

## **Total quality in teaching and school effectiveness as tools of Administration of Education**

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**Abstract:** *School effectiveness is a different approach to achieve quality in the organization and administration of education. The quality of teaching in classrooms is inextricably linked to the effectiveness of the school unit, as teaching directly affects one of the most important interest groups in education: students. The quality of learning is influenced both by school environment and the activities in which student are involved. The purpose of this research is to investigate the opinion of students on teaching and on the school culture. This opinion can be used in order to create the appropriate school climate with a view to achieving quality in the organization and in the administration of the school unit. This research is original and innovative as it correlates the views of students with the implementation of total quality management (TQM) in the school unit.*

**Keywords:** *teaching quality, school effectiveness, school climate, culture, total quality management.*

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### **I. Introduction**

Quality evolves constantly in the recent years. This evolution cannot be attributed to one person or a group of people. Over the years, the implementation of management's strategies led to the current era of quality in order to satisfy the needs and desires of the people (Brinia, 2008).

In education, the concept of quality is difficult to be defined because of the different views on its purpose, its objectives and the social and political functions. According to many, the perception of quality is relative and multifactorial. Additionally, education is facing increasing that are institutional but also philosophical, as it tries to adapt to the data of modern society (Giannias, 2014). Nevertheless, it is necessary to apply the principles of TQM in the school unit in order to achieve the expected school results.

Teaching and its quality plays an important role in cognitive and emotional development of students (Kyriakides, 2009) and is derived by the educational policy of the school unit (Porter, 1988; Teddlie, 2000). Therefore, the quality of teaching is an indicator of school effectiveness. Research on school effectiveness (SER -School Effectiveness Research) has developed a specific methodology based on criteria which demonstrate the effectiveness of an educational organization. One of the criteria is the quality of teaching. Specifically, this research assesses the teaching practices of school and their interconnection with school effectiveness. The parameters that determine the quality of teaching (teaching methods, teaching tools, time management, differentiation of methods, use of information technologies and media, interpersonal relations, student involvement in the learning process, etc.) were evaluated, good practices were found and problems and weaknesses were identified.

### **II. Literature review**

The Total Quality Management (TQM) is a management style which aims at improving the effectiveness, efficiency and competitiveness of an organization as a whole (Lock, 1997). In education, the concept of TQM is considered as a philosophy, a set of principles that form the basis of continuous improvement and includes the application of qualitative methods. It uses and develops with the human resources with a view to effective and qualitative services (Zavlanos, 1998).

It is necessary to separate the term of effectiveness from efficiency, which are often, confused. Effectiveness is the ability of someone to bring the expected result, while efficiency means the ability and capacity to produce sufficient work in order to make profit or gain (Mpampiniotis, 1998). Regarding the concept of effectiveness in schools, it is a measure of success with weighted criteria, especially when schools demonstrate the response of students' needs, combining the objectives and the curriculum (Pamouktsoglou, 2001). It is essentially an overall measure of satisfaction of social needs, through school success. School effectiveness needs cooperation and harmony among all the stakeholders that form the school community, but the important role is played by the principal of each school unit (Siapka, 2011). Therefore, the school principal should be the key factor of effectiveness and functionality (Brinia, 2014).

School serves as the main means to provide knowledge and develop skills, but it remains restricted to traditional standards. However, in recent years there is a general reflection on whether school can overcome its conservative character and cope with the social changes, in order to be effective (Brinia, 2008). Many people have been involved in identifying the factors that contribute to the effectiveness of a school unit (Edmonds, 1979; Mortimore, 1991; Andreadakis, 2009; Pasiardi, 2001). According to the holistic model of educational effectiveness, the effectiveness of the educational system is a function of the following factors: the strong management of the school, school climate that guarantees the learning progress, high expectations for student performance, the focus on teaching and learning, the clearly defined framework for the assessment of student performance, openness of the school in society and the provision of a separate budget to each school unit (Zogopoulos, 2011).

The role of the principal is important for the normal and effective operation of the school unit (Brinia, 2014). The principal is the person who bears the main responsibility for the development and promotion of democracy in school. He/she should ensure the existence of the basic conditions for an effective school which is open to the society (Kirkigianni, 2011). This role includes various functions, inside and outside school, and the cooperation with all stakeholders in the educational process. The duties of a principal are related to the compliance with laws, circulars and service orders, but also to the process of taking and implementing the decisions of the Association of Teachers and participate in the coordination and evaluation of the educational project. Therefore, the importance of effective school management is essential. Consequently, the principal of a school unit should be successful in combination of numerous roles. In particular, he/she should work as a coordinator, a representative, a regulator of operational issues, an organizer, a leader and a teacher (Brinia, 2014).

Additionally, the quality of teaching, the curriculum and the diversification of teaching methods affect the performance of each student. However, the quality of teaching, the time and the opportunities to learn are also affected by other factors that included within the school level (Kiriakides, 2004). Additionally, students, by themselves, determine how much time they devote to complete their school assignments. Therefore, the cognitive achievements of students are determined simultaneously by factors related to the students' level, such as the socio-economic level and the expectations and motives that they have for learning (Kiriakides et al., 2002).

Apart from the above, all parameters should interact in order to improve students' achievements. There should be consistency between the powerful features within the school. Furthermore, stability plays a decisive role in the school unit, which suggests that effective teaching and guidance will be provided throughout school life. At the same time, among them members of the school unit it is expected to exhibit similar characteristics of effective teaching. Finally, according to the model of TQM, the development of school effectiveness control mechanisms in order to achieve the desired results is critical (Kiriakides, 2004).

Continuous improvement is necessary to be introduced to the culture and philosophy of public administration in order to exploit the circles of quality, productivity and effectiveness. However, some obstacles must be first overcome in order to change the existing culture and attitudes of the school unit and the subsystems that interact with it (Chalkia, 2012), while ensuring that the utmost quality of teaching and learning is one of the main purposes of evaluation. Moreover, the basic assumptions of research on school effectiveness are:

1. Learning is the main criterion for measuring the effectiveness of the school.
2. Training has the potential to positively influence the students' progress.
3. Development and implementation of a theoretical background, which refers to the educational factors and simultaneously interprets the way they operate.

### **III. Research Methodology**

#### **3.1. Research Sample**

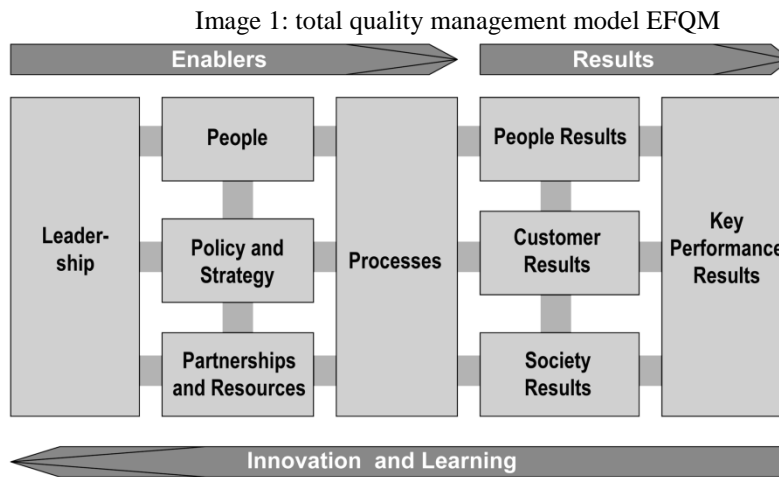
This research presents the students' views on the quality of teaching and it investigates the views of students on issues related to the organization and administration of education. The survey was conducted with convenient sampling in three classes of a High School in a big city of Greece during random teaching hours. The sample consists of 63 students. Therefore, ages are ranging mostly between 15-18 years and the course selection in order to conduct the research was random. This method is called random sampling (Cohen & Manion, 1997). 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 it presents in its application. Conversely, however, there are disadvantages associated with this method. For example, it may not lead to the creation of representative samples which may resulted in the existence of an error in assessment (Zafeiropoulos, 2005). This method is often used in the early stages of research to get the researcher a first assessment of the results.

### 3.2. Data Collection Tools

#### 3.2.1. Questionnaire

In order to collect the necessary information to assess the quality of teaching in the school and connect it with the school effectiveness, we chose to use the questionnaire as a research tool. Specifically, we chose the method of data collection using the questionnaire, because this tool is a systematic process in which the researcher organizes the outline of the questionnaire, according to the research requirements (Siomkos, 2008), hence, the main objective is the conversion of the required information to specific questions.

In formulating the questions, we based on total quality management model proposed by the European Foundation for Quality Management (EFQM) (Image 1).



For the implementation of this model in education, it is necessary to fulfill certain conditions in order to achieve the desired results. These conditions concern various factors. Specifically, these factors are divided into areas such as leadership formed in school unit, the workforce composed of the principal, vice-principal and teachers, the strategy of the principal regarding the school administration and the students. In addition, the conditions include the interconnections and partnerships formed between stakeholders, the methods and techniques used in the classroom and the resources available and ultimately utilized.

For qualitative school operation, it is necessary that the above conditions lead to satisfactory results. In particular, these results have to do with the satisfaction of teachers at first, but also with the satisfaction felt by students after the teaching process. Equally important is the impact of the knowledge acquired by students for the benefit of the society in general (Zavlanos, 2003).

At this point, it is necessary to mention that there has been a selective focus on specific conditions and results, according to the judgment of the researchers. Specifically, we chose to focus on leadership, partnerships, resources and procedures because we believe that these are the most critical factors that determine the quality and effectiveness at school. Moreover, these are the parameters that we can take into account if we aim to improve the operation of the school unit. This does not mean that all other factors are not important.

#### 3.2.2. Research Process

Based on the above, a questionnaire was designed, which included a total of 14 questions of the same type, which examined the quality of learning in various classes and the degree of effectiveness of the overall operation of the school. This questionnaire was given to a total of three clusters, one for each class of High School (A, B and C class) during different courses, which were selected randomly. More specifically, the questions were closed-ended, since each student had the opportunity to choose between seven alternative answers. The answers were based on Likert rating scale. In particular, the 7-degree scale was maximally selecting "Strongly Agree" and lowest degree of the answer was "Strongly Disagree". The fact that we chose an odd number of possible alternatives is because we did not want to push the interviewee student to get a distinct, clear position on the subject matter, but we wanted to give the opportunity to the student to choose the middle / neutral view (choice 4).

Because of the demanding program of students and their limited time, we reduced the number of questions to 14. Additionally we decided to distribute questionnaires via the Internet (online). This simplified the research because the answers were more objective, due to our distance with the participants. Taking into account the low response to the electronic questionnaires, in order to motivate all students and increase their interest and thus the response rate, we distributed them as invitations and we decorated them with various photos of Minions (characters from animated film Despicable Me) to arouse the attention, in order to participate in our survey.

Since the questionnaire was distributed online and students filled it anonymously, we had to define a coding method, in order to have a clear picture of the class which is each student and to avoid phenomena of multiple questionnaires from the same student which would affect the validity of the results. For this reason, we defined the following codification:

Option A – 1st Grade of High School

Option B – 2nd Grade of High School

Option C – 3rd Grade of High School

Each letter represents a different class, accompanied by a different number starting with 1 in ascending order according to the number of students in each class. This number was the personal password of each student, which he/she will be asked to fill in a separate area of the questionnaire. These codes were in every invitation and were randomly shared to students (A1 ... A21, B1 ... B23, C1 ... C19).

With regards to the formulation of questions, we used simple words and tried to adopt the vocabulary used by the students. In addition, because of the online distribution of the questionnaire the questions were as clear as possible. However, there were explanatory comments were we believed it was necessary. This ensured the complete understanding of the questions from the students, in order to reduce the risk of any misunderstanding. Appendix presents the questionnaire in its final form.

#### IV. Presentation of research results

This section summarizes the findings of this research. For the processing of the collected data, we utilized the SPSS program.

##### 4.1. Results of the three classes of High School

Firstly, the results of the entire sample (all three classes of High School) show that students do not seem to support the exclusive use of the textbook (Figure 1). On the adjustment of teaching to their needs, students mostly believe that there were some attempts by teachers to personalize the teaching process (Figure 2). Students believe that the knowledge gained from the courses is useful for them (Figure 3). In addition, their views for the communication that develops between them and the teachers (Figure 4) and between teachers and the school management (Figure 5) vary. However, students expressed a neutral attitude regarding the existence of communication and information between their parents and the teacher (Figure 6).

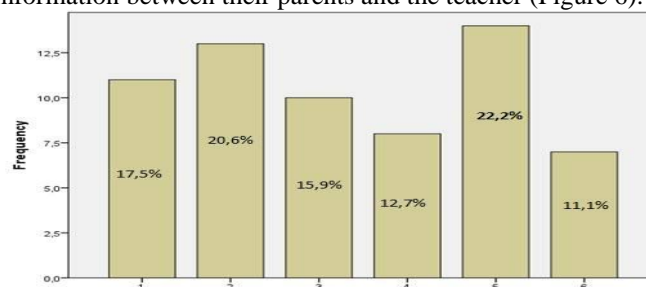


Figure 1: Use of textbook instead of other material

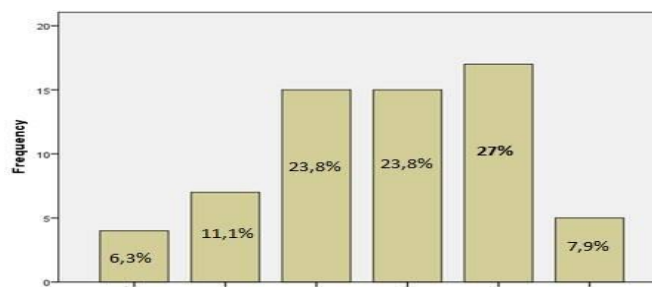


Figure 2: Use of individualized teaching

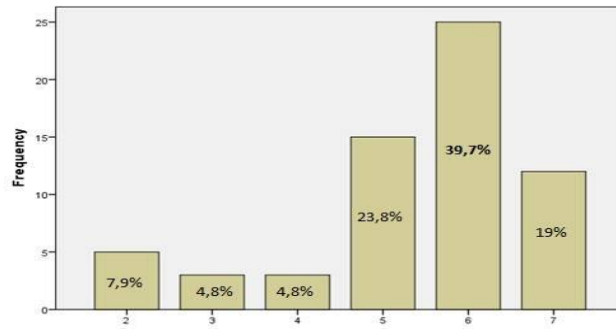


Figure 3: Usefulness of knowledge

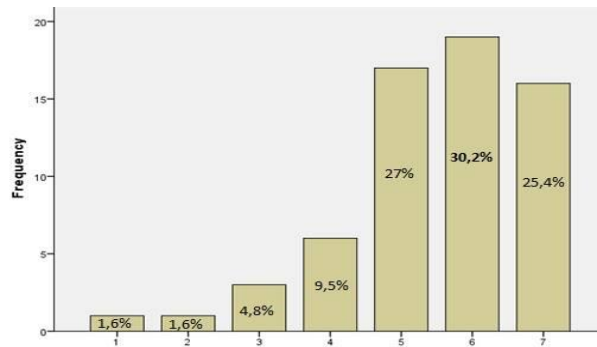


Figure 4: Communication of teacher- students

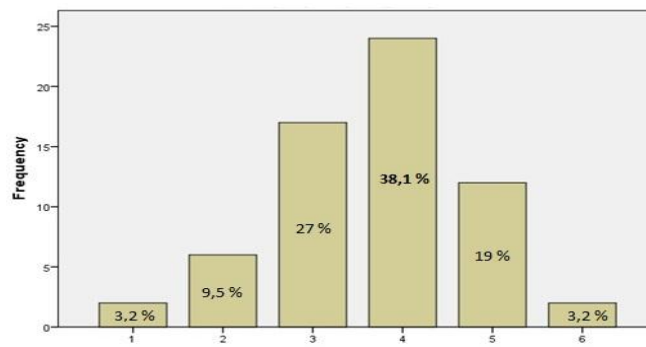


Figure 5: Communication of teacher- principal

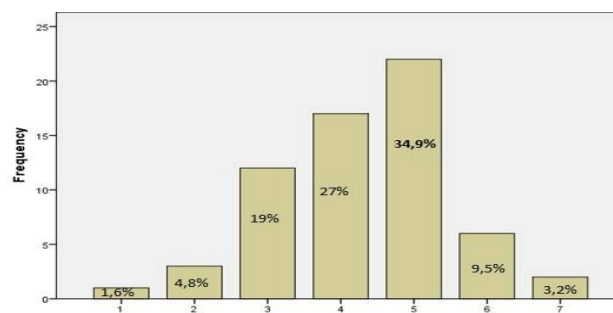


Figure 6: Communication of teacher- parents

According to the students' answers group activities are not a common practice (Figure 7). Regarding the infrastructure and equipment of the classroom, the students seem to retain a neutral attitude on their satisfaction (Figure 8). The connection of the lesson with their daily lives is considered to be sufficient (Figure 9). Corresponding results were presented at the next question regarding the objectivity of the evaluation by the teacher where students seemed to recognize it (Figure 10). Participants believe that during teaching the traditional approach is generally used (Figure 11), while they hold a neutral attitude on the issue of the adequacy of teaching hours (Figure 12). Overall, many students feel satisfied with the way courses were conducted (Figure 13) and believe that the school organization cope with the basic requirements of daily life (Figure 14).

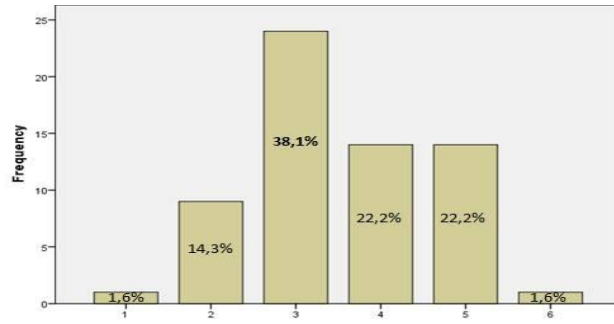


Figure 7: Teamwork Projects

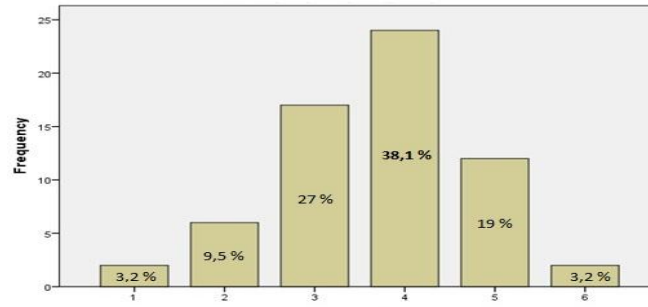


Figure 8: Adequacy of physical facilities and equipment

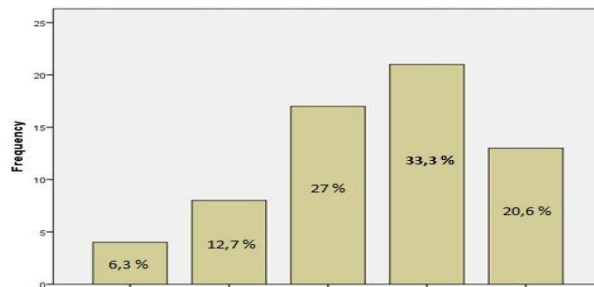


Figure 9: Link course with daily life

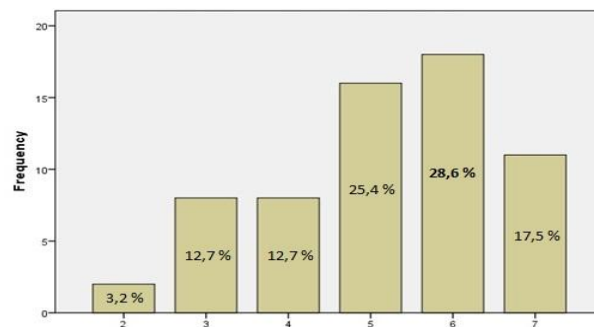


Figure 10: Objectivity of students' assessment

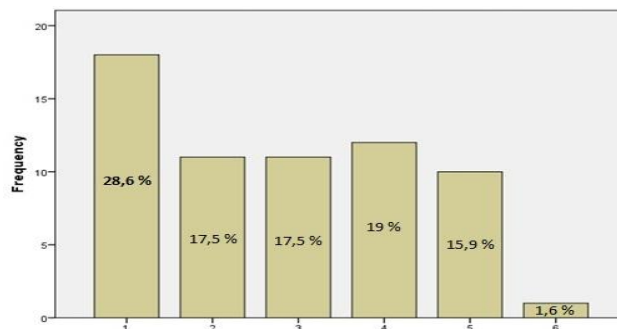


Figure 11: Traditional teaching methods (monologue, lecture)

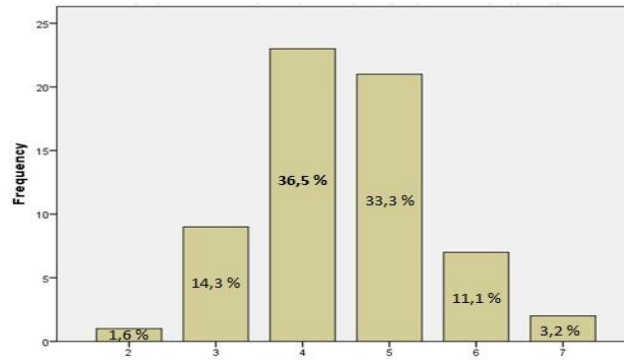


Figure 12: Adequacy of teaching hours

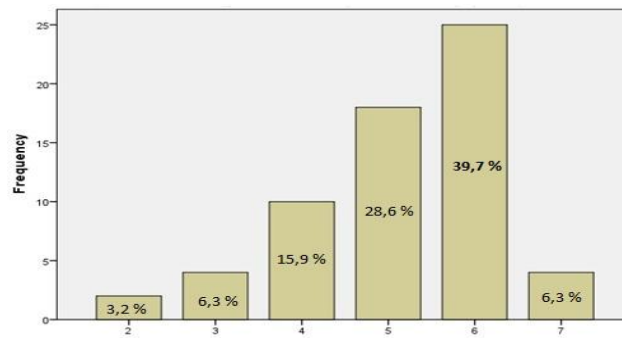


Figure 13: Satisfaction from teaching

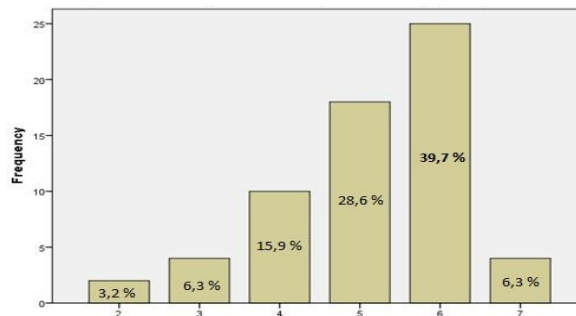


Figure 14: Satisfaction from school organization

Then, the results per class of the High School were analyzed.

#### 4.1.1. Results from the first class

As mentioned above, part of the sample for this research was students of the first grade of high school. The students claim that the use of the book is closely related with teaching practice. With regards to the individualization of teaching, students maintain a neutral attitude. However, they believe that the knowledge gained in the courses is quite useful in their lives. The results of the research also showed that students have developed a communication channel with their teachers and they are very satisfied with the connection between them and the connection between the principal and the teachers. However, they are not pleased with the communication that has developed between the teacher and their parents, and the attitude they maintain is neutral. It is worth mentioning, that students are dissatisfied with the lack of group activities and they would like more contact and cooperation with their peers.

The dissatisfaction of students on infrastructure and equipment of the class is obvious, as the resources do not seem to serve their needs. As for the connection of the course with daily problems, students are neither satisfied nor dissatisfied, as the majority of the sample claims that the connection is limited. It is noteworthy that the students believe that most of their teachers are objective and they evaluate without discrimination. On the other hand, much of the sample converges on the view that the participation during the teaching process is very limited and the teacher focuses on traditional techniques, mainly monologue and lecture. Finally, students believe that the teaching hours of the course are sufficient to consolidate the material and they maintain a neutral position in the overall operation of the school unit.

#### **4.1.2. Results from the second class**

For the second class, on the question which focuses on the exclusive use of the book by the teacher, the majority of students disagree. Instead, many argue that there are efforts for making lessons tailored to their needs and believe that the knowledge they derive from them is useful. Also, the majority of students believe that the communication developed with the teacher and the relationship between the teacher and the principal is frequent and normal. The replies of students concerning the continuous updating of parents by teachers have high dispersion tendency towards neutral.

On the other hand, the proposal regarding whether group activities take the students answered that they take place rarely, while regarding the resources students maintained a neutral attitude. Different results were conducted by the question concerning association of the course with real life, since the majority of the sample claimed that there is a strong connection. In the same context, the results on the objective evaluation varied. On the other hand, almost all students agreed that the teaching process is not conducted in a traditional way and as for the adequacy of teaching hours, they kept neutral attitude. Finally, many students felt satisfied with the way of teaching and the overall organization and operation of the school.

#### **4.1.3. Results from the third class**

In the third class of high school, regarding the question about the exclusive use of the textbook in teaching, the majority of students disagreed claiming that other external sources are often exploited. They seemed to be more cautious, maintaining a neutral attitude in the question about the fulfillment of their needs with the courses. The same results were presented for the next question, about the usefulness of the knowledge acquired from the courses. Regarding the existence of communication between parents and teachers, it appears to be limited. Similarly, the application of teamwork approach during the course is limited and this comes to supplement the low degree of satisfaction with regards to the physical facilities and equipment of the class.

On the other hand, students expressed a very positive attitude towards the link of course with their everyday life. However, they remained neutral on the subject of evaluation and its objectivity. A promising result in this class is that, according to the answers of the students, the course is not taught in a purely traditional way. Concluding, however, most students believe that the teaching hours are not sufficient to consolidate the material and this probably led them to express a neutral opinion about the satisfaction they receive from the teaching process, but also for the organization and operation of the school unit.

### **V. Conclusions**

In order to achieve qualitative education it is necessary to adopt specific policies within the school unit. Regarding the teaching process, it is not enough to have a teacher and a classroom with students. The quality of teaching, through the appropriate school climate, influenced and influences the management of the school. We are in an era of intensive knowledge and information. The modern school which is open to the challenges of the modern era and is staffed with teachers pedagogically trained can overcome the crisis and the problems and can operate in terms of total quality. Of course, a scientific and pedagogical training is not sufficient by itself to change a school unit from being ineffective to being effective. Everyone involved in the school unit has an important role to fulfill in order to ensure the effectiveness of all aspects and stakeholders.

The findings from the research focused both on the need of the State for a general revision of the educational system by methods that promote effective learning and the role of the principal. In this context, the Greek educational system should be transformed into a qualitative educational system with predominant application of TQM. In this direction all stakeholders, the Ministry, education intendancies, managers, teachers, students and parents should help. In particular, teachers should cooperate and improve their teaching methods, the curriculum, the evaluation methods, their participation in innovative programs etc. Students are expected to participate in the learning process as active researchers and not as passive recipients.

The school administration should transform the educational system and put in the centre the education of responsible, democratic and all-round developed people. Furthermore, the orientation of the educational system in capturing the dynamics of the economy, the investment in human resources, the absorption and rapid adjustment to the economic and social changes and the improvement of the future of the new generation are necessary.

"In order to highlight our advantages, we should continue and accelerate the upgrading and modernization of both the logistics and the institutional framework of educational operation to enable it to respond successfully to new challenges" (Darra, 2005).



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**Appendix**

**Questionnaire- Quality in the course of Social Science**

Please enter your password!

**1. Teacher uses only the school textbook instead of other sources (ex. to bring his own notes, other textbook, additional material.)**

Strongly Disagree        Strongly Agree

**2. Course is adapted to your needs, teaching is individualized.**

Strongly Disagree        Strongly Agree

**3. Knowledge that you gain from the course is useful.**

Strongly Disagree        Strongly Agree

**4. There is communication between students and teacher.**

Strongly Disagree        Strongly Agree

**5. There is communication between teacher and principal.**

Strongly Disagree        Strongly Agree

**6. There is constant communication between parents and teacher.**

Strongly Disagree        Strongly Agree

**7. During the course, students have group activities.**

Strongly Disagree        Strongly Agree

**8. The infrastructure and the equipment (resources) meet the requirements of the course.**

Strongly Disagree        Strongly Agree

**9. The course is linked to the reality and the everyday problems.**

Strongly Disagree         Strongly Agree

**10. The evaluation of students is done in an objective way, without discrimination.**

Strongly Disagree         Strongly Agree

**11. The course is taught in a traditional way (monologue, lecture etc).**

Strongly Disagree         Strongly Agree

**12. The teaching hours are sufficient to consolidate the course context.**

Strongly Disagree         Strongly Agree

**13. Generally, you are satisfied with the way the teaching is conducted.**

Strongly Disagree         Strongly Agree

**14. The management of the school handles well the basic daily school operations.**

Strongly Disagree         Strongly Agree

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