enthusiasm the research and the procedure began. Firstly, a questionnaire (No 1) examining students' previous knowledge concerning Stock Market was distributed to the students. The questionnaires included three questions (What is Stock Market? What is the purpose of operation of Stock Market? Do you know if there are any categories of people who buy and sell shares and bonds? If yes, which are these?). This was about understanding the level of knowledge of the students towards the issue and to compare it with the final results. The first teaching hour was devoted to the first stage of our methodology which is about art and teaching. In order to constitute art as a stimulus for our process, three artworks were presented to students (one photograph, one novel and a part of a movie). These were the presented artworks.

1. Movie

Title	"The Wolf of Wall Street"
Director	Martin Scorsese
Duration	180 minutes
Production year	2013
Production country	USA
Source	Internet:Abstract : https://www.youtube.com/watch?v=MJXLV_DMKa0

This film is an American biographical comedy of crime which was produced on 2013 and was directed by Martin Scorsese. The film chronicles the life of the stockbroker Jordan Belfort. From the American dream till the corporate greed, Belfort vacillates between shares and a life of corruption in the late 80s. The proposed abstract presents a telephone sale of a share from the protagonist.

2. Novel

Title	O Chartaetos (The Kite)
Author	Athina Kakouri
Year of 1 st edition	2002
Publication	Estia

This novel is presenting the real facts concerning the first stock market scandal of modern Greece, the Lavrion. It describes the conflict between the French – Italian company Roux - Serpieri - Fressynet and the Greek government regarding the extent of the exploitation of the mines of Lavrion. This conflict led to the sale of shares at a higher price than their real value resulting in the financial disaster of thousands of families who invested their money in them.

3. Photograph



Title	"Chicago, Board of Trade II"
Photographer	Andreas Gursky
Year	1999
Country	America
Source	Internet: http://www.tate.org.uk/art/artworks/gursky-chicago-board-of-trade-ii-p20191

Andreas Gursky is widely known for his large-scale color photographs depicting the architecture, landscapes and images of modern hyper consuming society with emphasis on detail. He was one of the first photographers who used and developed the digital processing. This photo is part of a series of photographs (five in total) shot on exchanges around the world, who have undergone extensive but discrete digital processing in order to focus on the institution of the stock market in different parts of the world. Aesthetically, the photographer recognizes the chaotic beauty of the world of the stock market and wants to highlight it with interference in colors, composition and details.

The second teaching hour was devoted to the presentation of the chapter "Stock Market" following the traditional method of lecture with the usage of Microsoft Powerpoint. Afterwards, the teacher separated the class into four groups of five students and one group of six students in order to allocate them the teamwork concerning the understanding of the teaching material. The first group had to find and read in class extracts from the novel "O Chartaetos". The other groups (4 of them) had to conduct a role play. Each group had to play a role concerning the world of Stock Market and one student was going to present it in class in cooperation with other groups.

The third teaching hour was devoted to the execution of activities. The first group presented the story behind the first Greek stock market scandal by reading selected abstracts from the novel "O Chartaetos". Then, the other teams started the role-playing activity. With the intention of setting a common ground for the clarification of the term "Stock Market", some hypothetical roles were invented. One representative had to be the owner of a stock exchange office, the other one was a speculator who wanted to multiply his money, the next one was a farmer who had no idea about the stock market and its operation and the last one was a well informed person. The concept was a negotiation between the owner of the stock exchange office with each of them with main goal the understanding of how the stock market works and which are the involving categories of people who buy and sell shares and bonds.

The last part of the teaching procedure was a discussion in class about the whole process, the completion of the first questionnaire in order to compare the cognitive results and the completion of a second questionnaire which evaluated the whole process.

VI. Research Process Results

The results of the research process entail the data that were produced by the questionnaires that were filled by the students.

1st Questionnaire Results

The questions of the first questionnaire examine the previous knowledge of students and whether this process helps them enhance their knowledge. The results from the first time of the completion differ a lot with the second time. To be more specific, the majority of students did not know what a stock market is, its operation and the categories of people that are involved. In contrast, the final completion shows that everyone (except one student's answer regarding the third question) has clarified the purpose of the stock market and the categories of involved people.

2nd Questionnaire Results

The second questionnaire was completed after the end of the procedure. The first question investigated the students' views and experiences regarding the teaching methodology and the first research question. Questions two to four examine the contribution of art as a stimulus for the teaching process. The fifth question is linked with the experiential learning and the role-playing, while questions six to seven aimed at the students' views about the weaknesses and benefits of this process. The results are the following.

Question one: The totality of students agreed that the lesson was interesting and provided them with motives for active participation in class. Some typical students' answers were the following "the course was funnier", "the interaction, the role-playing and the different forms of art activate my interest and appeal on different students' tastes", "the teaching procedure was not pathetic and boring and it enhanced the discussion, collaboration and the art forms contributed to the participation".

Question two: Seven students responded that the movie abstract facilitated in understanding the economic terms of the subject, while eleven mentioned that its contribution was very good.

Question three: Nine students stated that the use of the novel aided their understanding of the basic economic terms, while eight mentioned that novel aided their understanding to a satisfactory level.

Question four: Six students mentioned that the use of the photograph facilitated their understanding of the basic economic terms, while ten mentioned that contemporary art facilitated their understanding to a satisfactory level

Question five: All students, except of one, agreed that the role-playing contributed to the effectiveness of the course. Some typical answers are mentioned below: “the image of buying and selling bonds was made very clear”, “it was much better to see “real” course as part of real life rather than simply reading about that”, “we noticed many ways of thinking of people concerning the stock market”, “it helped us understand that it is important to think responsibly before making an investment”.

Question six: Students suggested that there should be more experiential learning actions and more motives as a stimulus.

Question seven: The overall benefits that students gained from the teaching methodology are: knowledge, understanding, cooperative learning, active participation, creativity, innovation and critical thinking.

VI. Discussion of results

It can be concluded from the results that this teaching methodology towards teaching Social Sciences has been an innovative proposal with great appeal to students, contributing to a pleasant, interactive and creative lesson.

According to the majority of students, the lesson became easier to understand especially when the students were separated into groups, worked in teams and presented their work. The role-playing created additional motives to students for interacting actively throughout the teaching process, allowing the exchange of ideas and enhancing their teamwork and cooperation skills. In the end of the process, students were able to explain the role and operation of Stock Market and could express their views regarding it.

The use of art and especially the use of a movie, helped students understand the basic concepts of the Stock Market. Furthermore, the usage of audiovisual material facilitated the active participation of students and made the course more interesting. As a result, the class climate was friendlier enhancing the freedom of expression. The role-playing was a significant factor in formatting this climate and it created positive experiences to students.

To sum up, this new teaching methodology contributed to the enforcement of knowledge results which helped students to shape their own views regarding the economic issues related to the Stock Market and to develop an overall view of economic science in relation to real life.

VIII. Conclusion - Guidelines For Future Research

The introduction of this teaching methodology in Greek Secondary Education is an issue that permits deepest analysis for its implementation. The state should promote analytical programs for High Schools based on this methodology by providing the necessary resources to all units of secondary education and to adjust the detailed timetable and relate structures in order to encourage teachers to use these teaching techniques during the educational process.

A necessary prerequisite is the formation of the suitable and appropriate climate in class. The active participation of all students and the exchange of opinions among students can help the shaping of their personality and facilitate the formation of critical thought (Matsagouras, 2003). Moreover, throughout this process the teacher formed groups of students enhancing the cooperative learning and the sharing of learning and emotional experiences.

Finally, during this teaching methodology, communication, teamwork, development of critical thought and presentation skills are promoted. The challenge for the teacher is the combination of the teaching methods that are consisted in our methodology and the right application of them in order to achieve the best possible results.

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Appendix

1st Questionnaire

1. What is the Stock Market?

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2. What is the main goal of the operation of the Stock Market?

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3. Which are the categories of people who buy or sell shares and bonds?

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2nd Questionnaire

1.a : The course was:

Boring Indifferent Interesting

1.b Do you believe that this applied teaching method create motives for your active participation in class?

Yes No

If yes, for which reason do you believe that happened that or what is it that contributed to the creation of these motives?

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.....

2. How much important do you consider the contribution of the abstracts of the movie in the achievement of easier understanding of the economic term and basic characteristics of the teaching unit?

Not at all A little At a satisfactory level A lot Very much

3. How much important do you consider the contribution of the novel and the selected abstracts of the novel in the achievement of easier understanding of the economic term and basic characteristics of the teaching unit ?

Not at all A little At a satisfactory level A lot Very much

4. How much important do you consider the contribution of the contemporary art (photograph) in the achievement of easier understanding of the economic term and basic characteristics of the teaching unit?

Not at all A little At a satisfactory level A lot Very much

5. Do you believe that the role play contributed to the effectiveness of the course?

Disagree Indifferent Agree

If you agree with this sentence, by which way do you believe that the role play helped you?

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6. Are there any suggestion for the improvement of the teaching process, or something that you would like to be included in the teaching process?

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7. Do you feel that you have acquired any benefits from the overall?

Yes No

If yes, can you describe briefly the benefit that you may have acquired?

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