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BUSINESS ADMINISTRATION

**Master Thesis**

**QUALITY ASSURANCE IN ELEMENTARY EDUCATION**

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It is submitted as a prerequisite for the acquisition of graduate diploma of specialty in  
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(specialising in Administration of Educational Organizations)

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## **Abstract**

This study attempts to understand the teachers' and educators' perceptions regarding the adoption of Total Quality Management principles in elementary schools of Eastern Thessalonica. It also investigates if the above perceptions are related with variables as gender, seniority, tenure-ship, level of education, specialty and administrative position. In the present study 174 elementary school teachers have participated. They held different specialties as general teachers, physical educators, English language teachers, music teachers and new technology teachers. These teachers work in schools that belong to the 5<sup>th</sup> Office of Elementary Education in Eastern Thessalonica, in particular, in Elementary schools of municipalities of Thermaikos, N. Mihanionas, Epanomis, Mikras, and Vasilika. The research was conducted on March of 2010. The participants completed a questionnaire which was conducted by the researcher based on the data found in the review of literature. The findings of this study revealed that the perceptions of elementary educators towards the adoption of Total Quality Management principles were in general positive. Furthermore, it showed that when these perceptions were related with the variables of gender, seniority, tenure-ship, level of education, specialty and administrative position no significant difference was found. Finally, this study proposes some directions for further research and investigation.

**Keywords:** Quality, Quality Assurance, Elementary School, Total Quality management.

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## **Summary**

The present study attempts to examine the elementary educators' perceptions towards Total Quality Method of administration. Furthermore, it intents to investigate if these perceptions differ depending on variables as gender, age groups, work experience, specialty, type of employment, further studies and administration.

The first part concludes the theoretical approach in which this research is based. In chapter one there is a reference to the purpose of the study which also includes the rationale of the study, the research questions and the definitions of the terms. Chapter two explains the structure of the educational system as well as the role of the school director. Chapter three includes the terms of quality management and how this is implemented both in products and in services as well as in quality in education. Furthermore, there is a reference to the quality strategies in schools, the staff development and cultural changes in school system. The educational policy and quality in education, the quality assurance in restructured schools and the role of the leadership in the quality culture in schools are also cited in chapter three.

Chapter four elaborates the quality assurance in education dealing with return on quality, with Total Quality Management in education with focus on elementary education.

Part two includes the empirical approach. Chapter one contains the purpose and methodology of the study. Specifically, with the population and the sample, the research instrument, the validity and creditability of the instrument, the procedure of data collection, the method of data analysis and lastly the research questions. Chapter two contains the statistical analysis with reference both in descriptive and inductive results. In chapter three there are conclusions and recommendations with discussion, and identification or disagreement of the results with older findings. Also, there is a citation to the limitations as well as proposals for further research.

Finally, there is the section with bibliography and appendixes which includes the study's questionnaire.

# **PART ONE**

## **THEORETICAL APPROACH**

### **1. Introduction**

#### **1. 1. Rationale of the study**

All the developed economies of the world have shown a high involvement in service production. Services exceed 70% of the total production of EU and USA (Javalgi, Martin and Young, 2006). Education is one of the most valued and highly appreciated service due to its contribution both to human cultivation and to economic growth of countries and individuals. The last fifty years criticism has been addressed towards educational efficiency, efficacy, and its return on investment. Countries like USA, Australia, UK, and many others in theirs attempt to improve education, have started an educational reform, especially after the publication of PISA ranking (The Program for International Student Assessment), an evaluation which classifies countries according to a student's specific test performance. PISA is a worldwide evaluation of 15-year-old school children's scholastic performance, was carried out first in 2000 and repeated every three years (Wikipedia, 2010). Both educators and researchers have spent a great amount of time and effort to investigate these matters. Governments increased the budget for education in order to improve schools and educational institutions. Some of them focused on managerial issues, others in teaching and some of them on both. Nowadays, there is a continuous increasing public opinion, that educational institutions need broader and more generalized methods to confront the problem of school inefficiency. A system that could take under consideration all the school functional dimensions and activities would be necessary to be recruited. In order, therefore, to improve the educational services, a new administration method could be the solution. One possible method can be the TQM adoption. New different ways of participating management ought to be used for quality improvement.

In Greece, there has been a continuous educational crisis, which leads to an inefficient educational product. Governments have not taken yet appropriate measures to change the bad climate (Karatzia-Stavlioti and Lampropoulos, 2006). Teachers on the other hand, react negatively every time that a new educational reform is proposed because they feel

fear and insecurity for the unknown. As a result of the above situation, Greece is probably the only country in the developed world whose educational services are not being evaluated. Consequently, there is no appropriate data for educational assessment and improvement. To reverse this negative climate, the introduction among others, of quality in schools could be the issue. To have a quality school nevertheless, a new philosophy of TQM has to be monitored, which is completely unfamiliar at the present time in our school system.

In our study we will try to discover, to what extent the philosophy of TQM is perceived by the teachers and the school administrators of public elementary schools of the 5<sup>th</sup> office of education of eastern Thessaloniki. Moreover, we will seek how variables as seniority, gender, tenure-ship, level of education, specialty and administrative position, influence the educator's opinion about the TQM method of administration. While we already know very well that the meaning of quality, quality assurance, TQM, quality assessment, is completely unfamiliar to the educators. Moreover, for the time being no discussion has been made by the central government to put this aspect under serious consideration for information and finally for implementation. Therefore, our ultimate scope is to put the matter of quality in discussion in the educational community of elementary schools giving the opportunity to educators to increase their knowledge and eventually improve their educational services.

## **1. 2. Research Questions**

1. What are teachers' and administrators' perceptions in Elementary schools regarding the adoption of Total Quality Management principles in schools?
2. How these perceptions are related to variables as:
  - a) Seniority ( 1-10, 11-20, 21 and more years of work)
  - b) Gender
  - c) Tenure-ship (Tenure, Substitute, time-paid)
  - d) Level of education (second degree, Bachelors', Master's, Ph.D)
  - e) Specialty (general teacher, Physical educator, foreign language teacher, Music teacher)
  - f) Administrative position (Director, Vice-director, Responsible of the all-day school).

## **1. 3. Definitions of terms**

### **1. 3. 1. Quality definitions**

In the quality management literature there is an abundance of definitions as: Quality: can be defined as the totality of features and characteristics of a product or service that bears to its ability to satisfy given needs. Or differently «Quality measures how well a product or service meets customer needs» (Evans 1984 p. 39). Gray, Griffin, and Nasta (2001 p.207) describe quality as: Quality, we recognize it when we see it. Quality is keeping the customer satisfied. Quality is high standards of teaching learning and achievement. Quality is about excellence and satisfying the customer. Quality is: Excellence (Peters and Waterman 1982), defect avoidance (Crosby 1979), meeting or exceeding customer's satisfaction (Parasuraman, Zeithaml, and Berry, 1985). Murgatroyd (1991, p.14) offers three different definitions of quality: Quality is defined in terms of some absolute standards and evaluations are based on the application of these standards to the situation experienced across a variety of organizations, irrespective of their strategy of differentiated services (established standards definition). Quality is defined in terms of the objectives set for a specific program or process in a specific location at a specific Time (Specific standard definition). Quality is defined as a «Fitness for use» as attested by the end-users on the basis of their direct experience (Fitness for use or market-Driven definition). The World Bank (1995, p 46) commenting quality in education, stated that it is difficult to be measured. An adequate definition must include students' outcomes. Most educators would also include in the definition the nature of the educational experience that helps to produce thus outcomes, the learning environment. Tenner and Detoro (1992) as well as Cheng (1995a) have defined education quality as follows: «Education quality is the character of the set of elements in the input, process, and output of the education system that provides services that completely satisfy both internal and external strategic constituencies by meeting their explicit and implicit expectations».

### **1. 3. 2. Qualitative dimensions**

Qualitative dimension means much more than the quality of education as customarily defined and judged by student learning achievements, in terms of traditional curriculum and standards. Quality also pertains to the relevance of what is taught and learned to how

well it fits the present and the future needs of the particular learners in question, given their particular circumstances and prospects. It also, refers to significant changes in the educational system itself, in the nature of its inputs (students, teachers, facilities, equipment); its objectives, curriculum and educational technologies; and its socioeconomic, cultural and political environment (Coombs 1985, p 105). Quality finally is to learn the right things and to teach them well (Fredriksson 2004).

### **1. 3. 3. Quality assurance definitions**

According to Gray, Griffin and Nasta (2001) Quality assurance refers to the procedures and measures for checking that quality is being maintained or improved. The ultimate purpose of all quality assurance procedures is to improve quality. The installation and operation of a quality assurance system should be seen as a means of improving practice, developing a quality culture and empowering staff (Garbutt 1996).

Cuttance (1993) defined quality assurance as the planned and systematic actions necessary to provide adequate confidence that the education provided will meet the needs of clients and focuses on the effectiveness of schooling and thereby seeks to prevent performance problems arising in the first place. Quality assurance is a way of evaluating the effectiveness of structures and process required to achieve outcomes. The approach of quality assurance is to seek to prevent defects arising in the first place. Doherty (2008) states that quality assurance is something organizations do: a methodology of judging the degree to which macro and micro organizational aims, objectives and outcomes have been achieved. It is therefore a management tool, which can make an effective contribution to improving performance at the institutional level or at a subject or departmental level within institution.

Taylor and Hill (1993) stated that quality assurance involves supplying evidence to external agencies about an organization's potential effectiveness. Quality assurance is the mechanism by which institutions meet the requirements of external accountability by demonstrating that they have in place both the management philosophy and the procedures needed to ensure that all those engaged in the activity have a responsibility for ensuring that the activity is carried out to the appropriate level of quality. Internally quality management is the framework within which quality assurance operates, and within which policies to promote quality improvement can be developed (Green 1993).

#### **1. 3. 4. Total Quality Management definitions**

Garbutt (1996) states that «total quality management involves satisfying customer requirements at least possible cost». TQM according to Doherty (2008) is a holistic management system requiring the development of a system of wide culture. In a TQM culture, everyone, and whatever his/her role, task or position in the organizational hierarchy is responsible for the management of his/her contribution to the whole. Taylor and Hill (1993) argue that the process of TQM is described as a never ending owing to the changing demands of the environmental the relentless search for improvement opportunities. Quality management is moreover defined as «the aspect of the overall management function that determines and implements the quality policy (Green; 1993). TQM refers to a quality emphasis that encompasses the entire organization from supplier to customer. TQM stresses a commitment by management to have a continuing company wide drive toward excellence in all aspects of products and services that are important to the customer (Heizer and Render 2008).

#### **1. 3. 5. Quality Education System**

The ISO ([www.iso.sc](http://www.iso.sc)) has established a standard for quality assurance. They define a quality system as one in which:

- The organizational structures, responsibilities, procedures, processes and resources are designed to implement the management of quality.
- Management develops, establishes and implements a quality system as the means by which stated policies and objectives are accomplished.
- The quality system is structured and adopted to the organization's particular type of business and takes account of the appropriate elements outlined in the international standard.
- The quality system functions in such a manner as to provide proper confidence that:
  - the system is well understood and effective
  - the products or services do actually satisfy customer's expectations
  - emphasis is placed on problem prevention rather than dependence on detection after occurrence.

While as quality we generally mean the continuous refinement of products and services, TQM is about whatever can be done by the school management using all the modern

methods of administration in order to achieve quality. Whereas, quality assurance is all the methods, procedures, policies, and implementations in order the idea or the concept of quality to be certified. Moreover, the systematic evaluation of quality level and implementation is assured by quality assessment. Finally, a quality education system should be a system that concludes all the organizational structures, responsibilities, procedures, processes and resources to achieve quality of the service, quality management and quality assessment.

## **2. The structure of the Greek Educational system**

### **2. 1. The Greek educational system in general**

Education in Greece is a constitutional protected function, and it is free offered through public schools including free books offer to every student-pupil as well as scholarships offer to the high-achievers. The Greek educational system is consisted of three basic levels of studies, the elementary, the secondary, and the higher. Higher education includes the Higher Educational Institutions and the Higher Technological Educational Institutions. Secondary Education concludes, Gymnasia and Lyceums (general and professional) and professional schools. Gymnasia accept elementary school graduates, it is obligatory for all pupils and offer three years studies. Lyceums accept gymnasium graduates and lasts three years also. After graduating from Lyceum pupils who pass through panellenic examinations enter in higher education.

### **2. 2. Elementary Education**

Elementary Education is consisted of Kindergarten and Elementary schools. In Kindergarten parents can enroll infants who have completed, by the end of December, their 4<sup>th</sup> year of life and lasts two years. Elementary is obligatory and lasts six years. In Elementary school parents enroll pupils who have completed by the end of December their 6<sup>th</sup> year of age. Also, there are all day Elementary schools, which have been initiated in 1997 according to 2527/1997 law, that contribute to extra education to pupils that want to stay at school longer, in order to prepare the next day's homework, to get involved in different creative programs, as computer learning, dance, athletics, painting and various other activities.

In Elementary schools both general teachers and branch teachers can teach. General teachers are graduates of Higher Educational Institutions (Universities) and teach all principles except Physical Education, Foreign Languages and Music, subjects that are taught by brand teachers.

The Elementary School administrators are selected every four years according to certain criterias and they are coming from the teaching personnel. The school curriculum is

designed and imposed by the Educational Ministry and it is identically applied across Greece. (Saitis, 2007).

The administration system is based on a strict hierarchical model which ends up to the Ministry of education which is both the commander and the final receiver. It is more than obvious that the Greek Educational system is extremely centralized and does not offer any opportunity to periphery in terms of decision making and differentiation. From the perspective of administration schools refer to Offices of Elementary Education that belong (usually, an Office of Elementary Education includes 20 School Units), Offices refer to the Directories (usually include 5 Offices) and Directories refer to the Peripheral Directory which is the highest decentralized organization in the Greek public administration system (There are 13 Peripheries) which finally refer to the Ministry of Education.

From the respective of educational support teachers and schools are both under the School Advisor surveillance and support. School Advisors, reeducate teachers, give them educational support with appropriate advice as well as through evaluation and feedback. Of course, the above functions are strictly related to the available facilities, the school advisor-teacher ratio, as well as the educational laws obedience and application, something unrealistic in the Greek Public administration.

In addition, to the Educational levels and subcategories there are a number of different Organizations, Offices and Centers that contribute supportively to Education and cooperate not only with teachers and schools but also with parents and other members of society.

Teaching personnel in elementary schools can be divided into three categories in terms of work status. The dominant one is that of permanent teachers, some personnel deficiencies though are covered by substitute teachers who are usually hired with a ten month contract. Finally, there are a few teachers, usually them of the second foreign language (French, German) which are hired and paid on an hourly basis.

Concluding, the Greek educational system consists of three levels, Elementary, Secondary, and Higher, which are divided in different subcategories. It is a free offer system in general with nine years obligatory school attendance that starts from Elementary School (6 years) and ends up after Gymnasia's (3 years) graduation. After that pupils have to decide which way should they go for pursuing their aspirations.

### **2. 2. 1. The role of the school director in Elementary schools**

The school principal supervises and coordinates all the functions of school life. Especially, organizes and coordinates subgroups as pupils, teachers, and local community members, is responsible for curriculum application and school function. He/she is also responsible of the facility maintenance and school environmental safety. Cause to the fact that all these functions cannot be carried out by one person, school director needs competent colleagues to administer school. While school director in the reality applies human resources management, since school personnel is the most important input in educational procedure, they do not have any right or opinion in teacher's selection. Moreover, they cannot modify the curriculum, neither have an opinion on the school's layout and construction. Central government has not given any significant power to school directors in order to achieve executive management. On the contrary, school principles function under strict supervision and guidance without having any opportunity to create new policies in order to differentiate the school's product and earn the competitive advantage, unlike other European countries with decentralized school administrative systems.

In short, in the Greek educational system, school directors, don't have a certain administrative education either before or after their nomination, and individuals who earn the positions are usually political friends of a governing party. School directors after their nomination try to manage personnel they have never chosen, which every year changes sometimes more than 50%, to apply a given curriculum, and maintain a sufficient and old facility. Consequently, a school director is not a dynamic, empowered and authorized manager but rather a close supervised instrument that cannot change drastically the educational service product.

### **3. Quality Management**

#### **3. 1. Quality in general**

Total Quality Management is a holistic approach affecting every aspect of the organization with a view in building quality into it. The focus of the TQM is twofold. First, the meeting of customer needs and secondly, the continuous improvement always connected with the cost of quality (Deming 1993).

Juran (1989) focuses on three different procedures of quality which are:

1. The quality Programming
2. The quality Control
3. The quality Improvement

Crosby (1979) on the other hand passes quality in the aspect to manufacture a product or to offer a service perfect in the first time without any defects (Zero Defects). Also, he indicates four strict positions for the management.

1. Quality is the attempt to satisfy customers
2. Quality is achieved with the defect avoidance
3. The only performance model is the «Zero defect model»
4. The only performance indicator is the cost of quality

According to Crosby, quality implementation reduces the cost of production. Feigenbaum (1991) claims that the achievement of quality targets is a result of the involvement of all input factors. Ishikawa (1986) divides the quality characteristics in «true characteristics» and «substitute characteristics». The first one is connected with the customer's opinion relating to the product's credibility. The second one is the producer's aspect according to the product's performance. Ishikawa developed seven fundamental tools of quality which can resolve any rising problem in business or Organization.

Dale and Cooper (1992 p. 300) propose seven key elements of quality management implementation. Traditional approaches of management such as authorization and participative style does not include the above elements. The only style that ensures the quality promotion is the «Empowerment Style».

- Commitment and Leadership of the chief executive
- Culture change
- Planning and Organization

- Education and Training
- Involvement
- Recognition
- Measurement

The involvement of the personnel is the greatest factor of quality implementation.

According to Storey (1992) TQM provides the following areas of opportunities:

- Business Strategy: The necessity of the personnel involvement in business strategy planning.
- Human Resource Strategy: The human resource strategy has to be matched with TQM
- TQM implementation: The personnel should be highly involved in Total Quality Management implementation.
- TQM within the personnel function: The application of quality criteria to the personnel function.

Pedler, Baydell and Burgoyne (1989) believe that quality is best applied in learning organizations which facilitate the learning of all its members and continually transform themselves. The application of the organizational behavior thought is a collective learning process. Also, it presumes that organizational learning is greater than the sum of individual learning in the organization. Organizational change and development implementation can be carried out according to Dessler (2000 p. 92) by cultural strategic change, Structural change, Task redesign, Technological change, Changes in people attitudes and skills.

Organization that intends to change should follow the next 10 steps:

1. Establish a sense of urgency
2. Mobilize commitment to change through joint diagnosis of business problems
3. Create a guiding coalition
4. Develop a shared vision
5. Communicate the vision
6. Enable employees to facilitate the change
7. Generate short term wins
8. Consolidate gains and produce more change
9. Anchor the new ways of doing things in the company's culture
10. Monitor progress and adjust the vision as required

### **3. 2. Quality in Services**

Due to its differences with the products, services should be planned, monitored and managed differently in order to meet the criteria of TQM. Moreover quality in services is very difficult to be measured because of its intangibility. Services also differ from products because: service's simultaneity of production, delivery and consumption, perish ability, variability, of expectations of the customers and the participatory role of the customers in the service delivery (Heizer and Render, 2008).

According to Parasuraman, Zeithaml and Berry (1985) the determinants of service quality are related to the service processes and are the following:

- Reliability, which involves consistency of performance and dependability. It means that the firm performs the service right the first time and that the firm honors its promises.
- Responsiveness, concerns the willingness or readiness of employees to provide service. It involves timeliness of service.
- Competence means, possession of the required skills and knowledge to perform the service.
- Access, involves approachability and ease of contact
- Courtesy, involves politeness, respect, consideration, and friendliness of contact personnel.
- Communication, means keeping customers informed in language they can understand and listening to them.
- Credibility, involves trustworthiness, believability and honesty. It involves having the customer's best interest at heart.
- Security is the freedom from danger, risk or doubt.
- Understanding/Knowing the customer involves making the effort to understand the customer's needs.
- Tangible, include the physical evidence of the service.

Sureschandar, Rajendram & Anantharaman (2001) since they critically examined all the literature written in TQM in services realized that it was examined by different researchers in terms of different features. Therefore, they decided to develop a holistic model of total

quality service addressing all the identified 12 critical dimensions of Quality management as:

1. The management commitment and visionary leadership.
2. Human resource management.
3. Technical system.
4. Information and analysis system.
5. Benchmarking.
6. Continuous improvement.
7. Customer focus.
8. Employee satisfaction.
9. Union intervention.
10. Social responsibility.
11. Service capes.
12. Service culture.

They finally concluded that the only purpose of the organization is to achieve a mission or a goal. The Organization thought can only serve its customers through its employees. Consequently, customer focus and employee satisfaction should be the two prime priorities of an inspired Management using the TQM method. Thus, TQM based on the holistic model of TQS (Total Quality Service) using the appropriate commitment and leadership can lead though the above subsystems to the Organizational Excellence and Service recovery. Heizer and Render (2008) stated that quality can also help companies to make it to the top. In this case organizations train and empower fertile employees to immediately solve the problem.

According to Milakovich (1995 p.208) TQS requires action in the following areas:

- Integrating management function promoting teamwork, and flattening hierarchies.
- Defining customer quality requirements.
- Strengthening customer-supplier relationships.
- Empowering employees.
- Continuously improving processes.
- Understanding systems.
- Reducing poor quality costs.

Romero-Simpson (1990) has identified ten principles of human resource quality management which lead to T.Q.S. (Total Quality Service) culture:

1. Anticipate customer needs.
2. Obtain committed top-management leadership.
3. Educate for self improvement
4. Continuously improve process and systems.
5. Create an environment free from fear.
6. Develop a simulating work environment.
7. Teach and practice teamwork.
8. Stress communication not inspection.
9. Think statistically.
10. Encourage personnel commitment to change.

Milakovich (1995) identified 6 fields that deteriorate the implementation of quality service as follow:

1. Development on Top-down Management.
2. Management by objectives.
3. Annual Review and Merit System.
4. Overspecialization in job descriptions.
5. Ineffective productivity management techniques.
6. Fear of change.

### **3. 3. Quality in public Services**

The current economical crisis worldwide has brought to the discussion, even within the public organizations, ideas and qualities that have never been considered before. Especially, in Greek public services there has been applied a very solid inelastic policy irrelevant to the market rules and values. They have never examined, in the name of their contribution to the society, if they offered services that worth the money the organization spends for service production.

Been aware of the economical problems, the value of money spent for something, should be taken under serious consideration. Therefore, services even in the public sector should be as best as they can, with the lowest cost, in order the products-services to be

antagonistic and offer the added value for the organization, which will guide it to the competitive advantage gaining.

Consequently, public services and organizations should be consistent with the free market values and practices. Therefore, a quality directed management in public services will make the organization more efficient and productive, competent to replay to the harsh criticism that has been addressed by the media and the public opinion, has been charged to the public, and is related with negative public stereotypes as bureaucracy, unresponsiveness and poor quality. A lot of researchers and scholars have investigated the aspect of quality service of public organizations. Osborne and Gaebler (1992) president's Clintons' advisors have proposed 10 principals of TQS approach:

1. Government should act as a catalyst to «see to it that services are provided».
2. Empowerment and community ownership.
3. Managed competition rather than monopolies.
4. Mission rather rule-driven governance
5. Focus on outcomes, not inputs.
6. Meet citizen customer needs.
7. Foster entrepreneurial enterprises.
8. Stress prevention, not cures.
9. Decentralization, participation and teamwork.
10. Market-Oriented government.

Defining quality in public services Milakovich (1990 p. 161) claims that TQS is a public policy based on the theory that the greater the commitment an employee has in determining organizational goals, the harder he or she will work to achieve them. Furthermore, proposes ten guidelines for public sector quality improvement:

1. Make customer satisfaction the primary goal and ultimate measure of service quality.
2. Broaden the definition of a «customer» to include both those internal to the organization (employees in other departments) and those external to it (Vendors, taxpayers, contractors, regulators, suppliers)
3. Develop a common vision of the mission of the organization based on extended customer requirements.

4. Communicate a long term commitment to all customers, reward teamwork, and encourage process improvement and innovation efforts at all levels.
5. Provide expanded education, training, and self improvement opportunities in supervisory and leadership skills in order to exceed valid customer requirements.
6. Ensure individual involvement by establishing add supporting organization-wide process improvement teams.
7. Recognize, support and acknowledge employee loyalty, trust, and team participation.
8. Eliminate fear in work and remove barriers to developing pride in service (i.e. empowerment)
9. Provide the proper tools and training for everyone responds to extended customer requirements.
10. Make the necessary changes in public organizations to successfully implement the preceding goals. (Milakovich 1990 p. 22)

Concluding, we can definitely say that public services should change towards a market orientation. Among changes and renovations they ought to apply, is the management style. The TQM philosophy seems to be the most appropriate style of management that can help both the external and the internal clients which they consist the greatest part of society.

### **3. 4. Quality in Education**

#### **3. 4. 1. Dimensions-Components of quality in education**

Alike businesses, schools need a different way of management to push them in the new century. TQM is a new philosophy which indicates a constructive way of management that can change schools and make them more efficient, more effective, more productive, and more antagonistic. Therefore, the usage of qualitative methods both in teaching and in administrating could offer towards this direction.

Maxwell (1984) distinguishes six dimensions of quality:

1. Access: To include both geographical convenience and timeliness of access.
2. Equity: The provision of Education/Training service on the basis of measured rather than any other personal characteristic.

3. Relevance to need: The extent to which the package of service provided for a defined population meets their education/training needs
4. Social acceptability: The extent to which the service meets the expectations of the users, e.g. the interpersonal and environmental aspects of education/training.
5. Efficiency: The use of resources, money, people, buildings, and equipment.
6. Effectiveness: The balance of education benefits for an individual person, plus the avoidance of intervention which is inappropriate or useless for the individual person.

Donabedian (1986) came up with a different approach than that of Maxwell's and divided the Organizational functions into three different divisions:

- Structure: includes skills of the staff, and accommodations and equipment available.
- Process: are the methods which are used by the organization in order to produce products or services.
- Outcome: are the results which come up from the combination of structures and process of the organization.

Cuttance (1993) summarizes the quality features as following:

- Structural Dimensions: They conclude the external environment. A system perspective. A learning organization, constructing the future and leadership.
- Performance Dimensions: which conclude, decision making, and emphasis on outcomes?

Gray, Griffin and Nasta (2001) identified four sets of criteria to access quality of education:

- Accessibility: The local or community tank that a school recruits its students.
- Teaching and Learning: Implies to the teaching and learning, and learning effectiveness.
- Student's achievements: The success of the students when he/she teaches a desired goal.
- Validity: Is the forth dimension of quality which replays to the question that this course achieved its aims?

The Scottish Office (1993) gives five components of quality schools:

1. The curriculum
2. The quality of teaching
3. Resources
4. Parental involvement
5. Training of head teachers

Partington and Brown (1997) refer to some new factors of quality schools: as curriculum design, content and organization, teaching, learning and assessment, student progress and achievement, student support and guidance, learning resources, quality assurance and enhancement. The Welsh system according to Assessors' Handbook, (HEFCE, 1996) points as well four quality elements:

1. Student achievement
2. Teaching and learning
3. Assessment and feedback of and about teaching and learning
4. Course or program design and curriculum.

### **3. 4. 2. Quality Strategies in schools**

The main issue of the companies is to increase profits. To achieve that, customers should be completely satisfied by the product of the services offered. Consequently, to achieve quality, companies and organizations can establish a quality strategy among that, of differentiation, low cost, and quick response. To increase the added value, educational services may meet quality criteria in order to increase profitability and reduce cost. While in the public services profitability is not an issue, the correct use of money and their return on investment or the best value for money spent for the educational services, could increase even more the quality of educational services (Heizer and Render, 2008 p.194).

A successful quality strategy begins with an organizational environment that fosters quality, followed by an understanding of the principles of quality, and then an effort to engage employees in the necessary activities to implement quality. When these things are done well, the organization typically satisfies its customers, and obtains the competitive advantage.

Reynolds (1992) and Levine (1992) found the elements that contribute to the school effectiveness. These elements can be adopted and reinforced by a certain strategy which stresses:

- A clear and shared vision of what students are to achieve in the particular school.
- A means of translating this vision into a strategic development plan for the school.
- Ownership of the vision and development plan by all stake holders in the school community who is responsible, for what, and by when.
- Identification of the professional development requirements for staff to implement the schools development program.
- Structures and processes for monitoring the implementation and effectiveness of the strategies for school development, with provision for feedback to the implementation process itself.
- A periodic review and evaluation of achievements, one which takes stock of plans for further development in the school.

A proper quality strategy should include both systems, inside and outside schools. Internally, curriculum, school development, student services, financial advice, facility maintenance, organizational culture and climate could be the issue, while externally the connection among the schools and the parents, the community, the neighboring organizations and business on the one hand, and general knowledge and technology transferred and incorporated, on the other.

Such quality strategies could involve, staff development and cultural change, rewarding excellence, establishing a new educational policy and incorporating self evaluation.

### **3. 4. 3. Staff development and Cultural Change in school system**

Staff development is about supporting individuals, groups and organizations to understand develop and refine their approaches to their work, to consider changes taking place, and to develop new resources to them. Cause to the factor that education is highly depended on human resources, staff development should be a critical aspect of quality in education since it is highly valued in its contribution to organizational development. Cheng and Tam (1994) defined staff development as different types of programs and activity which aim to empower teachers and administrators to develop positive attitudes and beliefs about education and management, to become more effective individual and teams, to be competent in teaching students and managing the school process, as well as to help the school adapt to its changing environment. Administrators, teachers and other support staff

in the school are often the subjects of staff development programs. Administrators should have more professional experience than teachers have and their development needs may be more about management, leadership, mentoring and team-building techniques. Cheng and Tam (1994) suggest that staff development activities should be developed in three levels; an individual, a group, and a school level:

- At the individual level, staff may need the knowledge and skills to accomplish their assigned tasks.
- At the group level, administrators and teachers may need to learn team working to contribute their efforts collaboratively.
- At the school level, administrators and teachers may need to learn to develop a shared school vision and to create a whole school environment for better teaching and learning.

Partington and Brown (1997) support that investment in staff on education, means not only investing in a rewards and promotions system which recognizes excellence, but also effort in curriculum and educational development and innovation.

### **3. 4. 4. Rewarding excellence in teaching**

Thomson, Cook, Cottrell, Lewis, and Miller (1998) admitted that there are not measures in place to formally reward successful and innovative teaching in the field of higher education. Furthermore, they suggested that excellence in teaching could be encouraged with:

- «Good» teachers could perhaps obtain incremental points by acting as mentors for new staff entering the profession.
- All teaching staff should be required to gain a postgraduate qualification in teaching.
- The real need is for resourcing.
- Evidence of appreciation for senior management would be gratefully received.
- Better facilities for teaching would be the best reward of all.
- The reward must be located within mainstream curriculum development.
- The emphasis should be placed to make the promotion of effective teaching and learning a central part of the role of administration and school advisors.

School administrators and managers should foster excellence in teaching and learning. Therefore, a « Managing Excellence» might be encouraged and rewarded. A fostering of excellence in teaching by groups/teams of staff, as well as in individuals, might be examined. Elementary schools have to start investigating, funding and operational zing a new policy to support the rewarding of excellence in teaching.

### **3. 4. 5. Educational policy and quality in Education**

Zgaga (2000) declared that educational policy is a very crucial matter affecting the issue of quality in education. She claimed that the notion of quality includes not only the assessment of students' achievements but also the description, school atmosphere and all other education-related issues, including the hidden curriculum. Also, she indicates the three steps that can reinforce quality assessment and assurance process:

1. Continuing in-service training teachers.
2. Evaluation of new programmes, syllabus and catalogues of required knowledge.
3. Self evaluation by schools.

Nevertheless, among the above, the most crucial factor in schools quality development and assurance is self evaluation. Up to the present school inspection policy that many countries have applied in their educational system have not given the expected results. On the contrary, they have realized that in modern societies, schools can operate at a high quality level only if they develop their specific culture of self evaluation, which is the means, and quality assurance the goal in this process. The main priority of schools should be to prepare the set of instruments that will enable schools to continuously assess and improve their own work either themselves or with partial external assistance. To improve quality in education moreover Taylor and Hill (1993) suggested the establishment of a strategic quality management which will focus on three different aspects, training, innovation, and resources availability.

### **3. 4. 6. Quality Management and Educational change**

While it is generally acceptable that the educational system should be reformed it is not clearly defined to what direction this change should be addressed. West-Burnham and Davies (1994) proposed that a new school leadership could possibly initiate the reform by using TQM. They also considered that a number of features of that quality seem to be valid in an educational context such as:

1. The holistic nature of the total quality. Integrating managing and teaching.
2. The emphasis on values.
3. Focus on customer.
4. Continuous improvement
5. The quality tools.

Therefore, according to the authors the initiatives of school principles should be directed towards:

1. School mission
2. Leadership
3. Customer focus
4. Quality assurance

Schools that intend to be restructured and innovated might serious take under consideration the different components of total quality, especially from the school management aspect. TQM's philosophy proposes a management system that addresses the needs of all members of the school community all the time. Cuttance (1993 p. 12) defined quality assurance «as the planned and systematic actions necessary to provide adequate confidence that the education provided will meet the needs of clients». Quality assurance focuses on the effectiveness of schooling and thereby seeks to prevent performance problems arising in the first place. Thus, quality assurance is a way of evaluating the effectiveness of structure and the process required to achieve an outcome, it does not seek to prescribe the ways of doing things and the same way across different subjects.

### **3. 4. 7. Quality Assurance in Restructured School Systems**

Cuttance (1993) investigated the quality assurance in restructured school systems viewing the issues from two different points. First, for the reform of school decentralization and second, discusses the quality assurance programs in school system analyzing its key features. Decentralization refers to the redistribution of decision making powers and authority to local (regional) branches of the head office accompanied also by a measure of operational autonomy. Decentralized schools have the opportunity, with the appropriate leadership and management, to implement quality assurance. Also schools that analyze the features of quality system in terms of both, structural dimensions and performance dimensions can establish quality assurance, especially using benchmarking of best

practices to acquire the skills and knowledge from the external world modifying schools in «Learning Organization».

### **3. 4. 8. Leadership and the development of quality culture in schools**

It is empirically well known, and systematically improved by many investigators that a good management and leadership can make the difference in the function of the organization and give it the competitive advantage. Fox (1991) classifies leadership among the most crucial aspects to the top management responsibility besides the aspects of developing a vision for the future, setting specific quality objectives and establishing the budget for quality.

Berry (1997) used the paradigm of TQM as a general philosophy to procure quality culture in schools. To acquire this culture, leader's fundamental responsibility is to develop a learning community characterized by representative and democratic decision making, critical reflection, dialogue and shared commitment to achieve organizational outcomes. In schools leadership is obligated to create not only a shared organizational vision but also to create the understanding, the knowledge, and the skills to implement the cultural change. Moreover, leaders should develop quality philosophy, since they understand the means of quality, be committed to it, and have the intention to improve schools. As a whole, TQM seems to be a valuable and indicative managerial tool that can initiate and preserve into the school organization continuous improvement and quality philosophy.

## **4. Quality assurance**

### **4. 1. Quality assurance in education**

The improvement of education is not only a matter of resources (especially financial) in terms of inputs, but also a matter of processes and procedures for gained outputs. Therefore, quantity in education can not by itself guarantee educational excellence if quality is excluded. Aspects of education need to be improved for educational improvement. These are, the curriculum, the language of teaching, the student guidance, the student streaming, the management, the teacher student ratio, the physical environment, and the teacher education. Education and manpower branch and education department, (1991); Education commission, (1984-1992).

Cheng and Tam (1997) proposing a multi-model of quality in education motivate leaders and educators to choose certain models of quality that suit the specific case and occasion. To explain the quality implementation Cheng and Tam introduced seven models of quality in education. They claimed that education quality is a multi-dimensional concept and cannot be easily assessed by only one indicator.

Generally speaking, quality can be perceived differently by different people using of course and different strategies to achieve it. These models are:

1. *Goal and specification model*: refers to the achievement of stated institutional goals conformance to given specification.
2. *Resource-input model*: refers to the achievement of needed quality resources and inputs for the institution.
3. *Process model*: refers to the smooth internal and fruitful learning experiences.
4. *Satisfaction model*: refers to the satisfaction of all powerful constituencies.
5. *Legitimacy model*: refers to the achievement of the institution's legitimate position and reputation.
6. *Absence of problems model*: refers to the absence of problems and troubles in the institution.
7. *Organizational learning model*: refers to the adaptation to environmental changes and internal barriers to continuous improvement (Cheng and Tam, 1997).

They also suggested all seven models of quality in education should be important in long term planning for achieving total education quality. Cheng (2003) gives a new inside to quality assurance in education dividing it, in three waves, the internal, the interface, and the future. The first wave of reform focuses on internal effectiveness, in order to improve internal performance, especially the methods and processes of teaching and learning in educational institutions. The second wave of reform is addressed towards the importance of existing structures, organizations, and practices in education at different levels to meet the stake-holders needs and expectation. The third, wave of education reform stresses future effectiveness in terms of relevance to the new approach in education concerning contextualized multiple intelligences and individualization. The author believes that the educational institutions that ensure internal quality, interface quality and future quality they can achieve total quality assurance in education. Thinking likewise the efforts for educational quality should include all three types of quality to achieve total quality in education. Despite the various constrains and problems, which put barriers to the simultaneous development of all three quality waves, educational institutions should struggle in the long run to learn and become effective to provide services and future quality of high internal quality, interface quality, in a dynamic way.

Freeman (1994) proposes another approach to quality for secondary schools indicating four main principals. Firstly, focusing on pupils and on learning, secondly, quality must reflect stakeholders' needs insisting that stakeholders must be central to the quality process. Stakeholders are classified in statutory, accountable (e.g. Governors), employed stakeholders (teachers), and others (e.g. parents and pupils). The stakeholders, according to Ribbins and Burridge (1992), can be categorized as external (e.g. governors and parents) and as internal (pupils and teachers). Thirdly, quality has to be demonstrable. Meaning that it should be a public issue-process especially in the public institutions. Fourthly, quality is about feedback. Meaning that quality's ultimate target is to create a learning organization. Consequently, quality itself it's a servant of all stakeholders.

## **4. 2. Return on Quality**

In implementing quality the value of money, that have been spent to achieve it, play a very crucial role. The value of money in terms of quality is called «Return on Quality». As Weller (1996) describes it this involves assessing customer need and expectation,

producing quality outputs which meet or exceed customer satisfaction, and then documenting these returns by directly linking quality education outputs with the inputs of time, money and effort. All the school stakeholders (teachers, administrators, students, parents, classified personnel and community members) have the right to see gains on their investment. To assure that the issue of accountability is more than necessary in the educational procedure. Accountability means, demonstrating quality returns on quality investment with procedures and services provided more efficiently and effectively to satisfy customers and meet expectations. When quality and value dimensions are successfully communicated, customer business creates customer loyalty and attracts new buyers. Customers understand the relative quality of the service and the return on their quality investment for the price paid (Murgatroyed and Morgan 1993). The return on quality investment in education will be translated in better grades, increased learning, and greater satisfaction from teachers, parents, and students.

Organizations therefore, should always assess customer satisfaction and expectations using customer surveys and interviews. The results of this assessment can be used as a basis for planning new strategies to increase product quality, reduce waste and rework, and demonstrate the continuous effort of the organization for high quality products which offer a great value for the investment.

Lately, the increased public demand for transparency and accountability stresses the necessity of demonstrating in the public schools the issue of return on investment, associating and comparing within the school functions the quality educational program and the investments of time, money, and effort.

Return on investment can be seen also reversely by the teachers and educators, concerning themselves. Therefore, in order to improve the status of all teachers, education authorities, governments and intergovernmental organizations must ensure that teachers receive the appropriate moral and material recognition in accordance to their qualifications and responsibilities. In such way it will be a worthwhile return on the investment they have made for their own education, work and effort (Fredriksson 2004).

#### **4. 3. Total Quality Management in Education**

To promote, assure and reinforce quality in Greek schools, the application of TQM is necessary. Using the administrative technique or philosophy of TQM the greatest functions

operations such as teaching, administration, communication and interaction with the external school environment can be adequately improved. Of course, the main effort of school should be addressed on student's learning and achievements. To realize that nevertheless we need the whole system to work towards this direction by being supportive. Therefore, good teaching by itself can not assure quality. Instead, all the organizations should work in such a way that will lead to a good teaching and affective pupil learning. Zavlanos (2003) refers to four qualities that students can develop in a good school quality:

1. Knowledge ability
2. Practical ability
3. Critical and creative thought
4. Character

The structure of today's school system is more associated with taylorism (an old fashioned administrative method) than with a new decentralized and employee empowered structure. Taylorism or the Taylor system; Taylor himself referred to it as Process management is a theory of management that analyzes and synthesizes workflows, with the objective of improving labor productivity. In management literature today, the greatest use of the concept of Taylorism is as a contrast to a new, improved way of doing business. In political and sociological terms, Taylorism can be seen as the division of labor pushed to its logical extreme, with a consequent de-skilling of the worker and dehumanization of the workplace (wikipedia, 2010). That is quite obvious, if we observe the hierarchical structure, the small participation of teachers in decision, making, the lack of teacher's empowerment and authorization and moreover the emphasis that is given to the final product and not to the procedures that lead to the good product. In today's high antagonistic global society it is more than necessary to provide our children the best education and training. Among the qualities of good education are; innovation, flexibility, adaptability, multitask orientation, research ability, critical thought, analysis and synthesis ability, communication, team working, and openness to changes.

Manufacturers in order to compete in the global market place must depend on a well-trained, technologically prepared workforce. If they cannot find those markets at home they will seek locations where they can find that labor supply. If in a business the production process fails to satisfy the customer because it is incapable of producing their products, how can industries then produce theirs?

To work productively, the Greek economy needs highly educated people to face successfully the future. This difficult challenge should be taken by schools, because new job opportunities demands highly trained and multi-skilled individuals. Consequently, schools should prepare the future workforce for quality orientation. To implement that, a number of incentives and motives should be given to teachers, pupils, parents and the rest of the participants.

#### **4. 4. The transfer of Total Quality Management from industry to education**

Garbutt (1996) examined how TQM can be transferred from industry to education. She concluded that attitudes and priorities in terms of quality appear to be alike. Quality requires commitment from the head manager it should involve staff in its implementation. Moreover, personnel should feel ownership of quality and continuous improvement searching.

In the school environment quality should be perceived as:

1. An idea to make things better
2. A positive optimistic attitude to progress
3. An endeavor towards excellence that involve every part of the system it is holistic
4. A motivation system that reward achievements and positive policies in curriculum and other school areas including behavior
5. A generator of proud ness
6. Continuous staff appraisal which provides useful feedback
7. Encouragement of the staff to develop skills and methodology to improve quality for teaching and pupil's achievement.

According to Carbutt (1996) teachers in nowadays have plenty of opportunities to «borrow» the qualities of industry. Wood (1993) also suggests that schools can learn from industry in terms of strategic planning, training, provision and the ethical standards. To adopt TQM philosophy and use effectively the resources, maximize the opportunities for pupils, develop their personnel, and fulfill the needs of the local community. Schools need to be restructured and transformed from a hierarchical organization to a team based, problem solving and self directed learning organization. To promote staff development, decision

making, empowerment, authorization of the personnel, reinforce appraisal and create a quality leadership at all levels. Moreover, school leaders should take care to drive out fear, to break down barriers and make individuals believe that things can be continually improved.

#### **4. 5. Integrating, Total Quality Management and Human Resources Management.**

Simmons, Shadur and Preston (1995) examining the relationship between TQM and Human Resources Management stated some categories of subject interrelation:

1. Human Resources Management planning
2. Employee involvement
3. Performance management
4. Education and training
5. Well being and Morale
6. Communication

They further grouped these categories in four functional areas:

1. Work organization which emphasizes not only the team based work organization and flexible work practices, but also the techniques of within the group job relation and multi skilling. Quality can be improved as well by reinforcing the cooperation and interaction among business cells and departments.
2. Planning and Staffing. The complete understanding of organizational goals and values is baseline of effective work towards them. Teamwork is also an extremely essential process for assuring quality.
3. Performance appraisal and remuneration are important mainly as a key to feedback provision to the employees. Rewards and excellent work bonuses should be given instead of an individual to a group basis to encourage collectiveness and teamwork.
4. Training and development stresses the necessary alterations and the required skills that should be provided to employees and managers. The philosophy of multi-skilling can be predominant within the organizational structure.

Employee's contributions must be taken into account by the system regarding team process improvements and inputs than individual achievements. Finally, Simmons, Shadur and Preston (1995) concluded that such core values, strategic directions and espoused culture should be centralized and then diffused to the rest of the organization. On the contrary, all the remaining policies and practices could be decentralized and autonomous for the specific workplaces, so they have freedom to adopt their specific policies.

#### **4. 6. Working with Emotional intelligence**

School staff especially leaders should be highly qualified in terms of the aspect of intelligence. The new dimension of intelligence, known as emotional intelligence, is the ability to elicit cooperation and collaboration with others. Reversely, the old meaning of intelligence refers to the ability of someone to hold hard technical skills. Emotional competence is particularly central to leadership, a role whose essence is getting others to do their jobs more effectively for successes at the highest levels, in leadership positions, emotional competence accounts for virtually the entice advantage. Therefore, the concept of emotional intelligence regarding the human resources of the organization is of a great importance, improving and assuring quality (George, 2000). Schargel (1996) proposed some ways of building TQM foundation with the educational faculty by:

- Systematically identifying errors locating their causes and removing them, we are changing the atmosphere of the school for the better.
- Meeting regularly with the principle and staff to suggest ways to upgrade the programs and make students more employable.

#### **4.7. Total Quality Management in Higher, secondary and elementary Education**

Most of the research conducted, in education related to TQM has taken place in the setting of higher education (Hoecht, 2006). Moreover, the introduction of quality management in university teaching is accompanied by a legitimate discourse referring

to the principles of accountability, transparency and good service. Quality and quality systems differ among them depending on whether they are designed for management control or for learning and innovation.

TQM in Higher Education in learning requires first, active involvement of the learner in the educational process and a variation of learning style. Secondly, TQM emphasizes customer focus determining who the customers really are; students, employers, taxpayers, society. Thirdly, TQM assumes that employees will share the «quality philosophy» as it is defined by Deming (1993).

Sitkin and Sutcliffe (1994) states that total quality learning depends on incentives for innovation, leadership support for independent thinking and taking risks as well as evaluation through general values and judgment rather than narrow performance feedback and evaluation through precise standards. Hoecht (2006) in his research found that while the quality assurance had brought some benefits to students, its operation in the university was over bureaucratic, had high opportunity costs for themselves and addressed quality only at a rather superficial level. Also, academics should seek the principles of accountability, transparency and fairness, and quality management should be tailored to promote learning and innovation rather than bureaucratic control.

Kim-wai Sum and Dimmock (2008) examined how the standards of Physical Education provision can be improved in Hong Kong schools. Physical education is a very special course in the schools curriculum and it is of great importance because it has psychomotor, cognitive and affective impact to the pupils. They investigated the physical education curriculum, teaching and learning in physical education, assessment in physical education, pre-service and in-service physical education teacher training, leadership and management, organizational culture, and education and curriculum reform which both essentially and peripherally influence the development of physical education in schools. The purpose of their investigation was to find better ways towards quality in relation to education and Physical Education. They concluded that PE in Hong Kong schools can be improved in terms of quality in all of the above mentioned areas.

Sahney, Banwet and Karunes (2004) applied the SERVQUAL (Quality assessment instrument) process to identify the gap between perception and expectation and determine the level of quality of the educational system in India. They have found that

a structured, quantitative approach to service quality can help an organization to understand the factors that the customer understands as continuing quality. The gap analysis showed the levels of satisfaction/dissatisfaction with different parts and attributes of the service were provided. The negative gap indicates that the expectation level was higher than the level of perceived quality and consequently there is a dissatisfaction among the students indicating at the same time our priority areas for improvement.

Thakkar, Deshmukh and Shastree (2006) in their purpose to explore the potential for adoption TQM in self-financed technical institutions concerning the societal demands come up to the conclusion that there is a strong need for continuous improvement, cultural change and effective use of financial resources to improve the value addition at each level. Policies, as good work culture, benchmarking and adoption of good practices and committed involvement of management in day-to-day work practices can help technical institutions in achieving competitive standards.

Mukherjee (1995) used the Ishikawa's model for quality of working life to analyze the teacher's involvement. He noted that individuals' ability to perform is the composite of his/her knowledge in the field and skill, while the two components are attitude and work environment. Thus, the basic determinants of the performance of an academic institution are the knowledge of the teachers, their communicative and interactive skills, their attitude towards the teaching profession, the work environment that characterizes the institution as well as others which influence or affect the former and lastly the physical material and technological resources available to the institution. Quite often, despite high levels of ability and motivation among individuals in an enterprise, organizational performance has not been satisfactory because physical and material resources are inadequate. It is not unusual competent and creative individuals, highly motivated to perform to the best of their abilities, and they are sometimes forced to work with scarce resources resulting in actual performance levels below their own expectation ultimately leading to withdrawal or demotivation.

Deming (1986) stated fourteen principles for transforming TQM in education to indicate what management needs to do to be able to deliver good service quality:

- 1 Create a constancy of purpose for improving the service
- 2 Adapt a new philosophy with management learning what their responsibilities are and by assuming leadership for change

- 3 Cease dependents on mass inspection for quality by building quality into the service
- 4 End awarding business on price. Award business on total cost and work with single supplier
- 5 Aim for continuous improvement of the service to improve quality and decrease costs
- 6 Institute training on the job
- 7 Institute leadership with the aim of supervising people to help them to do a better job
- 8 Drive out fear so that everyone can work effectively together for the organisation
- 9 Break down barriers between departments and encourage departments to work together
- 10 Eliminate slogans, exhortations and numerical targets for employees and recognise that difficulties belong to the whole system
- 11 Eliminate quotas, numerical goals and management by objectives and substitute leadership
- 12 Remove barriers that rob people of their right to pride in their work
- 13 Introduce a vigorous education and self-improvement programme for all employees
- 14 Put everyone in the company to work to accomplish the transformation

Deming identified uncertainty and variability as the two major problems in the service delivery. According to him, variability is a major source of poor quality while inconsistencies in service delivering annoy and frustrate customers and damage the reputations of organizations. Deming also established the meaning of the «Profound Knowledge» which is consisted by four interrelated parts:

- Appreciation of the system
- Understanding of variation
- Theory of knowledge
- Psychology

Moreover Deming proposes management to adopt his continuous improvement cycle of DPAS (do, plan, act, study) approach which refers to the organization's need, do, plan, act, and then study.

Redmond, Curtis, Noone and Keeman (2008) selected and described six of the fourteen Deming's principles and their implications management, and moreover highlighted the relevance of these principles with higher education. The principles they examined were:

- a. Adapt a new philosophy with management learning what their responsibilities are and by assuming leadership for change
- b. Cease dependents on mass inspection for quality by building quality into the service
- c. Aim for continuous improvement of the service to improve quality and decrease costs
- d. Institute leadership with the aim of supervising people to help them to do a better job
- e. Drive out fear so that everyone can work effectively together for the organisation
- f. Break down barriers between departments and encourage departments to work together

The authors concluded that the six principles emphasise critical considerations for responsive educational management including leadership, quality improvement as against reliance on inspection, teamwork, the removal of fear in the workplace and the removal of organizational barriers that rob people of their right to pride in their work.

Finally, Toremen, Karakus and Yasan (2009) researching in the specific field of primary education in Turkey, questioned on how and to what extent are the quality management practices determined, based on teachers' perceptions and how these perceptions are interrelated to different variables. The dimensions of TQM practices were:

1. Clarity of school principles
2. School management
3. School improvement
4. Quality of school life
5. Change management
6. Adoption of TQM philosophy

They concluded that:

- There were problems with the concept of «change management». Hence, schools need managers characterized by transformational leader style to implement changes.
- There are differences among the leader's perception with respect to TQM according to the variables of branch, level of education and tenure. But there are not differences in respects to the gender of the teachers. These differences are revealed due to the teacher's different background or level of involvement in Total Quality Management implementation process.

In conclusion, TQM theory has been introduced by different scholars; Deming (1993); Juran (1989); Crosby (1979); Feigenbaum (1991); Ishikawa (1986). Japan was the first country, that this administrative system was implemented after the year 1950 in the field of business and industry. The application of this method has gradually expanded not only geographically, covering the most advanced countries worldwide, but also in different areas of production as services, including public services and public education. Most of the research conducted in TQM concerning the field of education was implemented in Higher education. In Primary Education, only Toremen, Karakus and Yasan (2009) searched this matter in Turkish Primary schools of Malatya stating some small differences regarding the teacher's perceptions of TQM in combination with specialty, level of education and tenure-ship.

## **PART TWO**

### **EMPIRICAL APPROACH**

#### **1. Purpose and methodology of the study**

##### **1. 1. Aim of the study**

The present study aims to reveal what are the teachers' and administrators perceptions in the setting of elementary schools regarding the adoption of Total Quality Management principles in schools. Moreover, it intents to investigate how these perceptions are related to variables as seniority (1-10, 11-20, 21 and more years of work), gender (Man, Woman), Tenure-ship (Tenure, Substitute, Time-paid), level of education (Second Degree, Bachelors', Master's, PhD), specialty (Teachers, Physical Educators, Foreign Language Teachers, Music Teacher's, New Technologies Teachers), administrative position (Directors, Vice-directors, Responsible of the all-day school).

##### **1. 2. Population and sample**

The target of the population of this piece of research is the total number of educators that work in Eastern Directory Office of Elementary Education of Thessalonica. Among them are elementary school teachers, physical educators, Foreign Language Teachers, Music Teacher's and New Technologies Teachers. The number of educators is approximately 2500 individuals who work in schools that are located in the following municipalities:

1. Thessalonica
2. Kalamaria
3. Agios Pavlos
4. Pulaia
5. Panorama
6. Thermi
7. Vasilika
8. Mikra
9. Epanomi
10. N. Mihaniona

## 11. Thermaikos

The above area includes 6 offices of elementary education and approximately 150 school units.

The sample of the study consists of primary school teachers who work in the fifth office of elementary education in Eastern Thessalonica and work in 25 different schools. The method of sampling was the cluster sampling and the questionnaire was administered in 500 educators in 25 schools in addition. These schools are located in the municipalities of:

1. Vasilika
2. Mikra
3. Epanomi
4. N. Mihaniona
5. Thermaikos

Finally, 174 educators returned the questionnaire by filling it up properly to the researcher which is a 35% reply percentage.

### **1. 3. Research instrument**

This study has recruited the paper and pensile method, the questionnaire. After, an extensive review of literature, a questionnaire was formulated mainly based in Toremen, Karakus, and Yasan's (2009) questionnaire, which was developed for their study «Total quality management in Turkish primary schools» and moreover, in Sureshchandar, Chandrasekharan, and Anantharaman's (2001) instrument for measuring TQS (Total Quality Service, from the perspective of Management) with specific reference to the banking sector. The first questionnaire was inspired from the TQM scale of Rampa (2004) used to complete his doctoral degree.

After the questionnaire was completed it was handed to a number of specialists (professors and doctoral candidates of our department) to make sure that its language was comprehensible. Afterwards, some corrections were made. The final format of the questionnaire concludes 8 dimensions which contains 43 issues. The last dimension is an open question and seeks aspects and comments from the participants about TQM in education, and will be evaluated qualitatively (see appendixes). The dimensions that are included in the questionnaire are entitled as: Profile of Educators, clarity of school

principles, school management, school improvement, quality of school life, change management, adoption of TQM philosophy and an open question for comments and different opinions for TQM adoption in education.

#### **1. 4. The procedure of data collection**

The research was conducted in March 2010. The researcher visited all the 25 schools of 5<sup>th</sup> office and talked to the school Principles about the aim of the study and asked them to facilitate him to the questionnaire administration, fulfillment and gathering.

The questionnaire was administered to approximately 500 educators of different specialties (teachers, physical educators, foreign language teachers and music teachers). Educators were required to evaluate the indicators or Total Quality Management practices using a five point Liker scale of 1 to 5, when 1 is not at all, 2 least, 3 sufficiently, 4 much, 5 Very much.

After a week the researcher called the school principles to check the progress of the procedure and gave them further information and details when necessary. It was extremely difficult to convince educators to complete the questionnaire for different reasons. Sometimes while the schools directors agreed to cooperate in the reality did not do anything to motivate and encourage educators to participate in the research. Some educators had negative attitude towards any kind of research especially in the field of business administration while others always postponed the questionnaire completion. Therefore, after 2 or 3 calls to the school directors and approximately 20 days after the questionnaire administration the researcher collected as many questionnaires were completed by that time.

Our data analysis was conducted with the help of SPSS program. This study took as example the one that of Toremen, Karakus, and Yasan's (2009) conducted in Turkish primary schools of Malatya, nevertheless, in some critical aspects they differ:

1. While the Turkish sample is derived from one city (Malatya) our sample came from different cities of the region of Eastern Thessalonica as Thermaikos, N. Mihaniona, Epanomi, Mikra, Vasilika.
2. While educators in Turkey were trained in TQM in Greece that training has never happened.

3. While in the Turkish study the sample was randomly selected in our study we used cluster sampling.
4. In addition to the variables of the first study our study includes some different variables as seniority and administrative position, to investigate if aspects of educators about TQM were differentiated regarding the above variables.

## **1. 5. Validity and creditability of the instrument**

After the questionnaire was fulfilled it was handed to a number of specialists (professors and doctoral candidates of our department) to make sure that its language is comprehensible. Afterwards, some corrections were made in order the questionnaire to be valid and credible.

Examining the findings, we observe a high Cronbach's Alpha Reliability coefficient for the total score of six sub scores which comes to 0,970 (Table 11). Also, the general attitude of educators towards Total Quality Management principles is positive with the means of 126,9 when maximum are 174 (Table 12).

The general and most important finding of the study was that while the educators' aspects were in general positive regarding Total Quality Management in Elementary education, when we tested the different independent variables as age, years of experience, gender, further studies, Administrative position, and specialty we did not find any significant differences.

## **1. 6. Method of data analysis**

In spite the fact that school personnel was not trained in TQM, some of the questions referred to the TQM term, while the researcher was aware that they did not systematically know this management method. That was intentionally done to see if the educators know about this administrative method without being trained, because most of the principles that are used by the managers. That happens because some of the directors already know the method of TQM or in a different case the principles of TQM are identified with pedagogical principles, something that educators know very well. Some of the participants complained about lack of theory knowledge, nevertheless the construction of the

questionnaire gave the framework of TQM theory. Moreover, some of the participants were bothered by the term «customer», obviously focusing only to the negative aspects of the term in accordance to the public Greek opinion. As a matter of fact, educators don't want to see pupils, parents, other levels of education and society in general as customers, probably because they are afraid that they will be evaluated by them. In that case they have to prove that their services are qualitative and the public will check the relationship of cost-benefit. At this point we have to say that our questionnaire was administered in a difficult moment for the Greek society, cause to the huge public economical problems which caused wage reductions. Therefore, whatever was related to free market was confronted suspiciously by the educators.

To check if there are any differences between the demographic elements that are divided into two categories as Gender, Type of employment, further studies (Yes/No), Administrative position (Yes/No), the appropriate method for statistical control that was used was t-test examining the p value. If the score is  $< 0,05$  (level of significance) we can claim, with a mistake margin of 5%, that the score differences in different categories of independent variable is statistically significant.

For the cases of variables, as Age Groups / Work experience / Specialty, the technique of analysis of variance (ANOVA) was used. The p value of F parameter indicates, if for every score the difference between the subcategories of independent variable is statistically significant or not. If the significance price of F is  $< 0,05$  we can insist, that score differences in the different categories of independent variable are statistically significant.

## **1. 7. Characteristics of data**

### **1. 7. 1. Gender**

From a total of 174 subjects 74 were males therefore 42,5% and 100 females therefore 57,5% (table 1).

**Table 1: Gender frequencies & percentages**

		<b>Frequency</b>	<b>Percent</b>
<b>Valid</b>	Male	74	42,5
	Female	100	57,5
	Total	174	100,0

**1. 7. 2. Age group**

Regarding the age group the highest frequency were that of 41-50 with a percentage of 68,4 following the age group of 31-40 with a percentage of 20,1 in third position was classified the age of 50 and over, with a percentage of 9,2 in the last position was the age group of 25-30 with a percentage of 2,3 (table 2).

**Table 2: Age group frequencies & percentages**

		<b>Frequency</b>	<b>Percent</b>
<b>Age groups</b>	25 – 30	4	2,3
	31 – 40	35	20,1
	41 – 50	119	68,4
	> 50	16	9,2
	Total	174	100,0

**1. 7. 3. Work experience**

From the work experience aspect, replied 37 educators with 1-10 years of experience 21,3%, 69 educators with 11-20 years of experience 39,7% and 69 educators with more than 20 years of experience 39,1% of the total population (table 3).

**Table 3: Work experience frequencies & percentages**

		Frequency	Percent
Valid	1 – 10	37	21,3
	11 – 20	69	39,7
	> 20	68	39,1
	Total	174	100,0

#### 1. 7. 4. Specialty

As far as specialty is concerned in the first position were primary teachers with 144 responses 82,8%, in the second physical educators with 14 responses 8%, in the third position were foreign language teachers with 11 responses 6,3%, in the forth position were music teachers with 4 responses 2,3% finally a teacher of new technologies only participated which is a 0,6 percentage of the total population (table 4).

**Table 4: Specialty frequencies & percentages**

		Frequency	Percent
Valid	Primary Teacher	144	82,8
	Physical Education	14	8,0
	Foreign Languages	11	6,3
	Music	4	2,3
	New Technologies	1	,6
	Total	174	100,0

#### 1. 7. 5. Type of employment

In terms of type of employment 165 permanent educators replied with 94,8% percentage and only 9 educators paid on an hourly basis with 5,2 percentage (table 5).

**Table 5: Type of employment frequencies & percentages**

		Frequency	Percent
Valid	Permanent	165	94,8
	Hourly wages	9	5,2
	Total	174	100,0

**1. 7. 6. Studies**

As far as studies are concerned 112 educators didn't have any further education with a 64,4% while 62 educators have at least one more degree (table 7) with a 35,6%, from them 31 had a second degree percentage of 17,8% and 31 also had post graduate degree with percentage of 17,8% Table 6).

**Table 6: Studies frequencies & percentages**

		Frequency	Percent	Valid Percent
Valid	Second Degree	31	17,8	50,0
	Postgraduate	31	17,8	50,0
	Total	62	35,6	100,0
Missing	System	112	64,4	
Total		174	100,0	

**Table 7: Further Studies frequencies & percentages**

		Frequency	Percent
Valid	Yes	62	35,6
	No	112	64,4
	Total	174	100,0

### **1. 7. 7. Administrative position**

Finally, the subgroup of educators that hold administrative positions were 25 that means 14,4 of the sample and 149 with no administrative position which is 85,6 percent of our sample. From them 13 were directors 7,5%, 7 assistant directors 4% and 5 All day school responsible 2,9% (table 8, 9).

**Table 8: Administrative position frequencies & percentages**

		Frequency	Percent	Valid Percent
<b>Valid</b>	Director	13	7,5	52,0
	Assistant Director	7	4,0	28,0
	All-day school responsible	5	2,9	20,0
	Total	25	14,4	100,0
<b>Missing</b>	System	149	85,6	
Total		174	100,0	

**Table 9: Administrative position frequencies & percentages**

		Frequency	Percent
<b>Valid</b>	Yes	25	14,4
	No	149	85,6
	Total	174	100,0

### **1. 8. Characteristics of the open question data**

#### **1. 8. 1. Gender**

From a total of 174 subjects in the open question only 20 people replied 11% ( table 10). From them 8 were males 40% and 12 females 60%.

### **1. 8. 2. Age**

Among ages we noticed the following variation 31-40: 3 responses 15%, 41-50: 15 responses 75%, greater than 50: 2 responses 10%.

### **1. 8. 3. Work Experience**

Regarding work experience from 1-10 years of experience we received 3 responses 15%, 11-20: 8 responses 40%, greater than 20: 9 responses 45%.

### **1. 8. 4. Specialty**

Concerning specialty, 17 primary teachers replied the open question which is 85%, 2 Physical educators replied to the open question which is a 10%, and only one teacher of new technologies replied to the open question which is a 5%.

### **1. 8. 5. Type of work**

As far as type of job is concerned 19 were permanent 95%, and 1 person only was hired on an hourly basis 5%. Extra studies had 10 people 50%.

### **1. 8. 6. Administrative position**

Moreover, 5 of them hold administrative positions 25%. From the people that declared more studies 2 hold a second degree 20% and 8 a post graduate degree 80%.

**Table 10: Descriptive regarding the answer of open question**

		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	Yes	20	11,5	11,5	11,5
	No	154	88,5	88,5	100,0
	Total	174	100,0	100,0	

## **1. 9. Research Questions**

1. What are teachers' and administrators' perceptions in Elementary schools regarding the adoption of Total Quality Management principles in schools?
2. How these perceptions are related to variables as:
  - a. Seniority ( 1-10, 11-20, 21 and more years of work)
  - b. Gender (Man, Woman)
  - c. Tenure-ship (Tenure, Substitute, time-paid)
  - d. Level of education (second degree, Bachelors', Master's, Ph.D)
  - e. Specialty (teacher, Physical educator, foreign language teacher, Music teacher)
  - f. Administration position (Director, Vice-director, Responsible of the all-day school).

## **2. Results**

### **2. 1. Statistical analysis**

Examining the findings, we observe a high Cronbach's Alpha Reliability coefficient for the total score of six sub scores which comes to 0,970 (Table 11). Also, the general attitude of educators towards Total Quality Management principles is positive with the mean 126,9 when maximum are 174 (Table 12).

The general and most important finding of the study was that while educator's aspects were in general positive regarding Total Quality Management in Elementary education, when we tested the different independent variables as age, years of experience, gender, further studies, Administrative position, and specialty we did not find any significant differences.

**Table 11: Cronbach's Alpha reliability coefficient**

	$\alpha$	N of items
<b>Clarity of school principles</b>	0,857	6
<b>School administration</b>	0.886	6
<b>School improvement</b>	0.889	6
<b>The quality of school life</b>	0.589	6
<b>Change management</b>	0.822	6
<b>T.Q.M. philosophy adoption</b>	0.913	6

Cronbach's Alpha Reliability coefficient for the total score of six sub score: 0,970.

**Table 12: General attitude additionally**

	N	Minimu m	Maximum	Mean	Std. Deviation
score	174	45,00	174,00	126,9655	23,93003
Valid N (listwise)	174				

### **2. 1. 1. Gender in relation to TQM perceptions**

According to the t-test (Table 13) there were no significant differences between the aspects and attitudes of men and women about Total Quality management practices, indicating that men and women educators had similar ideas regarding Total Quality Management application at Elementary schools.

**Table 13: Gender in relation to TQM perceptions**

	Gender	N	Mean	Std. Deviation	t	p
<b>Clarity of school principles</b>	Male	74	22,3649	4,90059	-0.144	0.556
	Female	100	22,4700	4,59788		
<b>School administ ration</b>	Male	74	21,6486	4,69751	-0.163	0.870
	Female	100	21,7700	5,03694		
<b>School improve ment</b>	Male	74	22,1351	4,68844	0.286	0.775
	Female	100	21,9300	4,66938		
<b>The quality of school life</b>	Male	74	18,8649	3,67265	1.365	0.174
	Female	100	18,0700	3,95749		
<b>Change manage ment</b>	Male	74	20,8784	4,21333	-0.404	0.687
	Female	100	21,1300	3,84459		
<b>TQM Philosop hy adoption</b>	Male	74	21,4459	4,68499	0.172	0.864
	Female	100	21,3200	4,90491		

### **2. 1. 2. Age Groups in relation to TQM perceptions**

The age groups ANOVA (analysis of variance, table 14) showed that there were not significant differences among age groups of the participants. These findings indicate that educator's opinion about the method of Total Quality Management was similar across different ages as they were classified.

**Table 14: Age Groups in relation to TQM perceptions**

		N	Mean	Variance	
				F	p
<b>Clarity of School principles</b>	25 – 30	4	20,7500	0,909	0,438
	31 – 40	35	22,4857		
	41 – 50	119	22,6807		
	> 50	16	20,8125		
	Total	174	22,4253		
<b>School administration</b>	25 – 30	4	19,5000	0,816	0,487
	31 – 40	35	22,0571		
	41 – 50	119	21,8824		
	> 50	16	20,3125		
	Total	174	21,7184		
<b>School Improvement</b>	25 – 30	4	19,7500	0,807	0,492
	31 – 40	35	22,0571		
	41 – 50	119	22,2521		
	> 50	16	20,7500		
	Total	174	22,0172		
<b>The quality of School life</b>	25 – 30	4	16,7500	0,937	0,424
	31 – 40	35	18,0857		
	41 – 50	119	18,6975		
	> 50	16	17,3750		
	Total	174	18,4080		
<b>Change Management</b>	25 – 30	4	20,5000	0,892	0,447
	31 – 40	35	21,7429		

	41 – 50	119	20,9916		
	> 50	16	19,8125		
	Total	174	21,0230		
TQM Philosophy adoption	25 – 30	4	20,2500	0,729	0,536
	31 – 40	35	21,0571		
	41 – 50	119	21,6891		
	> 50	16	20,0000		
	Total	174	21,3736		

### 2. 1. 3. Work Experience in relation to TQM perceptions

According to ANOVA (analysis of variance, Table 15) did not exist any significant difference regarding the educator's work experience. The categories were: from 1 to 10, from 11 to 20, and lastly more than 20 years of work experience. The findings indicate that all the participants with different experience posses similar opinion about Total Quality Management practices in the primary schools that belong to the 5<sup>th</sup> office of Eastern Thessalonica.

**Table 15: Work experience in relation to TQM perceptions**

		N	Mean	Variance	
				F	p
Clarity of School principles	1 – 10	37	22,5946	0,106	0,900
	11 – 20	69	22,5362		
	> 20	68	22,2206		
	Total	174	22,4253		
School administra tion	1 – 10	37	22,1351	0,385	0,681
	11 – 20	69	21,3333		
	> 20	68	21,8824		
	Total	174	21,7184		

School improvement	1 – 10	37	21,8378	0,048	0,953
	11 – 20	69	22,0000		
	> 20	68	22,1324		
	Total	174	22,0172		
The quality Of school life	1 – 10	37	18,2162	0,270	0,764
	11 – 20	69	18,2464		
	> 20	68	18,6765		
	Total	174	18,4080		
Change management	1 – 10	37	21,5405	0,395	0,674
	11 – 20	69	20,8551		
	> 20	68	20,9118		
	Total	174	21,0230		
TQM philosophy adoption	1 – 10	37	20,9730	0,187	0,830
	11 – 20	69	21,3913		
	> 20	68	21,5735		
	Total	174	21,3736		

#### 2. 1. 4. Specialty in relation to TQM perceptions

The basic daily primary school program is carried out mainly by the primary teachers. Nevertheless, some other specialties teach their own subject. Among them are Physical Educators, Foreign language Teachers, Music and New Technologies Teachers. The findings of ANOVA (analysis of variance, table 16) did not show any significant difference among different specialties of educators which indicates that different specialties share the same ideas according to the Total Quality Management practices in primary schools.

**Table 16: Specialty in relation to TQM perceptions**

		N	Mean	Variance	
				F	p
<b>Clarity of school life</b>	Primary Teacher	144	22,4861	0,456	0,768
	Physical Education	14	21,1429		
	Foreign Languages	11	22,4545		
	Music	4	24,5000		
	New Technologies	1	23,0000		
	Total	174	22,4253		
<b>School administration</b>	Primary Teacher	144	21,6875	1,030	0,393
	Physical Education	14	20,7143		
	Foreign Languages	11	21,6364		
	Music	4	26,2500		
	New Technologies	1	23,0000		
	Total	174	21,7184		
<b>School improvement</b>	Primary Teacher	144	22,1250	0,759	0,554
	Physical Education	14	20,5000		
	Foreign Languages	11	21,6364		
	Music	4	24,7500		
	New Technologies	1	21,0000		
	Total	174	22,0172		
<b>The quality of school life</b>	Primary Teacher	144	18,5139	0,706	0,589
	Physical Education	14	17,3571		
	Foreign Languages	11	17,5455		
	Music	4	20,0000		

	New Technologies	1	21,0000		
	Total	174	18,4080		
<b>Change management</b>	Primary Teacher	144	21,0764	0,871	0,483
	Physical Education	14	19,3571		
	Foreign Languages	11	22,0000		
	Music	4	22,2500		
	New Technologies	1	21,0000		
	Total	174	21,0230		
<b>TQM philosophy adoption</b>	Primary Teacher	144	21,5903	0,932	0,447
	Physical Education	14	19,0714		
	Foreign Languages	11	21,2727		
	Music	4	22,2500		
	New Technologies	1	20,0000		
	Total	174	21,3736		

## 2. 1. 5. Type of employment in relation to TQM perceptions

In the present study we examined only two different statuses of employment. From 174 subjects only 9 people are hired on an hourly basis and 165 are permanent. The T-test showed that the two categories of educators regarding the work status did not have any significant difference which indicates that all educators have the same attitude regarding Total Quality Management practices in primary Education (table 17).

**Table 17: Type of employment in relation to TQM perceptions**

	Type of employment	N	Mean	Std. Deviation	t	p
<b>Clarity of school principles</b>	Permanent	165	22,5030	4,65207	0.752	0.472
	Hourly wages	9	21,0000	5,89491		
<b>School administration</b>	Permanent	165	21,7697	4,93695	0.743	0.475
	Hourly wages	9	20,7778	3,83333		
<b>School improvement</b>	Permanent	165	22,0848	4,60435	0.818	0.415
	Hourly wages	9	20,7778	5,84760		
<b>The quality of school life</b>	Permanent	165	18,4788	3,70660	1.038	0.301
	Hourly wages	9	17,1111	6,05071		
<b>Change management</b>	Permanent	165	21,0121	3,94163	-0.120	0.907
	Hourly wages	9	21,2222	5,16667		
<b>TQM Philosophy adoption</b>	Permanent	165	21,4303	4,80247	0.655	0.529
	Hourly wages	9	20,3333	4,89898		

## 2. 1. 6. Further Studies in relation to TQM perceptions

From a total of 174 subjects 62 had further studies and 112 had not the T-test (Table 18) showed that there is not significant difference between the educators that are more educated and with them that have only the basic degree. The educational level therefore does not play any role for educator's opinion about Total Quality Management practices.

**Table 18: Further Studies in relation to TQM perceptions**

	Further Studies	N	Mean	Std. Deviation	t	p
<b>Clarity of school principles</b>	Yes	62	21,9194	4,99606	-1.025	0.307
	No	112	22,7054	4,55129		
<b>School administra tion</b>	Yes	62	21,1774	4,84015	-1.092	0.277
	No	112	22,0179	4,90079		
<b>School improve ment</b>	Yes	62	21,2742	4,65945	-1.568	0.119
	No	112	22,4286	4,63771		
<b>The quality of school life</b>	Yes	62	18,1452	4,10855	-0.650	0.517
	No	112	18,5536	3,70741		
<b>Change manage ment</b>	Yes	62	20,0484	3,88957	-2.442	0.016
	No	112	21,5625	3,96785		
<b>TQM philosop hy adoption</b>	Yes	62	20,8548	4,66183	-1.075	0.285
	No	112	21,6607	4,87049		

## 2. 1. 7. Administrative position in relation to TQM perceptions

From the 174 subjects only 26 hold any administrative position and 148 had never got involved in administration. The T-test (table 19) indicated that there were not any significant differences among educators who are engaged in administration and those who are not engaged. Therefore, both administrators and educational personnel have the same aspect regarding the administrative method of Total Quality Management.

**Table 19: Administrative position in relation to TQM perceptions**

	Administrative position	N	Mean	Std. Deviation	t	p
<b>Clarity of school principles</b>	Yes	26	22,5000	4,43847	0.092	0.927
	No	148	22,4122	4,77654		
<b>School administration</b>	Yes	26	21,6923	4,14506	-0.034	0.973
	No	148	21,7230	5,01267		
<b>School improvement</b>	Yes	26	22,0385	4,17115	0.028	0.978
	No	148	22,0135	4,75950		
<b>The quality of school life</b>	Yes	26	18,9231	3,32172	0.832	0.410
	No	148	18,3176	3,93664		
<b>Change management</b>	Yes	26	20,2308	3,44451	-1.235	0.224
	No	148	21,1622	4,07924		
<b>TQM philipsophy adoption</b>	Yes	26	21,3846	4,71658	0.013	0.990
	No	148	21,3716	4,82945		

## **2. 2. Results of the open question**

On the last page of the questionnaire the subject had the opportunity to declare and comment any possible idea, position, experience, critic and perception, regarding TQM practices in schools of elementary education. Many of the responses are in agreement with our reviewed theory but others give us a new perspective to this matter. Therefore, the open question will be classified in two sections: Responses in accordance to the theory and new findings.

### **2. 2. 1. Responses in accordance to the theory**

Decoding the answers of the open question the following statements agreed with the reviewed theory:

1. In order to implement TQM in Elementary Education great changes should be initiated including:
  - Facilities and equipment
  - Manager selection
  - Curriculum
  - Book writing
2. When TQM leads all actions and procedures in a school, there is a very good relation among stakeholders.
3. Gives a great importance to cooperation of all stakeholders.

### **2. 2. 2. New findings**

Decoding the answers of the open question we classified them as following:

1. Educators try as hard as they can and they are ready to accept and support drastic changes.
2. There has not been any training for educators regarding TQM. Also, according to her opinion Total Quality Management's efficiency will be depended on collective effort, team work as well as the agreement in decision making. Consequently, there is a strong need for changing the beliefs and behaviours of both educators and society, especially in education, because we mainly deal with human resources.

3. Believe that TQM philosophy should lead all actions and procedures in school environment. So, we will create a climate of respect, cooperation and confidence in our interpersonal relations.
4. There is a serious effort for high level of educational services but they meet strong obstacles on behalf of old public employee mentality.
5. Believe that, TQM is the backbone of the educational reform.
6. This administrative method looks positive, so education can produce responsible citizens for the society.
7. Some changes should be initiated as:
  - In director's selection
  - In educators motivation and empowerment, in equipment, in facilities, but support that if educators are innovative and modern can find ways to substitute equipment.
  - In team spirit creation
  - This type of administration needs people with high socioeconomic and family background. Otherwise, some of the people will work and cooperate; some others will not be working towards this direction. TQM should be adopted in education only if everybody has realized his/her role, has certain principles and values and is motivated by intrinsic motivation. Above all a qualitative and inspired leadership could make the difference.
8. Disagree with the method, because there is no improvement in all education. The pupil is not the customer but the product. Also this system will create a lot of inequalities in the social environment. There is a question also concerning who is going to finance schools or the uncertainty if schools will be obliged to do the wills of their financers. Are they willing to establish a quality system?
9. Address severe criticism about the selection of directors as:
  - Interview with no structure
  - Ignorance of typical qualifications of the candidates
  - There is an agreement to the TQM principles but there is a strong scepticism regarding who will implement it.
  - TQM can change education if an evaluation system will be established so there will be a basis for improvement.

- TQM is a good method of administration but it cannot be applied in a restricted and extremely centralized administrative system with laws which prevent real management.
- School should hire only virtuous educators who have as target; to promote education.
- There is a strong need for better facilities and equipment which can help teachers and pupils to perform better.

Consequently, most of the subjects that replied to the open question having the freedom to state any comment, fear or disagreement showed that they had positive aspect-attitude about TQM practices in elementary schools, indicating also and some areas that should be improved. These areas usually are: the schools' management, the facilities and equipment, curriculum, books, and human resources management aspects as empowerment, authorization, motivation, and personnel training. They also believe that a reliable system of evaluation should be established accompanied with a public administration reform towards decentralization and abolition of multi-law environment. Moreover, the Ministry of Education should only hire virtuous educators who have as unique target the "Promotion of Education".

Also, educators should get rid of the so called public employee mentality. The minority of subjects that replied negatively to this type of administration focused on the possibility that the system will create inequalities and moreover that school financing will be unclear and ambiguous. Finally, two of the female subjects did not reply the open question because they needed more information about TQM method of administration.

### **3. Conclusions and recommendations**

#### **3. 1. Conclusions**

In the present study an attempt has been made to examine the primary schools the educators' aspects, attitudes, opinions and ideas about TQM practices in schools of Directory of elementary education of Eastern Thessalonica.

The general findings showed that educators had a very positive opinion towards the TQM method. However, when using either the T-test or the ANOVA to see if there were any differences regarding the independent variables of gender, type of employment, further studies, administrative position, age group, work experience, and specialty we did not find any significant differences. These findings were in accordance with the results of Toremen, Karakus, and Yasan (2009) study in terms of the general view of educators towards TQM.

However, examining one by one the findings of the above study concerning the dimensions of quality management we found that it differed from ours regarding the ideas of specialties with class teachers in the dimension of "school improvement". Also, the level of education played an important role of differentiation in the dimensions of "clarity of school principals" and "school improvement" showing that teachers with post graduate education had more negative perception towards TQM compared to the teachers with bachelors. Moreover, less tenured teachers had more negative opinion about TQM practices in all dimensions of quality except the dimension of "adoption of TQM Philosophy".

At this point we would like to state that our results could have been a little different if we had applied a different methodology. Analytically, directors administered and collected the questionnaires, so educators were perhaps afraid to truly reply the questions as they felt. On the other hand, school personnel has never been trained to TQM in education to deeply understand the details of the method. A possible explanation is that educators see things as they would like to see them and not as they really are. They either hesitate to reply with sincerity because of the fear of managers or because of ignorance (could not understand the scope of the study). The structure of the questionnaire perhaps affected the differences among the two studies. On the contrary, in the Turkish study, which indicated significant difference between the educators with the basic degree and them with additional degrees, showing the later to have more negative attitude than the former towards Total Quality

Management, Greek educators respectively did not show any difference. That could be attributed to the fact that Greek educators receive post graduate degrees for typical and not substantial reasons as a means to becoming directors etc. Finally, some of the subjects replied having in mind the general school system and not the specific school.

According to our opinion there is a great deficiency regarding teacher's training beyond classroom teaching in subjects related to continuous improvement, customer satisfaction and generally consumer behaviour. Specifically, there has not been any education, not only to the classroom teachers but also to the managers of education, as school directors, their assistants, as well as the rest of the administrative hierarchy in education, so they can understand first, the different methods of administration and second, how these methods can be implemented. Surprisingly, all the educational administrative executives are being called to administer educational organizations without any prior training in the field. Moreover, school personnel has not enough information about consumer's behaviour in order to inform pupils on one hand, and acquire a more proper behaviour for parents and stakeholders on the other. Therefore, teachers will broaden their horizons to be able to see pupils and parents as customers so they can try consciously to offer them customer satisfaction which with the continuous improvement according to Deming (1993) is the basis of TQM. The lack of evaluation does not give any feedback to educators to improve, deprives good educators from extra rewards and to the mediocre from improvement opportunities. The present system focuses and eliminates educators to their teaching role ignoring other important areas for teacher integration and consequently for quality school improvement. The areas that could help educators to see things differently except teaching is the acquisition of administrative, consumer behavior, customer satisfaction, creative and finally innovating skills.

Our findings to the open question indicated that educators attribute the problems in Total Quality Management implementation, in insufficient: school management, facilities, equipment, curriculum, books, evaluation, human resources management and personnel training. Likewise, Dale and Cooper (1992) supported that quality management could be implemented through commitment and leadership of the chief executive, culture change, planning and organization, education and training, involvement, recognition and measurement. Pedler, Baydell and Burgoyne (1989) stated that quality is best applied in "Learning Organizations" and collective learning processes are the best elements for quality improvement. Something that educators cannot express explicitly is the feeling of

the employee satisfaction in the job environment which is crucial for their well being and their further performance. Besides, Sureschandar, Rajendram and Anantharaman (2001) propose that important factors for quality improvement are: employee satisfaction, existence of a clear organizational vision and mission, and feeling of achievement. Milakovich (1995) also believes that fear of change rises serious barriers to the quality improvement. That happens because people are always suspicious and afraid of the new and the unfamiliar thinking that will not be sufficient in their new role or mission. This statement is best identified to the educator's denial for evaluation. Regarding education of teachers, Cheng and Tam (1994) suggested that staff development activities should be developed in a individual, group and school level, an idea that leads to the conclusion that teacher's education should be carried towards the above three areas both outside and inside schools. Finally, one of the subjects believes that the Minister of Education should only hire virtuous educators who have as unique target the promotion of education. In accordance to that Sitkin and Sutcliffe (1994) TQM depends on incentives for innovated leadership support for independent thinking and taking risks as well as evaluation through general values and judgement rather than narrow performance feedback and evaluation through precise standards.

Concluding, to improve school efficiency and offer better educational services some changes should be made. To implement changes new ways of administration could be recruited. A method of administration that has shown can change things is TQM. Perhaps information about TQM philosophy in the school teachers helps them to excel to their demanding profession.

### **3. 2. Limitations**

The fact that directors administered and collected the questionnaires, perhaps made educators afraid to truly reply the questions as they felt. Moreover, school personnel has never been trained to TQM in education to deeply understand the details of the method. A serious problem for educators is that they hesitate to reply with sincerity, because of fear for the managers, or because of ignorance (could not understand the scope of the study). The structure of the questionnaire also could be different so the educators could reply with more honesty. Finally, some of the subjects replied having in mind the school system in general and not the specific school.

To investigate TQM in the future in elementary education for more accurate findings a number of actions should be taken under consideration: firstly, the population should be greater and be addressed to all Greek provinces secondly, the educators should be introduced and trained to this kind of administrative philosophy thirdly, the questionnaire administration and collection should be done without any intervention by a manager to ensure that there is not any kind of biases and fourthly, perhaps the questionnaire should be modified and more adjusted to the Greek mentality.

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## **Ιστοσελίδες**

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## Appendix 1

### Καταγραφή απόψεων των Εκπαιδευτικών της Πρωτοβάθμιας Εκπαίδευσης σχετικά με την εφαρμογή των αρχών της Διοίκησης Ολικής Ποιότητας στο Δημοτικό Σχολείο

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*To παρόν ερωτηματολόγιο εντάσσεται στο πλαίσιο διεξαγωγής έρευνας με θέμα: «Καταγραφή των απόψεων των Διοικούντων και διδασκόντων στην Πρωτοβάθμια Εκπαίδευση σχετικά με την εφαρμογή των αρχών της Διοίκησης Ολικής Ποιότητας στο Δημοτικό Σχολείο» Απευθύνεται στο προσωπικό της Πρωτοβάθμιας Εκπαίδευσης της Διεύθυνσης Ανατολικής Θεσσαλονίκης, και η συμπλήρωσή του είναι προαιρετική.*

*Αφού μελετήσετε τις ερωτήσεις που ακολουθούν, σας παρακαλούμε πολύ να απαντήσετε σε αυτές με ακρίβεια και ειλικρίνεια. Το ερωτηματολόγιο είναι ανώνυμο και οι απαντήσεις σας θα χρησιμοποιηθούν αποκλειστικά και μόνο για τους σκοπούς της έρευνας.*

---



**Σας ευχαριστούμε πολύ για τη συνεργασία σας**

**Γιάννης Βασιλειάδης  
Εκπαιδευτικός Π.Ε.**

**A.**

**ΠΡΟΦΙΛ ΕΚΠΑΙΔΕΥΤΙΚΩΝ**  
**(Δημογραφικά στοιχεία, Εκπαίδευση)**

<b>A1</b>	<b>Προσωπικά στοιχεία</b>		
1.	Φύλο	Άνδρας <input type="checkbox"/>	Γυναίκα <input type="checkbox"/>
2.	Ηλικία: 25-30 <input type="checkbox"/> 30-40 <input type="checkbox"/> 40-50 <input type="checkbox"/> 50-60 <input type="checkbox"/>		
3.	Προϋπηρεσία: 1-10 <input type="checkbox"/> 11-20 <input type="checkbox"/> 21 και πάνω <input type="checkbox"/>		
4.	Κλάδος- Ειδικότητα: Δάσκαλος-α <input type="checkbox"/> Φυσικής Αγωγής <input type="checkbox"/> Ξένων Γλωσσών <input type="checkbox"/> Μουσικής <input type="checkbox"/>		
5.	Σχέση Εργασίας: Μόνιμος-η <input type="checkbox"/> Αναπληρωτής-τρια <input type="checkbox"/> Ωρομίσθιος-α <input type="checkbox"/>		
6.	Σπουδές: Δεύτερο Πτυχίο <input type="checkbox"/> Μεταπτυχιακό <input type="checkbox"/> Διδακτορικό <input type="checkbox"/>		
7.	Διοικητική Θέση: Διευθυντής-τρια <input type="checkbox"/> Υποδιευθυντής-τρια <input type="checkbox"/> Υπεύθυνος-η ολοημέρου <input type="checkbox"/>		

**B.**

**Η σαφήνεια των αρχών του σχολείου**

**Απαντήστε κατά πόσο συμφωνείτε με τις παρακάτω δηλώσεις:**

8.	Σ' αυτό το σχολείο οι μαθητές θεωρούνται, οι σημαντικότεροι πελάτες του	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
9.	Ο Διευθυντής του σχολείου προσπαθεί να παροτρύνει όλους τους συντελεστές της διαδικασίας της μάθησης, (μαθητές, δασκάλους, γονείς, κ.λ.π.) να συνεργαστούν, με σκοπό την βελτίωση της ποιότητας	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
10.	Ο Διευθυντής του σχολείου δίνει σ' όλους τους συντελεστές οδηγίες για την βελτίωση της ποιότητας	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>

11.	Σ' αυτό το σχολείο όλοι οι συντελεστές συμμετέχουν στην διαδικασία της λήψης των αποφάσεων	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
12.	Σ' αυτό το σχολείο υπάρχει, ένα ξεκάθαρο όραμα ποιότητας ( <b>βασισμένο στον εστιασμό στον πελάτη</b> ) το οποίο διαμορφώνει την βάση για τον στρατηγικό σχεδιασμό του και συμβάλλει στην λήψη των αποφάσεων	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
13.	Σ' αυτό το σχολείο υπάρχει ένα ξεκάθαρο όραμα ποιότητας ( <b>βασισμένο στον εστιασμό στον εργαζόμενο</b> ) το οποίο διαμορφώνει την βάση για τον στρατηγικό σχεδιασμό του και συμβάλλει στην λήψη των αποφάσεων	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>

Γ.

### Η Διοίκηση του σχολείου

**Απαντήστε κατά πόσο συμφωνείτε με τις παρακάτω δηλώσεις:**

14.	Σ' αυτό το σχολείο η Διοίκηση Ολικής Ποιότητας χρησιμοποιείται συστηματικά και αποτελεσματικά από την διοίκηση του	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
15.	Σ' αυτό το σχολείο υπάρχει συνεχής βελτίωση των παρεχόμενων υπηρεσιών	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
16.	Σ' αυτό το σχολείο υπάρχουν μαρτυρίες και στοιχεία για την ύπαρξη ποιοτικής ηγεσίας	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>

17.	Ο Διευθυντής του σχολείου αγωνίζεται-προσπαθεί να περιορίσει τα εμπόδια για όλους τους συντελεστές προκειμένου να δουλέψουν συνεργατικά και αποτελεσματικά	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
18.	Ο Διευθυντής του σχολείου λειτουργεί ως φιλόσοφος και καθοδηγεί τους υφιστάμενους του	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
19.	Υπάρχει η τάση από πλευράς της διοίκησης να βλέπει τους εργαζόμενους (Δασκάλους Ειδικότητες) ως πολύτιμους και μακρόπονους ανθρώπινους πόρους	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>

Δ.

### Βελτίωση του σχολείου

Απαντήστε κατά πόσο συμφωνείτε με τις παρακάτω δηλώσεις:

20.	Σ' αυτό το σχολείο οι συντελεστές είναι ενδυναμωμένοι (τους δίνεται η ελευθερία και το δικαίωμα από την αρχή) να συμμετέχουν στην διαδικασία βελτίωσης της ποιότητας	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
21.	Υπάρχει σ' αυτό το σχολείο συνεχής και αποτελεσματική επικοινωνία που να παρακινεί τους εργαζόμενους	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
22.	Οι σωστές απόψεις και η θετική στάση των συντελεστών συμβάλλουν στην διαμόρφωση της σχολικής κουλτούρας και της συνεχούς βελτίωσης	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
23.	Οι αποτελεσματικές ομάδες διασφαλίζουν την δέσμευση των συντελεστών	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>

24.	Οι εργαζόμενοι στο σχολείο σ' όλα τα επίπεδα συνειδητοποιούν ότι ο πραγματικός λόγος της ύπαρξης τους είναι « <b>να προσφέρουν υπηρεσίες παιδείας στους πελάτες του σχολείου</b> » (μαθητές, γονείς, Κοινωνία, άλλες βαθμίδες της εκπαίδευσης)	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
25.	Σ' αυτό το σχολείο, δίνεται βάση στην ανάπτυξη της αναλυτικής και συνθετικής σκέψης, της κριτικής ικανότητας, της καινοτομίας και της δημιουργικότητας	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>

E.

### Η ποιότητα της σχολικής ζωής

**Απαντήστε κατά πόσο συμφωνείτε με τις παρακάτω δηλώσεις:**

26.	Υπάρχει ένα κλίμα σεβασμού συνεργασίας και εμπιστοσύνης στο σχολείο μας που παρακινεί τους συμμετέχοντες	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
27.	Ολοι οι συμμετέχοντες στο σχολείο μας, αναγνωρίζονται ως συντελεστές στην λήψη των αποφάσεων	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
28.	Οι ιδανικές φυσικές συνθήκες εργασίας (εσωτερικό περιβάλλον) στο σχολείο μας παρακινούν τους εργαζόμενους	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
29.	Ολοι οι συμμετέχοντες στο σχολείο μας αντιμετωπίζονται με σεβασμό και αξιοπρέπεια	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>

30.	Οι συνθήκες του περιβάλλοντος όπως η θερμοκρασία, ο εξαερισμός, ο θόρυβος, η καθαριότητα των χώρων, ο χρωματισμός, η χωροταξία των επίπλων και ο φυσικός φωτισμός που προσφέρει το σχολείο είναι ποιοτικά επαρκείς προς τους πελάτες του σχολείου (μαθητές, γονείς, Κοινωνία, άλλες βαθμίδες της εκπαίδευσης)	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
31.	Τα εποπτικά μέσα, οι εγκαταστάσεις, τα υλικά και γενικότερα ο εξοπλισμός του σχολείου που σχετίζονται άμεσα με την παροχή υπηρεσιών ποιοτικής παιδείας έχουν θετικό ή αρνητικό αντίκτυπο ανάλογα με το επίπεδο τους στους πελάτες του σχολείου (μαθητές, γονείς, Κοινωνία, άλλες βαθμίδες της εκπαίδευσης)	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>

ΣΤ.	Διοίκηση αλλαγών
<b>Απαντήστε κατά πόσο συμφωνείτε με τις παρακάτω δηλώσεις:</b>	
32.	Οι συντελεστές σ' αυτό το σχολείο είναι αρκετά εκπαιδευμένοι ώστε να καταλαβαίνουν την ανάγκη για αλλαγή
33.	Ο φόβος για αλλαγή σ' αυτό το σχολείο είναι περιορισμένος και αυτό εκπορεύεται από την συμμετοχή όλων των συντελεστών

34.	Σ' αυτό το σχολείο όλοι οι συμμετέχοντες λαμβάνουν μέρος στην λήψη των αποφάσεων που αφορούν τις αλλαγές	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
35.	Υπάρχει αντίσταση των εργαζομένων σε επιχειρούμενες αλλαγές	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
36.	Αυτό το σχολείο ξεπερνάει τις αντιστάσεις για αλλαγές με την πειθώ	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
37.	Σ' αυτό το σχολείο υπάρχει καλή και ανοικτή σχέση ανάμεσα στους εργαζόμενους	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>

Z.

### Υιοθέτηση της φιλοσοφίας της Διοίκησης Ολικής Ποιότητας

**Απαντήστε κατά πόσο συμφωνείτε με τις παρακάτω δηλώσεις:**

38.	Η φιλοσοφία της Διοίκησης Ολικής Ποιότητας σ' αυτό το σχολείο καθοδηγεί όλες τις πράξεις και τις διαδικασίες	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
39.	Σ' αυτό το σχολείο οι πρακτικές της Διοίκησης Ολικής Ποιότητας προάγουν την υπερηφάνεια και το σφοδρό αίσθημα προσφοράς	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
40.	Η Διοίκηση Ολικής Ποιότητας σ' αυτό το σχολείο εκλαμβάνεται ως ένα ολοκληρωμένο μέρος της διαδικασίας σχεδιασμού	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
41.	Υπάρχει πολύ καλή σχέση ανάμεσα σ' όλους τους συντελεστές (γονείς, μαθητές, δασκάλους) σ' αυτό το σχολείο	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>

42.	Το σχολείο ως οργανισμός αγωνίζεται να αναπτύσσει συνεχώς τις δεξιότητες, ικανότητες, του προσωπικού και να βελτιώνει τις εγκαταστάσεις του προκειμένου αυτές να ανταποκρίνονται καλύτερα στις απαιτήσεις των πελατών του	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>
43.	Το σχολείο αυτό ενημερώνει τους πελάτες του για τις δράσεις και την λειτουργία του μέσω, επιστολών, καταχωρήσεων στον ιστότοπο του, ανακοινώσεων, τηλεφωνικών κλήσεων (όπου είναι αναγκαίο), ενημερωτικών συναντήσεων, ομιλιών, και λαμβάνει υπόψη του όπου είναι δυνατόν και τις προτάσεις των συντελεστών	Καθόλου <input type="checkbox"/>	Ελάχιστα <input type="checkbox"/>	Αρκετά <input type="checkbox"/>	Πολύ <input type="checkbox"/>	Πάρα Πολύ <input type="checkbox"/>

H.

**Σας παρακαλώ να καταγράψετε την άποψη ή τα σχόλια σας για την Διοίκηση  
Ολικής Ποιότητας στην Εκπαίδευση**

**Σας ευχαριστούμε πολύ**

## **Appendix 2**

### **Survey for estimating the educator's perceptions relating the application of total quality management principles in elementary schools**

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*The present questionnaire is part of a research project with theme: **Educators' perceptions relating to the application of total quality management principles in elementary schools***

'It is addressed to the personnel of elementary education that the work in the division of the manager's office of Eastern Thessalonica, and its fulfillment is optional.' After studying the questions carefully we kindly request you to reply with accuracy and sincerity. The questionnaire is anonymous and your responses will be used only for the aims of this study.

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**Thank you for your cooperation**

**Ioannis Vasileiadis  
Educator of Elementary Education**

**A.**

**Profile of educators**  
**(Demographics, Education)**

	<b>Personal Elements</b>				
<b>44.</b>	Gender	Man <input type="checkbox"/>	Woman <input type="checkbox"/>		
<b>45.</b>	Age: 25-30 <input type="checkbox"/>	30-40 <input type="checkbox"/>	40-50 <input type="checkbox"/>	50-60 <input type="checkbox"/>	
<b>46.</b>	Experience: 1-10 <input type="checkbox"/>	11-20 <input type="checkbox"/>	over 21 <input type="checkbox"/>		
<b>47.</b>	Brand-Specialty: Teacher <input type="checkbox"/>	Physical Educator <input type="checkbox"/>	Teacher of foreign languages <input type="checkbox"/>	Music Teacher <input type="checkbox"/>	
<b>48.</b>	Work status: Permanent <input type="checkbox"/>	Substitute Teacher <input type="checkbox"/>	Hour paid teacher <input type="checkbox"/>		
<b>49.</b>	Studies: Second Bachelor <input type="checkbox"/>	Master <input type="checkbox"/>	Ph.D <input type="checkbox"/>		
<b>50.</b>	Administrative position: Director <input type="checkbox"/>	Assistant Director <input type="checkbox"/>	All day school responsible <input type="checkbox"/>		

**B.**

**Clarity of school principles**

**Reply how much you agree with the following statements:**

<b>51.</b>	In this school, students are viewed as the most important customers	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>52.</b>	Our school managers' efforts to make participants interact for the purpose of improving quality	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>53.</b>	Our school manager gives all the participants directions to improve quality	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>54.</b>	In this school, all the stakeholders participate in decision-making process.	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>

<b>55.</b>	In this school there is a clear vision (based on customer focus) and the extent to which the vision forms the basis for strategic planning and decision-making	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>56.</b>	In this school there is a clear vision (based on employee focus) and the extent to which the vision forms the basis for strategic planning and decision-making	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>

C.

### School Management

**Reply how much you agree with the following statements:**

<b>57.</b>	TQM process is effectively and consistently managed in this school	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>58.</b>	Services rendered in this school are improved continuously	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>59.</b>	There is evidence of quality leadership in this school	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>60.</b>	Our school manager strives to eliminate barriers for stakeholders to work efficiently and cooperatively	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>61.</b>	The school manager operates as philosopher and guides educators	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>62.</b>	There is a tendency from the side of the administration to consider the employees (teachers and specialties) as valuable and long term human resources	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>

**D.**

## School improvement

**Reply how much you agree with the following statements:**

<b>63.</b>	In this school, stakeholders are empowered to participate in quality improvement process	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>64.</b>	In this school, effective and constant communication motivates stakeholders	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>65.</b>	Right and positive attitudes of stakeholders contribute to the development of school culture of continuous improvement	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>66.</b>	Effective teams ensure commitment of stakeholders	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>67.</b>	The employees of this school in all levels, realize that the real reason of their existence is to “to offer educational services to the school managers” (pupils, parents, society, other levels of education)	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>68.</b>	In this school the emphasis is given in the development of analytical and synthetic thought, the critical ability, the innovation and creativity	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>

**E.**

## Quality of school life

**Reply how much you agree with the following statements:**

<b>69.</b>	There is a atmosphere of respect, cooperation and trust in our school that motivates our stakeholders	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>70.</b>	All the stakeholders of our school are recognized as contributors in decision making	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>71.</b>	Physical working conditions in our school motivate employees	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>

<b>72.</b>	All the stakeholders in our school are treated with respect and dignity	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>73.</b>	The environmental conditions as temperature, ventilation, noise, neatness, painting,, furniture layout and physical lighting that school offers are sufficient in terms of quality to the school customers (pupils, parents, society and other levels of education)	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>74.</b>	The equipment, facilities, materials and generally school environment that are directly related with the giving of qualitative education have positive or negative impact in accordance to their level to the school's principles (pupils, parents, society and other levels of education).	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>

F.

## Change management

**Reply how much you agree with the following statements:**

<b>75.</b>	In this school, stakeholders are educated to understand the need for change	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>76.</b>	In this school, fear for change is eliminated through participation of all stakeholders	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>77.</b>	In this school, all stakeholders are involved in deciding about changes	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>78.</b>	There is employee resistance to any possible change	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>79.</b>	This school overcomes resistance to change through persuasion	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>

<b>80.</b>	In this school, there is a good and open relationship among employees	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
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**G.**

### **Adoption of TQM philosophy**

**Reply how much you agree with the following statements:**

<b>81.</b>	In this school, stakeholders are educated to understand the need for change	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>82.</b>	TQM practices promote this school's pride and passion	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>83.</b>	In this school, TQM is viewed as the integral part of the planning process	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>

<b>84.</b>	In this school, good relationships are established among stakeholders	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>85.</b>	School as an organization always strives to develop the skills and abilities of personnel to improve facilities in order to satisfy customers	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>
<b>86.</b>	This school informs its customers regarding actions and operations through letters, internet site, announcements and phone-calls (when it is necessary), informative meetings, lectures and takes under consideration if possible the stakeholders prepositions	Never <input type="checkbox"/>	Rarely <input type="checkbox"/>	Sometimes <input type="checkbox"/>	Usually <input type="checkbox"/>	Always <input type="checkbox"/>

H.

**Would you please state your opinion or comments for TQM  
practices in education**

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*Thank you very much*

**Table catalogue**

**Table 20 Gender Crosstabulation for the open question**

<b>Comments * Gender Crosstabulation</b>					
		Gender		Total	
		Male	Female		
Comments	Yes	8	12	20	
		40,0%	60,0%	100,0%	
		10,8%	12,0%	11,5%	
	No	66	88	154	
		42,9%	57,1%	100,0%	
		89,2%	88,0%	88,5%	
Total		74	100	174	
		42,5%	57,5%	100,0%	
		100,0%	100,0%	100,0%	

**Table 21 Age Crosstabulation for the open question**

<b>Comments * Age Crosstabulation</b>							
		Age				Total	
		25 - 30	31 - 40	41 - 50	> 50		
Comments	Yes	0	3	15	2	20	
		,0%	15,0%	75,0%	10,0%	100,0%	
		,0%	8,6%	12,6%	12,5%	11,5%	
	No	4	32	104	14	154	
		2,6%	20,8%	67,5%	9,1%	100,0%	
		100,0%	91,4%	87,4%	87,5%	88,5%	
Total		4	35	119	16	174	
		2,3%	20,1%	68,4%	9,2%	100,0%	
		100,0%	100,0%	100,0%	100,0%	100,0%	

**Table 22 Work experience Crosstabulation for the open question**

Comments * Work experience (yrs) Crosstabulation							
		Work experience (yrs)			Total		
		1 - 10	11 - 20	> 20			
Comments	Yes	3	8	9	20		
		15,0%	40,0%	45,0%	100,0%		
		8,1%	11,6%	13,2%	11,5%		
	No	34	61	59	154		
		22,1%	39,6%	38,3%	100,0%		
		91,9%	88,4%	86,8%	88,5%		
Total		37	69	68	174		
		21,3%	39,7%	39,1%	100,0%		
		100,0%	100,0%	100,0%	100,0%		

**Table 23 Specialty Crosstabulation for the open question**

Comments * Specialty Crosstabulation								
		Specialty					Total	
		Primary Teacher	Physical Education	Foreign Languages	Music	New Technologies		
Comments	Yes	17	2	0	0	1	20	
		85,0%	10,0%	,0%	,0%	5,0%	100,0 %	
		11,8%	14,3%	,0%	,0%	100,0%	11,5%	
	No	127	12	11	4	0	154	
		82,5%	7,8%	7,1%	2,6%	,0%	100,0 %	
		88,2%	85,7%	100,0%	100,0 %	,0%	88,5%	
Total		144	14	11	4	1	174	
		82,8%	8,0%	6,3%	2,3%	,6%	100,0 %	

Comments * Specialty Crosstabulation									
			Specialty				Total		
			Primary Teacher	Physical Education	Foreign Languages	Music	New Technologies		
Comments	Yes		17	2	0	0	1	20	
			85,0%	10,0%	,0%	,0%	5,0%	100,0 %	
			11,8%	14,3%	,0%	,0%	100,0%	11,5%	
	No		127	12	11	4	0	154	
			82,5%	7,8%	7,1%	2,6%	,0%	100,0 %	
			88,2%	85,7%	100,0%	100,0 %	,0%	88,5%	
			144	14	11	4	1	174	
			82,8%	8,0%	6,3%	2,3%	,6%	100,0 %	
			100,0%	100,0%	100,0%	100,0 %	100,0%	100,0 %	

Table 24 Type of employment Crosstabulation for the open question

Comments * Type of job Crosstabulation						
			Type of job		Total	
			Permanent	Hourly wages		
Comments	Yes		19	1	20	
			95,0%	5,0%	100,0%	
			11,5%	11,1%	11,5%	
	No		146	8	154	
			94,8%	5,2%	100,0%	
			88,5%	88,9%	88,5%	
Total			165	9	174	
			94,8%	5,2%	100,0%	

Comments * Type of job Crosstabulation						
			Type of job		Total	
			Permanent	Hourly wages		
Comments	Yes		19	1	20	
			95,0%	5,0%	100,0%	
			11,5%	11,1%	11,5%	
	No		146	8	154	
			94,8%	5,2%	100,0%	
			88,5%	88,9%	88,5%	
			165	9	174	
			94,8%	5,2%	100,0%	
			100,0%	100,0%	100,0%	

Table 25 further studies Crosstabulation for the open question

Comments * Further Studies Crosstabulation						
			Further Studies?		Total	
			Yes	No		
Comments	Yes		10	10	20	
			50,0%	50,0%	100,0%	
			16,1%	8,9%	11,5%	
	No		52	102	154	
			33,8%	66,2%	100,0%	
			83,9%	91,1%	88,5%	
Total			62	112	174	
			35,6%	64,4%	100,0%	
			100,0%	100,0%	100,0%	

**Table 26 administrative position Crosstabulation for the open question**

<b>Comments * Administrative position Crosstabulation</b>						
		Administrative position?			Total	
		Yes	No			
Comments	Yes	5	15		20	
		25,0%	75,0%		100,0%	
		20,0%	10,1%		11,5%	
	No	20	134		154	
		13,0%	87,0%		100,0%	
		80,0%	89,9%		88,5%	
Total		25	149		174	
		14,4%	85,6%		100,0%	
		100,0%	100,0%		100,0%	

**Table 27 studies Crosstabulation for the open question**

<b>Comments * Studies Crosstabulation</b>						
		Studies		Total		
		Second Degree	Postgraduate			
Comments	Yes	Count	2	8	10	
		% within Comments	20,0%	80,0%	100,0%	
		% within Studies	6,5%	25,8%	16,1%	
	No	Count	29	23	52	
		% within Comments	55,8%	44,2%	100,0%	
		% within Studies	93,5%	74,2%	83,9%	
Total		Count	31	31	62	
		% within Comments	50,0%	50,0%	100,0%	
		% within Studies	100,0%	100,0%	100,0%	

**Table 28 Gender descriptives regarding all items**

	N	Minimum	Maximum	Mean	Std. Deviation
Clarity of principles school	174	6,00	30,00	22,4253	4,71532
School administration	174	6,00	30,00	21,7184	4,88196
School Improvement	174	8,00	30,00	22,0172	4,66505
The quality of school life	174	8,00	25,00	18,4080	3,84830
Change Management	174	10,00	30,00	21,0230	3,99560
T.Q.M. Philosophy adoption	174	6,00	30,00	21,3736	4,79928

**Table 29 Age Groups descriptive regarding all items**

		N	Mean	Std. Deviation	Minimum	Maximum
Clarity of school principles	25 - 30	4	20,7500	5,50000	18,00	29,00
	31 - 40	35	22,4857	4,62965	8,00	30,00
	41 - 50	119	22,6807	4,89194	6,00	30,00
	> 50	16	20,8125	3,08153	17,00	27,00
	Total	174	22,4253	4,71532	6,00	30,00
School Administration	25 - 30	4	19,5000	4,43471	16,00	26,00
	31 - 40	35	22,0571	4,68378	9,00	29,00
	41 - 50	119	21,8824	5,15057	6,00	30,00
	> 50	16	20,3125	2,93754	16,00	26,00
	Total	174	21,7184	4,88196	6,00	30,00
School Improvement	25 - 30	4	19,7500	6,70199	11,00	27,00
	31 - 40	35	22,0571	4,98198	11,00	30,00
	41 - 50	119	22,2521	4,68539	8,00	30,00
	> 50	16	20,7500	3,08761	17,00	29,00
	Total	174	22,0172	4,66505	8,00	30,00
The quality of school	25 - 30	4	16,7500	7,67572	8,00	25,00
	31 - 40	35	18,0857	3,99538	8,00	25,00

	41 - 50	119	18,6975	3,79016	9,00	25,00
	> 50	16	17,3750	2,65518	13,00	24,00
	Total	174	18,4080	3,84830	8,00	25,00
<b>Change management</b>	25 - 30	4	20,5000	5,50757	14,00	26,00
	31 - 40	35	21,7429	3,56736	14,00	29,00
	41 - 50	119	20,9916	4,23163	10,00	30,00
	> 50	16	19,8125	2,34432	16,00	23,00
	Total	174	21,0230	3,99560	10,00	30,00
<b>T.Q.M. Philosophy adoption</b>	25 - 30	4	20,2500	5,85235	13,00	27,00
	31 - 40	35	21,0571	4,73996	10,00	29,00
	41 - 50	119	21,6891	4,99618	6,00	30,00
	> 50	16	20,0000	2,85190	16,00	26,00
	Total	174	21,3736	4,79928	6,00	30,00

**Table 30 Work experience descriptive regarding all items**

		N	Mean	Std. Deviation	Minimum	Maximum
<b>Clarity of school principles</b>	1 - 10	37	22,5946	4,54887	11,00	30,00
	11 - 20	69	22,5362	4,72658	8,00	30,00
	> 20	68	22,2206	4,85259	6,00	30,00
	Total	174	22,4253	4,71532	6,00	30,00
<b>School Administration</b>	1 - 10	37	22,1351	4,22402	12,00	29,00
	11 - 20	69	21,3333	5,43861	8,00	30,00
	> 20	68	21,8824	4,65377	6,00	30,00
	Total	174	21,7184	4,88196	6,00	30,00
<b>School Improvement</b>	1 - 10	37	21,8378	4,67567	11,00	30,00
	11 - 20	69	22,0000	4,81419	11,00	30,00
	> 20	68	22,1324	4,57085	8,00	30,00
	Total	174	22,0172	4,66505	8,00	30,00
<b>The quality of school</b>	1 - 10	37	18,2162	4,10376	8,00	25,00
	11 - 20	69	18,2464	3,84786	11,00	25,00

	> 20	68	18,6765	3,74740	9,00	25,00
	Total	174	18,4080	3,84830	8,00	25,00
Change management	1 - 10	37	21,5405	3,47686	14,00	29,00
	11 - 20	69	20,8551	4,25743	12,00	30,00
	> 20	68	20,9118	4,01763	10,00	29,00
	Total	174	21,0230	3,99560	10,00	30,00
T.Q.M. Philosophy adoption	1 - 10	37	20,9730	4,57946	10,00	29,00
	11 - 20	69	21,3913	5,06492	10,00	30,00
	> 20	68	21,5735	4,69460	6,00	30,00
	Total	174	21,3736	4,79928	6,00	30,00

**Table 31 Administrative position frequencies and percentages regarding school managers**

		Frequency	Percent	Valid Percent
Valid	Director	13	7,5	52,0
	Assistant Director	7	4,0	28,0
	All-day school responsible	5	2,9	20,0
	Total	25	14,4	100,0
Missing	System	149	85,6	
	Total	174	100,0	

**Table 32 Administrative position**

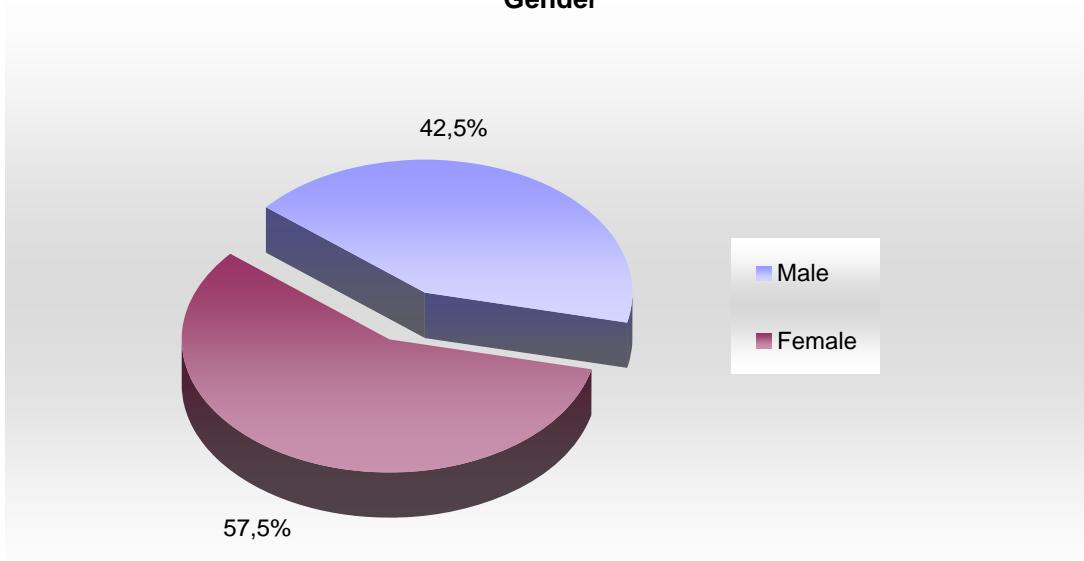
		Frequency	Percent
Valid	Yes	25	14,4
	No	149	85,6
	Total	174	100,0

**Table 33 Specialty descriptives regarding all items**

		N	Mean	Std. Deviation	Minimum	Maximum
<b>Clarity of school principles</b>	Primary Teacher	144	22,4861	4,56803	6,00	30,00
	Physical Education	14	21,1429	5,92072	6,00	30,00
	Foreign Languages	11	22,4545	5,80282	11,00	30,00
	Music	4	24,5000	3,10913	20,00	27,00
	New Technologies	1	23,0000	.	23,00	23,00
	Total	174	22,4253	4,71532	6,00	30,00
<b>School Administration</b>	Primary Teacher	144	21,6875	4,82631	6,00	30,00
	Physical Education	14	20,7143	5,67625	9,00	30,00
	Foreign Languages	11	21,6364	5,12392	14,00	29,00
	Music	4	26,2500	2,06155	24,00	28,00
	New Technologies	1	23,0000	.	23,00	23,00
	Total	174	21,7184	4,88196	6,00	30,00
<b>School Improvement</b>	Primary Teacher	144	22,1250	4,53714	8,00	30,00
	Physical Education	14	20,5000	5,57122	11,00	30,00
	Foreign Languages	11	21,6364	5,66167	11,00	29,00
	Music	4	24,7500	3,20156	20,00	27,00
	New Technologies	1	21,0000	.	21,00	21,00
	Total	174	22,0172	4,66505	8,00	30,00
<b>The quality of school life</b>	Primary Teacher	144	18,5139	3,81016	9,00	25,00
	Physical Education	14	17,3571	4,03079	8,00	25,00
	Foreign Languages	11	17,5455	4,67683	8,00	25,00
	Music	4	20,0000	2,16025	18,00	23,00
	New Technologies	1	21,0000	.	21,00	21,00
	Total	174	18,4080	3,84830	8,00	25,00
<b>Change management</b>	Primary Teacher	144	21,0764	3,96502	10,00	30,00
	Physical Education	14	19,3571	4,21731	11,00	25,00
	Foreign Languages	11	22,0000	4,60435	14,00	29,00
	Music	4	22,2500	2,21736	20,00	25,00
	New Technologies	1	21,0000	.	21,00	21,00
	Total	174	21,0230	3,99560	10,00	30,00
<b>T.Q.M. Philosophy adoption</b>	Primary Teacher	144	21,5903	4,66412	6,00	30,00
	Physical Education	14	19,0714	5,75746	9,00	29,00
	Foreign Languages	11	21,2727	5,71123	10,00	28,00
	Music	4	22,2500	3,20156	20,00	27,00
	New Technologies	1	20,0000	.	20,00	20,00
	Total	174	21,3736	4,79928	6,00	30,00

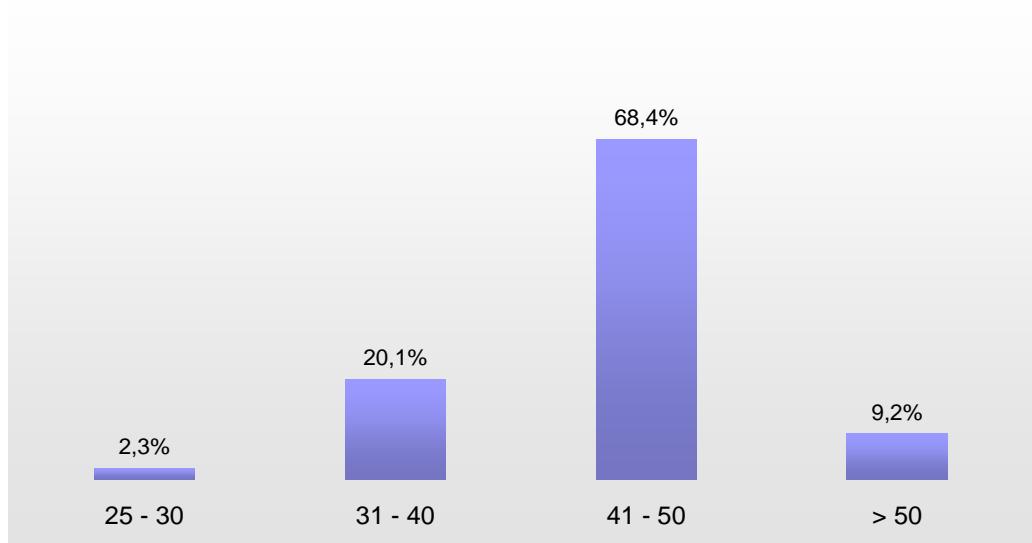
## Catalogue of histograms and maps

Gender



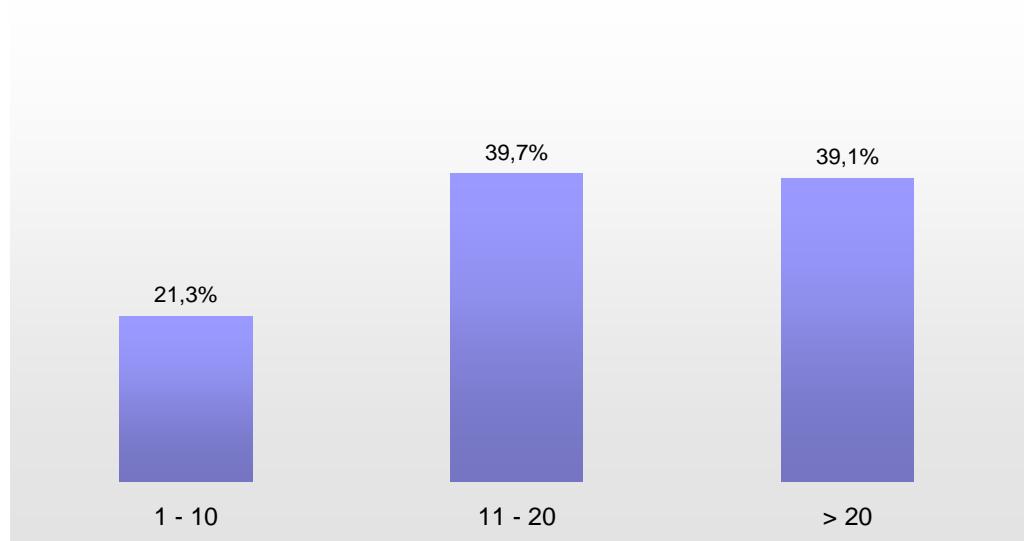
Histogram 1 Gender percentages

Age group



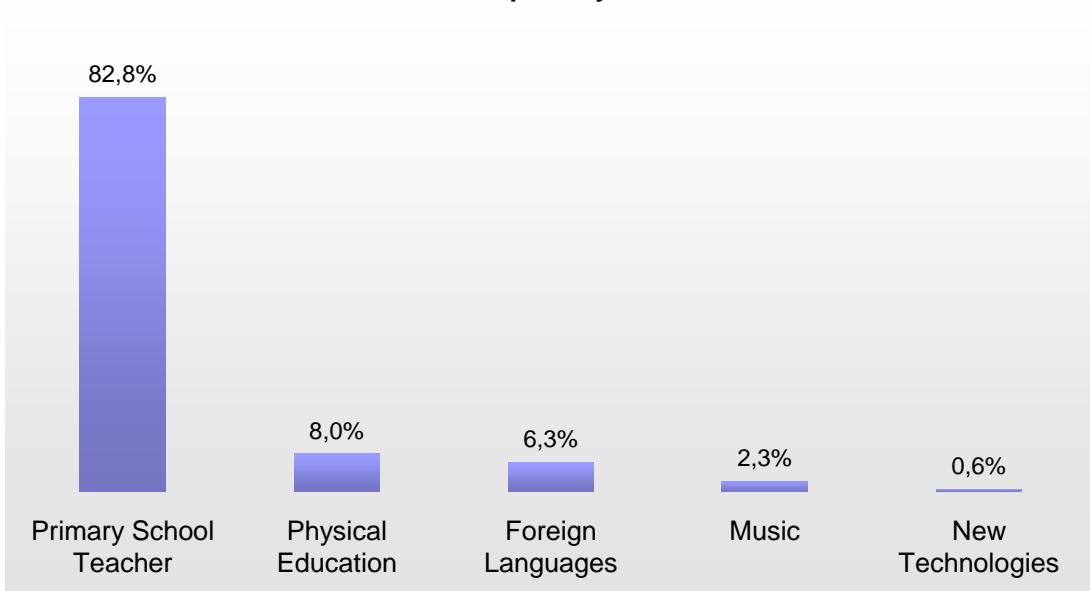
Histogram 2 Age group percentages

**Work experience**

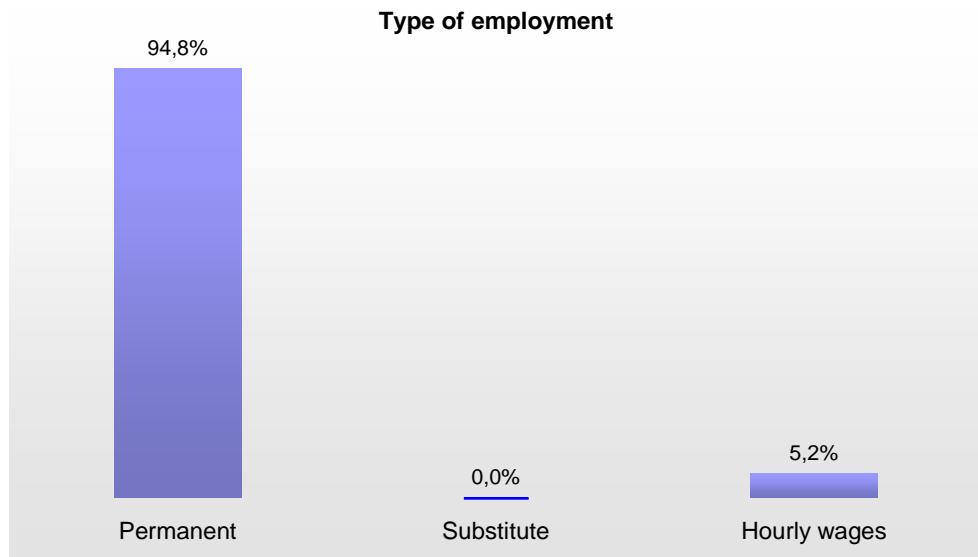


**Histogram 3 Work Experience percentages**

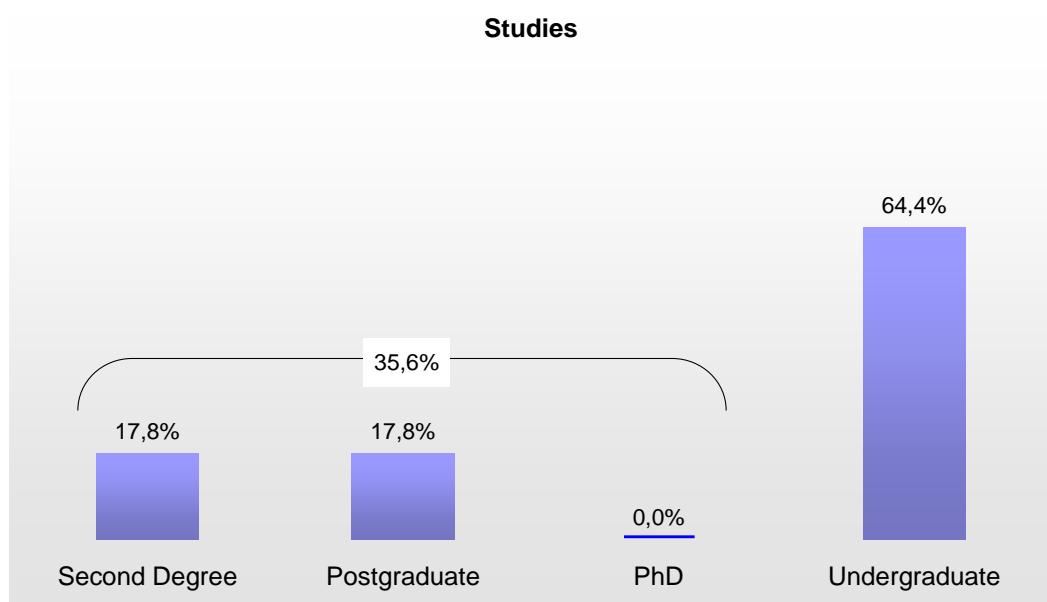
**Specialty**



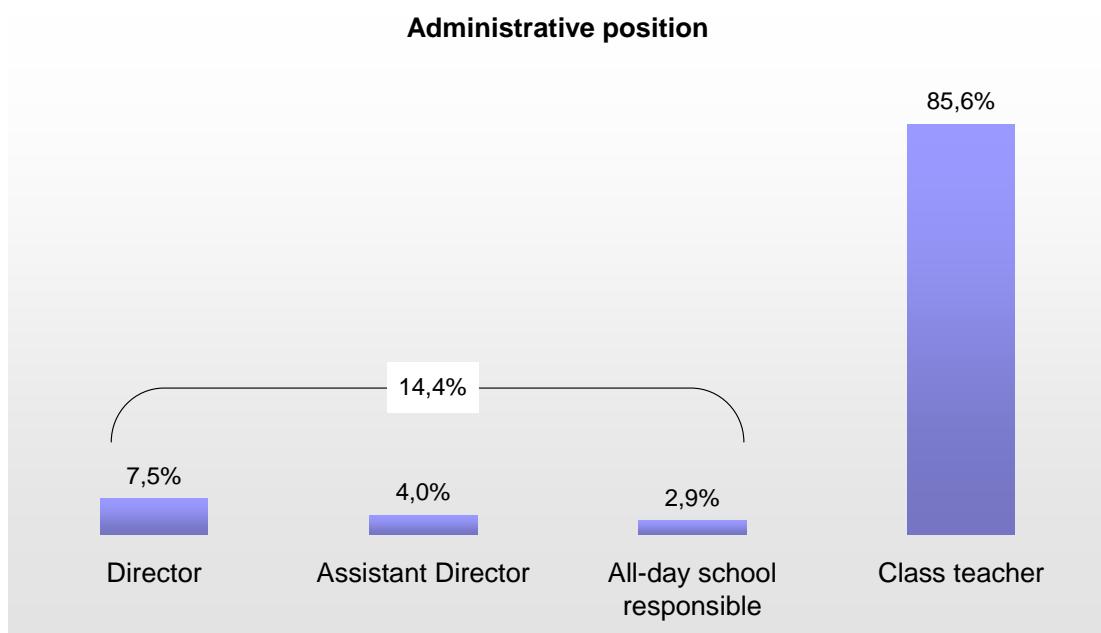
**Histogram 4 Specialty percentages**



**Histogram 5 Type of employment percentages**



**Histogram 6 Studies percentages**



**Histogram 7 administrative position percentages**