

Teachers' Views on the Role of Leadership in the Implementation of Total Quality Management

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Abstract: The purpose of this research is the identification of the Greek teachers' opinions concerning the role of the schools' principals in the implementation of the five dimensions of total quality management. For the measurement of the total quality management's dimensions, SERVQUAL model was used. For the identification of the leadership styles followed, the Multifactor Leadership Questionnaire was used. The research sample consists of 217 teachers of Thessaloniki region in Greece, who are working to schools that operate in both public and private education. The questionnaire was online distributed and the convenience sampling, in combination with the avalanche method, were followed. The main results of the present research concern the positive correlation between all dimensions of total quality management with the transformational and transactional leadership style and their negative correlation with the laissez-faire leadership style. In addition, they relate to the identified statistically significant difference between the schools that operate on public and private sector, in the tangibles' dimension, in which the public sector lags behind the private sector. Finally, in both the private and public sector schools in Greece, the most prevalent leadership styles are transformational and transactional, and the least prevalent is the laissez-faire leadership style, where no statistically significant differences were identified between the two sectors in terms of the leadership style that is followed.

Keywords: Leadership Style, Education, School Principal, Total Quality Management

1. Introduction

According to Ozberk et al. [15], the need for quality education is the most important issue in education today. Quality seems to be a high priority for education policy makers, and improving quality is probably the most difficult task facing educational institutions. In this regard, Total Quality Management is considered as a powerful vehicle for supporting quality management in schools [15].

Total quality management provides a structured, systematic education service system, which leads to improvement in various areas, such as student performance, staff and student motivation, and increased self-esteem, both for staff and for students. Total quality management can help schools make significant changes by applying its procedures, principles, and tools, which have already demonstrated significant improvements in schools in the United States.

Total quality management promotes pride, empowerment, teamwork and competition, issues that can ultimately lead to quality management in schools [13].

Hayward & Steyn [11] treat total quality management as the systematic management of the supplier-customer relationship by an organization in such a way as to ensure an improvement in the quality of performance. The principles of total quality management focus, first, on the achievement of quality, which is defined as a philosophy and a set of guiding principles, which aim to meet and exceed the needs and expectations of customers. In addition, it focuses on the acceptance and pursuit of continuous improvement, as the only useful formal goals. Total quality management can, therefore, be considered as an operational management theory with a set of process tools and their application [20].

It is therefore clear that in order to address the quality of education, the guiding principles of total quality management need to be reviewed and explored. The commitment of the management leadership, i.e. the school principals, is of the utmost importance in this process. Undoubtedly, there is a strong need for clear and visible commitment and support from senior school executives, which should be clear to all parties involved with these schools.

In general, and taking into account the above information, the emphasis, in the definition of quality, is on customers and their needs, views and requirements. In an educational context, quality is considered in terms of the service provided to the public. Therefore, it is imperative that service standards in education be understood and adhered to by all stakeholders, who are considered part of the school community and in particular by the school administration.

In the present work, emphasis is placed on the approach to the importance of the role played by school principals, in the implementation of total quality management. Therefore, there is a deepening and specialization in a field of great importance, which is that of education. In particular, in the present work, the degree of originality is even greater, because it lies not only in the issue of the approach of total quality management, but also in its connection with the current leadership style of school principals. Another point of strengthening the originality of the studied subject lies in the comparison made in the research part, between private and public sector.

This specialization and targeted approach make this study necessary and unrepeatable in the recent past. Following this completion, private and public sector school principals and teachers will be able to know the changes they need to make to their administrative approach, if necessary, as well as the points that need more attention and more rational management.

2. Theoretical Framework

School principals must effectively work and manage the issues that arise in order to ensure the high quality of education services provided by their schools. However, this is not the point where total quality management is restricted, as Pourrajab et al. [17] mentions. The existence of a middle hierarchy of school principals and/or managers is necessary to help in the process of ensuring quality activities and services in these organizations, something that is pointed out by Donitsa-Schmidt & Zuzovsky [7] and by Branson et al. [3], although the study of the lastly-mentioned ones is focused on higher education and not primary and secondary.

However, school principals have the day-to-day responsibility for ensuring proper planning and promoting the implementation of the best teaching and learning methods, in order to ensure and maintain high quality standards, both in the administration and in the implementation of functional educational work [16, 19].

The principal of the school units plays an important role in identifying quality issues and is responsible for

communicating the resulting threatening issues to the relevant senior bodies. The school principal must evaluate the monitored and implemented educational and school activities, regarding issues of quality of the educational services provided and the general internal environment of the school unit, as he/she perceives them from his/her own point of view. This information becomes necessary to be provided, by the school principal, for reasons of policy development, for the school, which will respect the principles and conditions of quality education, as expected by the various stakeholders of the teacher environment [14].

In this way, school principals, therefore, have an indirect influence on the policies pursued in matters of total quality management, which can be adopted and enacted not only at the local level but also at the national level [10].

School principals, in the context of the school-based administration application, are called upon to balance a variety of roles. The principal's role evolves from direct educational leadership to a broader decision-making role, often by assisting teacher teams, and interacting with a wider range of individuals, including community members (e.g. parents) and other out-of-school stakeholders. This is the reason why emphasis should be placed on the development of mid-level executives, who will substantially help enhance the quality levels of school management [22].

Currently, the school principal becomes responsible for the day-to-day professional and operational management of the school, which is carried out under his/her own leadership. This means that he/she is responsible for ensuring that the policies agreed upon and defined by government and other relevant organizations, coming from the external school environment, are implemented in practice [23].

In short, the principal of a school acts as a representative of his/her school unit and deals with the various stakeholders, whether inside or outside the school environment, becomes responsible for the utilization and exchange of information, is effectively responsible for the decision-making process, for problem solving and how to use the available resources, while at the same time he/she is responsible for the effective work of the teachers of his/her school and for the rest of the human resources [1].

There are, in addition to the above, certain administrative tasks that the school principal is required to perform, such as the management of available school financial resources, the creation of participatory structures, the effective regulation of procedures, the effective management of resources, the maintenance of useful records, the evaluation and evaluation of the staff employed in their school, as well as the procedures for monitoring the human resources of the school even during working hours [8].

When these tasks are further analyzed, it becomes worrying that the managerial and administrative function of this organizational level is not clearly defined. This can lead to a situation where school principals are not, in practice, committed to addressing quality issues that arise in their unit and this is due to the fact that their role is multidimensional and not clearly and distinctly defined [5, 28].

All the areas of activities and responsibilities of school principals require knowledge, understanding and insight. If the school principals are called upon to effectively perform their role and responsibilities, and therefore to contribute to the overall quality management of their schools, it is necessary for them to acquire specific and specialized skills in teaching and administration [9, 26]. School principals should be aware of all business aspects of their school, which include curriculum issues, criminal matters, research and development issues, and policy practices [9].

Principals, among others, should provide tangible and intangible resources – time and opportunities – to their staff, in order to assist in teachers' improvement process, but also in order for the whole school unit to increase its efficiency [27]. However, when the available financial resources and logistical infrastructure are limited, this is difficult to achieve, and the manager is not responsible for not achieving this [21].

At this point, it should be noted that the multidimensionality of the roles and responsibilities of school principals conceal the risk of role conflict. Role conflict occurs when a person is expected to fulfill different roles at the same time, such as teaching and administration. Role conflict can also arise when proper organizational principles are ignored. Role conflict can further be caused by lack of experience [12].

When implementing a policy that is intertwined with total quality management, the school principal should create a culture in his/her school that is "friendly" to the wider stakeholders involved. Its introduction is similar to the adoption of a transactional or transformational leadership application and ensures the minimum resistance of stakeholders, in which case the school principal is called upon to make internal changes in order to move closer to the direction of school's total quality [4, 6].

3. Research Questions

The purpose of the research is to investigate the beliefs of teachers about the role of leadership in the overall quality management of educational institutions. In particular, the aim is to compare the views of teachers from the public sector with the views of teachers from the private sector, on the role played by the directors of the educational institutions in which they work, for the implementation of total quality management. In order to meet this research purpose, the answering of the following research questions is required:

- 1) Is there a correlation between overall quality dimensions and leadership styles?
- 2) Is there a difference in the private and public sector in terms of total quality dimensions?
- 3) Is there a difference between the private and public sectors in terms of leadership styles followed?

4. Methodology and Data

The population of the present research is teachers of public schools, private schools and tuition centers. The research

sample consists of 217 teachers of public schools, private schools and tuition centers in Thessaloniki region of Greece. The sampling method followed is the convenience sampling [25], in which all prospective participants have equal chances to be selected in the research sample. The researcher also used the avalanche technique, as, when sending the questionnaire via e-mails, to the prospective participants, they were encouraged to forward this e-mail to their colleagues, in order for them to participate in the research.

The research tool is a structured questionnaire that consists of three parts. The first part contains seven multiple choice questions about demographic and social information of the research sample.

The second part aims to measure total quality management through the SERVQUAL tool, as described by Van Dyke et al. [24]. This tool is divided into two categories. The first category concerns the recording of the imaginary state, that is, the recording of the state as the research sample would like it to be, regardless of how it actually is. The second category concerns the recording of the actual situation that prevails. In this case, the questionnaire of the present research consists of one of the two aspects of the SERVQUAL model, i.e. the capture of the real situation, omitting the aspect of the ideal. In this context, the SERVQUAL scale of the real situation, to which the research sample of the present research is called to answer consists of 22 questions of the 5-point Likert scale. Methodologically, the SERVQUAL scale proposes the creation of the variable "tangibles" from questions 1-4, the creation of the variable "reliability - stability" from questions 5-9, the creation of the variable "response" from questions 10 - 13, the creation of the variable "safety" from questions 14 - 17 and finally, the creation of the variable "empathy" from questions 18 - 22.

The third and last part of the questionnaire aims to identify the leadership style followed. The multifactorial model of Bass & Avolio [2] was used for this determination. This model consists of 36 5-point Likert questions. Methodologically, the following variables emerge from this model: (a) Transformational leadership, (b) transactional leadership and (c) Laissez-faire leadership.

5. Results

Table 1 shows the results of the reliability test Cronbach Alpha for the variables that are going to be constructed by the questionnaire as it was described at the previous section.

Table 1. Cronbach's Alpha reliability test.

Variable	Cronbach's Alpha	N of Items
Tangibles	0.76	4
Reliability/Stability	0.85	5
Response	0.83	4
Safety	0.87	4
Empathy	0.91	5
Transformational Leadership	0.97	20
Transactional Leadership	0.76	12
Laissez-faire Leadership	0.85	4

Since Cronbach's Alpha index is higher than 0.7 in all the above-presented groups of items, their reliability levels are high and accepted (Table 1).

Table 2. Variables presentation.

Variable	Mean	Standard Deviation
Tangibles	3.63	0.83
Reliability/Stability	4.02	0.72
Response	4.19	0.70
Safety	3.99	0.77
Empathy	4.04	0.73
Transformational Leadership	3.61	0.86
Transactional Leadership	3.19	0.50
Laissez-faire Leadership	2.16	0.97

The highest mean score (M=3.63) shows that the

transformational leadership is the one that is followed to a greater extent, while the lowest mean score (M=2.16) shows the laissez-faire leadership is followed to a lesser extent. Regarding the total quality management dimensions, the highest mean score (M=4.19) is presented by the "response" dimension, which is covered in greater degree. The mean score of "tangibles" is the lowest (M=3.63) and it covered to a lesser extent (Table 2).

Shapiro Wilk test showed that the constructed variables do not follow normal distribution. This means that the statistical analysis that follows is conducted through non-parametric statistical tests. The confidence levels are set to 95% and this means that statistically significant results are the ones when $p\text{-value} < 0.05$.

Table 3. Is there a correlation between overall quality dimensions and leadership styles?

	Transformational Leadership	Transactional Leadership	Laissez-Faire Leadership
Tangibles	0.32*	0.34*	-0.11
Reliability/Stability	0.55*	0.30*	-0.38*
Response	0.46*	0.24*	-0.35*
Safety	0.65*	0.26*	-0.45*
Empathy	0.60*	0.34*	-0.37*

(*) Statistically significant correlation ($p\text{-value} < 0.05$)

Table 4. Is there a difference in the private and public sector in terms of total quality dimensions?

	Chi-Square	df	Assymp. Sig.
Tangibles	24.10	1	0.00*
Reliability/Stability	0.64	1	0.43
Response	7.62	1	0.06
Safety	0.12	1	0.73
Empathy	0.34	1	0.56

Kruskal-Wallis Test - Grouping Variable: Education Sector

(*) Statistically significant difference ($p\text{-value} < 0.05$)

Table 3 shows many statistically significant correlations ($p\text{-value} < 0.05$) between the dimensions of total quality management and leadership styles. More specifically, it seems that all leadership styles show statistically significant correlations with all dimensions of total quality management, except for the dimension of tangibles, which makes this finding remarkable. In addition, all the statistically significant correlations that emerge between transformational leadership and transactional leadership with the five dimensions of total quality management are positive. This means that the stronger the transformational and transactional leadership, the more strongly the five dimensions of total quality management are covered, and vice versa, that is, the weaker the transformational and transactional leadership style, the weaker the five dimensions of total quality management. In the case of laissez-faire leadership, the statistically significant correlations that have emerged with the four dimensions of total quality management -excluding the dimension of tangibles- are negative, which is to be expected and perfectly reasonable, at a time when laissez-faire is negative example of leadership style. Thus, in this

case, the greater the laissez-faire leadership, the weaker the four dimensions of total quality management -excluding the tangibles- and vice versa.

Table 4 shows that statistically significant differences between the private and public sectors arise only in the case of tangibles ($p\text{-value} < 0.05$). Table 5 presents in detail these statistically significant differences between the two sectors, in the case of tangibles.

Table 5. Difference between the private and public sector in terms of tangibles.

	N	Mean Rank
Private education sector	108	129.94
Public education sector	109	88.26
Total	217	

Table 5 shows that the tangibles are covered to a greater extent by the private sector, while this sector has a higher score (M=129.94), in contrast to the case of the public sector (M=88.26).

Table 6. Is there a difference between the private and public sectors in terms of leadership styles followed?

	Chi-Square	df	Assymp. Sig.
Transformational Leadership	2.31	1	0.13
Transactional Leadership	2.54	1	0.11
Laissez-faire Leadership	1.50	1	0.22

Kruskal-Wallis Test - Grouping Variable: Education Sector.

Table 6 covers the last research question. Thus, it appears that in none of the following leadership styles did a statistically significant difference appear between the private and public educational sector ($p\text{-value} > 0.05$).

6. Discussion

The results showed the statistically significant and positive correlation between the transformational and transactional leadership styles and the total of the five dimensions of total quality management. On the contrary, in the case of the laissez-faire leadership style, there was a statistically significant correlation with all dimensions of total quality management -except of the tangibles- which was negative.

With the above research finding, this research is in line with many other researches. More specifically, it is aligned with Pourrajab et al. [18] who mentioned the responsibility of the school principal for the rational and effective management of issues that arise and need immediate resolution, with Donitsa-Schmidt & Zuzovsky [7] and Branson et al. [3] on the need for emphasis on the quality of educational services provided by school principals, with Pounder [16] and Psomas & Antony [19] stating that proper planning and selection of appropriate teaching methods and practices are the responsibility of school principals, so school principals and the role they play are intertwined with the elements involved in the quality of educational services.

In addition, the results of this research confirm Lin et al. [14] and Dou et al. [8] who spoke about the responsibility of the principal for the correct and appropriate evaluation and proper management of all the resources available in his school, but also Gurr & Drysdale [10], who reported that the principals have a direct influence in all dimensions of total quality management.

In fact, many other studies agree, such as those of Sfakianaki et al. [22], Sunaengsih et al. [23], Brinia & Papantoniou [4] and Barr & Saltmarsh [1]. At this point, it should be noted that we have not been able to confirm the finding of Bush [5] and Warwas [28], according to which, the school principal may not be fully responsible for the completeness of the dimensions of his/her overall quality administration, due to the multidimensionality of the role assigned to him/her. The results of the present study did not reveal such a thing, as in no dimension of total quality management was found the absence of a statistically significant correlation with the followed leadership style.

As for the differences that arise between the private and the public sector, these were not particularly significant and, above all, were identified only in the case of tangible elements, i.e. only in one dimension of total quality management. More specifically, the public sector appeared to be weaker, compared to the private sector, in this particular dimension of tangibles.

The specific difference that arose between the public and private sector, we consider to be justified due to the competition that exists in the private sector and which does not exist to such an extent in the public sector. But, regardless of the nature of the competing forces, the special importance that accompanies the high quality of education, in our view, balances the public and private sectors, in the sense that both sectors are obliged to pay the same attention to all the individual dimensions. affecting, either negatively or

positively, the quality of the educational services provided.

At this point, the reference to the study of Wani & Mehraj [27], which also aligned our above-mentioned research results, and which was in favor of the school principal's responsibility for providing tangible and intangible resources to the school, is noteworthy. However, here, there is a contradiction from the study of Sadeh & Garkaz [21], which especially in the case of tangible data, the researchers state that if they have always been absent from school, then this is not under the responsibility of the school principal. Through the findings of the present study, however, it is not possible to agree with the view of Sadeh & Garkaz [21], and in the case of tangible elements, as noted above, a statistically significant correlation emerged with all leadership styles.

7. Conclusion

Total quality management reflects a process that is supported through continuous monitoring of the procedures followed by the educational institutions, in order to ensure the quality of the educational services provided at all times, regardless of whether they are provided by the public or private sector. Total quality management consists of five sub-dimensions, namely the dimension of tangible elements, empathy, reliability and stability, responsiveness and safety. In case that these individual dimensions are not covered to the desired degree, then the respective educational institution must proceed to change the strategies followed by its plans in view of its daily operation and activity. Otherwise, the quality of education provided to students is undermined.

This paper proved that the more the two positive leadership styles are followed, namely the transformative and the transactional, the more the five sub-dimensions of total quality management are covered, which is not the case with the negative leadership style, which undermines the completeness of these five dimensions.

Finally, due to the differences that arose in the tangibles between the private and public sector, and in order to further upgrade the quality levels of educational services provided in the public sector, it is proposed to place greater emphasis on upgrading and renewing the tangible elements of total quality management, i.e. school buildings, indoor and outdoor school environment, as well as the required equipment used during the training.

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