The Impact of Total Quality Management on three secondary schools in Israel.

'IMPROVEMENT THROUGH TOTAL QUALITY MANAGEMENT (T.Q.M.)?'
The perceptions of headteachers and staff in three Tel-Aviv secondary schools.

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ABSTRACT

This thesis focuses on perceptions about the application of the T.Q.M. approach within three secondary schools which have a high rate of Russian newcomer students in the Tel-Aviv area. This study indicates that the staff, with their commitment to the schools' aims especially to the academic ones, had substantial reservations regarding the usefulness and the implementation of the T.Q.M. approach as a whole in these schools. This may be explained by the inadequacy of some T.Q.M. key factors such as 'zero-defects' or 'customer-centered approach' in the educational setting where education is perceived as a trial and error process.

This research indicates that there are robust monitoring systems as well as collegiality and accountability of the staff in the three schools, and a culture which supports the idea of continuous quality improvement. In effect, the pre-requisites for the implementation of the T.Q.M. methods namely, management-led process, cultural change and finally data gathering and analysis as a means of monitoring quality and measuring change, have been achieved. Nevertheless, the attitudes towards the overall success of these schools is attributed mainly to the unusual quality of the Russian students. An additional aspect which rejects the usefulness of industrial elements of the T.Q.M. approach is that T.Q.M. has proved adequate only in coping with issues such as leadership, culture and relationships which could have been addressed anyway through the paradigms of school improvement and effectiveness. Hence, the industrial procedures and concepts have been perceived as mainly inadequate to apply in these schools where heterogeneous groups, teachers' expertise, ethical, discipline and academic values are considered to be the milestones of these schools. Apparently, another managerial approach should be sought which may more appropriately address these issues.
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Chapter 1 - INTRODUCTION TO THE THESIS

Research on T.Q.M. in schools has provided information mainly on the implementation process (Tzuk, 1995) for example Sitka, Alaska. However, the success or the failure of the implementation of the basically industrial approach of T.Q.M. to education in general and schools in particular, in the long run, remains open. This thesis investigates the influence of the elements important in the actual application of T.Q.M. in three schools. The main elements selected are leadership, culture, team-work and relationships among the staff members. The widespread prevalence of these factors in the literature which are perceived as essential for the improvement of the process in general and in education in particular, points at their centrality and importance in order to grasp the changes which have occurred in these schools. Other important concepts are problem-prevention, the customer-centered approach, 'drive out fear', and the quality product (Deming, 1986). The choice of these elements, although it does not include the full list of Deming’s techniques and principles which are required in the industry world, enables us to scrutinize those workable aspects whose implementation may effect the educational system.

The research undertaken for this thesis is an attempt to comprehend the secret of success in three particular secondary schools in Tel Aviv area from the viewpoint of the school staff. The researcher investigated the question of whether the success in these schools is due to the introduction of the T.Q.M. approach and its associated techniques or to other factors. The exploration of this question is done on the school level rather than on the class one. Since three Israeli secondary schools are the subject of research it is relevant to look into the Israeli educational system and into the special background in which these schools operate.

At present, secondary schools in Israel are in transition from the centralized to the more decentralized management style and the focus is on improving the competence of the student's academic level within the school. This transition is due to the special student population of Israeli secondary schools. Since 1948, Israel has welcomed
more than two million newcomers, and its school population has increased ten fold. The newcomers have arrived from all over the world. But in the 1990s, there has been a tremendous ‘wave’ of immigrants, approximately one million newcomers arrived from the former Soviet Union. Most of them are young people who are highly sensitive to the quality of what they are offered within their educational setting and are mainly ‘streamed’ towards the traditional academic offerings in secondary schools.

This reality has changed the nature of the current school population, and secondary schools with a high percentage of newcomers have had to create the conditions within which these newcomers could be successfully absorbed. Acknowledging the government policy that favors differentiation and heterogeneous classes, the educational system has striven to develop appropriate methods to help in their absorption such as: teacher training programs geared towards working with immigrant students; special curricular aids; opening short-term classes to introduce immigrant students to subjects not learnt in their countries of origin; and offering retraining courses for immigrant teachers to facilitate their employment in the education system (Focus, education in Israel p. 2-3).

In the present research, all three schools under study have a high percentage of Russian newcomer students. This is just an extreme of the normal Israeli situation where youngsters from all over the world immigrate and become part of the Israeli educational system. Yet, introducing the attitudinal profile of new adolescent immigrants from the USSR, Cohen (1993) raised some interesting aspects about this unique population, attempting to answer why and how these particular students are highly motivated:

Most Russian youngsters study in academic schools rather than vocational ones;
A high percentage of these students’ parents are concerned with academic or scientific professions;
81 percent of the Russian students participating in his survey aspire to take after their parents especially in the educational way (p. 15-20).
In effect, this aspiration probably serves as a key factor in understanding the Russian students’ motivation for constantly improving their educational outcomes. Goldberger (1998) adds that the Russian parents tend to come to management and staff of schools with demands and they are perceived as concerned and demanding parents. These parents are actively involved in the school life. They are willing to help in order to make their children realize their full potential. High performance and quantified results are of great importance (Cohen, 1993) and they expect both management and staff to invest time, effort and resources in order to advance their progeny to the goal of getting a 'Bagrut' certificate with high grades. The parents' insistence on improvement and success which can be measured, can partly explain the desire to enhance achievements and the decision to adopt the T.Q.M. approach as a means of trying to improve in some Israeli secondary schools.

An additional possible factor to the desire to improve the educational system is linked to the general dissatisfaction which many educators feel about the present educational system and this is what specifically prompted the introduction of T.Q.M. The strongest aspirations of those involved in the school system aim at optimizing the students’ individual abilities and resources and thus improving the quality of education (Friedman, 1988; Gaziel, 1996). This demand for improvement has been raised worldwide:

“Public schools appear to be failing the basic educational mandate of any democracy, to provide equitable preparation for, and equal opportunity in society. A system that holds a far higher likelihood of educational failure for students who typically struggle in school cannot be considered effective, even if some students are experiencing success. This basic failure has led to a cacophony of voices calling for educational reform.” (Capper and Jamison, 1993 p. 25)

Thus, today:
"a school is either improving or it is getting worse. It cannot stand still because the context is constantly changing." (Stoll et al, 1996 p. 34)

Indeed, a number of different secondary schools in Israel decided to implement a T.Q.M. approach as a means towards improving educational outcomes. Although the researcher received no reply from the Ministry of Education about the accurate percentage of secondary schools that implemented a T.Q.M approach, reports from different secondary schools in the north such as in the Carmiel region, or in the centre such as Tel Aviv region were published while implementing this study ('Kesher Ayin', 1995).

The three schools under study could be considered typical academic secondary schools in Israel where the national curriculum is mainly college preparatory. That means that all three schools teach at least twenty total units that are required for graduation according to the Ministry of Education. Every student is entitled to have his/her diploma if tested in at least twenty units on the following subjects: Math, English, History, Bible, Language, Literature and Citizenship. Typically, another seven units are required for a high school diploma in optional subjects such as technology, science, sport or art education. In order to be entitled to receive a 'Bagrut' certificate, the student must obtain at least the grade of 55 out of 100 in all subjects. The table of the means and results, of some of the units in the 'Bagrut' 2000/2001, and of the main subjects in the three schools under study follows.

Table 01. The main final exams' results in 2000/2001

<table>
<thead>
<tr>
<th>Subject</th>
<th>Average in School 'one'</th>
<th>Average in School 'two'</th>
<th>Average in School 'three'</th>
<th>Average in Israel</th>
</tr>
</thead>
<tbody>
<tr>
<td>English (5 units)</td>
<td>83.8</td>
<td>82.6</td>
<td>82.8</td>
<td>79.9</td>
</tr>
<tr>
<td>History (1 unit)</td>
<td>77.9</td>
<td>79.0</td>
<td>71.8</td>
<td>76.8</td>
</tr>
<tr>
<td>Math (3 units)</td>
<td>98.5</td>
<td>96.5</td>
<td>100.0</td>
<td>80.2</td>
</tr>
<tr>
<td>Physics (3)</td>
<td>85.3</td>
<td>82.5</td>
<td>87.8</td>
<td>75.6</td>
</tr>
<tr>
<td>units)</td>
<td>68.1</td>
<td>61.9</td>
<td>73.3</td>
<td>76.5</td>
</tr>
<tr>
<td>------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Bible (2 units)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literature (2</td>
<td>70.4</td>
<td>65.9</td>
<td>78.3</td>
<td>71.3</td>
</tr>
<tr>
<td>units)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citizenship (1</td>
<td>69.5</td>
<td>71.0</td>
<td>80.4</td>
<td>70.2</td>
</tr>
<tr>
<td>unit)</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

It is quite clear, from the above data, that these three schools can now be considered generally successful in academic terms when compared to the average in Israel. This is especially true in Math, English and Physics.

One reaction to the wish to improve schools has been the drive to identify effectiveness. Various worldwide studies (Davies, 1997; Levine and Lazotte, 1990; Sammons et al, 1995; Tzuk, 1995; Zavida, 2000) attempt to locate the factors which are connected with effective schools. In the past it was believed by some researchers (Bernstein, 1970; Coleman et al, 1966; Jencks et al, 1972), who focused on sociology, that students' achievements are conditioned by the stock of knowledge, attitudes, traits, which they have acquired at home. These researchers assumed that the school policy, its organization and climate, and the proper functioning of the headteacher do not play a major role in improving these achievements, whereas, later researchers (Friedman et al, 1988; Hopkins, 1994; Minkovitz et al, 1980; Reynolds et al, 1976) disagree. Their stance on the issue is that the main focus for school effectiveness and improvement should not be only on the ‘input factors’ of the ability of the students and his/her socio economic situation but also on different features common to effective schools. Or as Minkovitz et al (1980) put it:

"The divergence separating schools from one another cannot be, in its large measure, explained by the students background factors or the school characteristics but by the combination of both." (p. 316)

Gray (1998) agrees but clarifies that even in schools designated as effective as a whole, there will be departments that are less effective and that each student may have "very different experiences of schooling" (p. 23).
In fact, one of the main limitations of school effectiveness research is its focus on quantitative data relating to the student’s achievements. These measurements do not, therefore relate to the development of a student’s personality or necessarily to the quality of teaching and learning. Many of these criticisms lead some researchers (Hopkins, 1994; Sammons et al, 1994a,b) to the consideration of school improvement. There, the stress is more likely to be given to all aspects of student’s development, including skills and values. Nonetheless, there are still critics of both school effectiveness and school improvement research. The heaviest critique comes from researchers (Elliott, 1996; Fielding, 1997) who consider these movements’ findings as fundamentally flawed and stress the socio-economic aspect of the student.

Creemers et al in Holland (1998) also problematise the issue of improvement noting that the policymakers are viewed as tend to utilize the knowledge base selectively for their own ends.

Similarly to the situation in the Dutch and British education systems, in Israel there is a lack of co-operation between and sometimes confrontation amongst policymakers and researchers. As policymakers, researchers and teachers come from different traditions and disciplines, it is obviously not easy for all parties to reach a unanimous view (Gaziel, 1996). In fact, the specific strains and problems as a result of secular/religious dichotomies make the situation even more difficult to overcome. Gaziel further claims that although the rhetoric of most Israeli governments’ policy is social justice, excellence and commitment to equality of opportunity, there is no equality of outcomes. In practice, the secondary schools education policy of excellence in schools finds it difficult to guarantee equality of education along the lines of ethnicity, social class and economic differences. As a result, the improvement of secondary schools’ students’ outcomes became high in the policy agenda of the Israeli government and schools are seen as a key to improving the society’s future:

“The educational system aims to prepare children to become responsible members of a democratic, pluralistic society.” (Focus, Education in Israel p. 1)
Another possible way to achieve excellent results in education and to obtain a commitment to the educational system aims was recommended by the Ministry of Education (Friedman, 1998), namely delegation of powers to those who are involved in the process of education. As a result, many secondary schools have opted to switch to the decentralization mode of operation. This may be the reason why there is a move from centralized to decentralized management which brings about some reforms. Headteachers and their staff have to deal with new roles and responsibilities: building new organizational structures, defining the direction and the vision, and developing the proper environment for implementing change (Gaziel, 1996). To these ends, both international and Israeli secondary schools have adopted a T.Q.M. approach:

"T.Q.M. has been presented as a radical departure from the current educational paradigm, by freeing educators from their bureaucratic shackles and providing a model for empowerment." (Capper and Jamison, 1993 p. 25-26)

The rationale was that T.Q.M. is:

"a system that offers an equitable education—one that opens doors to every manner of societal opportunity for all students, regardless of differences."

(ibid p.26)

Although this was written in relation to schools in the U.S.A it applies equally well in Israel. T.Q.M. was also seen as the answer for the increased pressure for education systems to demonstrate results, to improve their schools and the standards of education as it also:

"focuses all aspects of management on its core purpose—the provision of appropriate services and products to customers." (West-Burnham, 1994 p.171)

On the operational level, some researchers considered other management features in relation to improving schools. For example, a study which was carried out by Hen et al (1991) makes it clear that the application of a collegial educational policy in a
certain direction can increase achievements and improve the student opportunity of succeeding in his/her studies:

"the practical conclusion from these findings ascertains the fact that the headteacher and his/her staff can have a real impact over the results of their work provided they establish a clear-cut educational policy and they dedicate their educational efforts to attain their goals." (Hen et al, 1991 p. 91)

Moreover, other researchers (Bolender, 1997; Hopkins, 1994; Mortimore, 1991; Tzuk, 1995) highlight in particular the importance of the quality of leadership in relation to improvement and effectiveness in schools. They focus on the need for the leader to have a vision for the school and to be transformational and dispersing the leadership function throughout the school. The development of the notion of transformational leadership point toward a leader who is not based in the autocratic or the 'laissez-faire' style of leadership but rather as one of whom much is demanded and who empowers others.

The leader’s role in implementing change is to anticipate and initiate changes without engineering them, hence, building an effective school culture is considered to be of prime importance for school success. Bolender (1997) calls it ‘the role of orchestrating change’ (p. 9). Managing the process of change must be organic and dynamic (MeKenzie, 1999) as it should incorporate; vision building, evolutionary planning, monitoring, initiative taking and empowerment, staff development and restructuring.

The issue of leadership and culture are also identified as main concepts within T.Q.M. The theory which lies at the core of the T.Q.M. approach requires provision for all the needs and demands of the customer through features such as monitoring and empowerment which can continually improve the organization so it will be possible to:

"create such process and organizational climate which will foster the assimilation of the required values and changes." (Tzuk, 1995 p. 1)
Referring to Deming’s fourteen principles, Tzuk (1995) adds that:

“there is a need to make the educational system receptive to the concepts and tools as accepted by the T.Q.M. approach in order to influence teachers and staff in an educational organization in their thought and perception processes.” (p. 4)

Likewise, Bostingle (1992) agrees that it is possible to apply this management approach to the educational system, however, he advocates adopting only four of the fourteen Deming’s principles, namely:

1. The concept of facing the interests of the school customers.
2. Constant improvement.
3. An ongoing process.
4. The headteacher’s responsibility.” (Bostingle, 1992 p. 2).

The current research investigates the above main T.Q.M. concepts: the customer-centered approach and leadership but also considers other key concepts of T.Q.M.: culture, problem-prevention, and relationships among the staff members. In effect, T.Q.M. approach was introduced as a philosophy that has advanced the Japanese industrial attempts to achieve quality (Deming, 1986). As a result of the Japanese success, T.Q.M. was later adopted to other international and Israeli organizations which aimed at improvement, and perceived the T.Q.M. as a means towards improvement (Tzuk, 1995). This is probably the reason why the three schools under study have adopted the T.Q.M. approach. In order to appreciate the possible influence of the T.Q.M. approach in education which this research focuses on, it is indispensable to examine in-depth those characteristics which have served the schools until now in the process of achieving the desired improvement so that it maybe possible to study the changes which took place there.

It is relevant to consider other previous movements in order to understand why it was decided to implement the T.Q.M. approach in some secondary schools in Tel - Aviv
as a means to improving education. This may illuminate the uniqueness of the T.Q.M. approach.

PREVIOUS MOVEMENTS, PRECURSORS TO T.Q.M.

T.Q.M. is not the first management approach to be adopted in secondary schools in the Tel-Aviv area. Some schools have recognized that most quality problems were caused by the inappropriate management approach applied in their school (Kesher Ayin, 1995). Yet, questions as to whether T.Q.M. serves as the next, short-term management approach or if T.Q.M. has more significance have been raised and are often asked by different authors (Brandt, 1992; Evans, 1993; Hirumi and Kaufman, 1992; Kohn, 1993) particularly after some unsuccessful attempts of T.Q.M. in the past. Betts (1992) considers that only when applying an overall management approach, will T.Q.M. succeed.

Wasley (1992 p. 64-65) takes the same view but highlights leadership as a vital condition for long lasting T.Q.M. success. Other researchers (Evans, 1993 p. 8; Betts, 1993 p. 146) put the emphasis on the most essential human factor, namely, the worker’s motivation.

Isaacson and Bamburg (1992 p. 43) add that quality leadership and culture enable organizations and schools to turn into ‘learning organizations’, therefore, creating a primary basis for implementing T.Q.M.:

“A learning organization is a place where people continually expand their capacity to create its future, where adaptive learning is joined by generative learning.” (Senge, 1990, p.14)

In effect, authors (Bostingle, 1992; Tzuk, 1995) base their thinking on the premise that organizations benefit greatly from implementing T.Q.M. and that it does increase effectiveness. Nevertheless, it is not the only management approach that proclaims its ability to improve effectiveness.
The scientific management approach (Taylor, 1979) has claimed that through exact measurement and accurate definition of the content of the role and through correlation between the role and the person doing it, high percentage outputs are achievable (Daft, 1988 p. 273). However, Taylor’s approach lays a stress on the micro level; the focus is on measuring and defining the single worker, whereas, T.Q.M. focuses on the macro level; the overall view of the organization as well (Blackburn and Rosen, 1993 p. 49-50).

Management By Objectives (M.B.O.) (Banks, 1993) is based on the formal procedure of determining objectives for different levels and then the analysis and control of outcomes and performances. The key points of M.B.O. are:

1. Employees know exactly what is expected from them.
2. Improvement in planning - by making managers set objectives and have timetables.
3. The decisions are more focused as objectives are defined in details.
4. Employees know how they function concerning the organizational aims.” (Banks, 1993 p. 73).

Indeed in an M.B.O. approach, workers participate in determining the purposes, are willing to invest in work and increase productivity. Yet, compared to the T.Q.M. approach, the M.B.O. approach has some weaknesses:

1. Winning or failing the objectives seems to be the employee’s problem as he/she decides upon these objectives. In any case, success or failure is directly connected to the employee’s personal performance and capacity.
2. Aiming at specific objectives, encourages employees to focus only on these objectives although he/she can be capable of handling a wider range of objectives.
3. No tools for process improvement are presented in M.B.O. approach.” (ibid p. 74).
There is another interesting approach: The Theory Of Constraints (T.O.C.) which some schools in Israel ('Amal' chain schools) prefer to implement alongside T.Q.M. in order to have an appropriate management package which includes the proper tools.

The T.O.C. is a management philosophy and a collection of various techniques that allow managers to focus on a small number of constraints; the same constraints which call a halt to organizational performances. Managing these constraints successfully guarantees improvement of the organization performance, better productivity and, undoubtedly, shortens the reaction time to respond to customer's demands. These factors, accordingly, have a strong connection to customer satisfaction and to the organization profit. Unfortunately, applying T.O.C. aims at a short-term improvement whereas applying T.Q.M. focuses on incremental improvement (Goldratt, 1986 p. 1-12).

Ronen (1992) states that there are other management approaches that claim to be the best for increasing quality and output. Yet, unlike these approaches, the focus of T.Q.M. is on the process and its control. There is no quick fix, but a long, incremental process that is carried out by all the members of the organization and in the different domains of the organization (p. 289-290). Or, as Sallis (1996) clearly puts it:

"T.Q.M. is a practical but strategic approach to running an organization which meets or exceeds the needs and wants of customers." (p. 28)

The penultimate section of the introduction of this thesis that outlines the aims and objectives of the current study in detail, follows.

OUTLINE OF THESIS

This project commence with a Literature Review which looks at three closely related areas. Focusing on the issue of Total Quality Management, comparisons will be drawn between that and the related movement of School Effectiveness and the educational initiative concerned with School Improvement. In the international move towards school improvement and increased effectiveness, T.Q.M. can be adopted as a
method to progress a school, its staff and its students. The literature review first considers the wider context of school improvement and related issues of school effectiveness and then moves to the more conceptual focus of the thesis, namely the area of T.Q.M. The next chapter looks at the methodology used in the study, introducing qualitative and quantitative approaches, the tools and techniques for quality improvement and the pilot study. Then, the main research findings from the schools are presented followed by the data analysis section which suggests interpretations of the data. Finally, the possible conclusions are pointed out and ways of further improving the schools.

OBJECTIVES OF INVESTIGATION

This research raises the question of what is the mainspring of difference in achievements among schools? Does the reason lie in the adopted management approach which has highlighted specific factors such as: collegiality, 'drive out fear' and close relationships that are particularly important on the part of the headteacher and school staff or is it the result of different educational inputs such as: the educational level of the student; his/her socioeconomic status, which really determine the student achievements?. In addition, there is a possibility that the reasons for it lies in the adopted paradigms of effectiveness and improvement. In any one of these possibilities, educators constitute the key for any change.

The professional literature attaches great importance to the role of the headteacher and his/her staff in influencing the school processes and the students' achievements. The National Assessment Centre in 1990 in the U.K. defined the competencies needed for successful leadership in schools:

"the ability to get others involved in solving problems; the ability to recognize when a group requires direction, to interact with the group effectively and to guide them to the accomplishment of the task." (Green, 1996 p. 14)

The above definition combines the main elements of leadership: vision, organizational and personal skills. There is recognition that leaders in education have crucial role in
improvement. They are expected to be both managers and leaders at the same time and to act as a change agent and maintain the day-to-day running of a stable school. Therefore, it is crucial to examine the way the headteacher and his/her staff perceive the school policy, the management of the school and the central factors that constitute the major components of the educational experience.

The purposes of this study are to:

- introduce the major theoretical and organizational issues which underpin approaches to T.Q.M. and the associated areas of school effectiveness and school improvement;
- examine a range of characteristics common to T.Q.M. in schools;
- link T.Q.M. to schools' current practice, paying particular attention to the implementation of change and innovation;
- estimate the extent to which T.Q.M. has been successfully managed.

Thus, it will be important to raise the following key question:

Do the headteachers, teaching and non-teaching staff in the three case-study schools in the Tel Aviv area, perceive that the introduction of a T.Q.M. initiative has contributed to school improvement?

A number of sub-questions were identified relating to aspects of T.Q.M. It was decided to focus on several key characteristics of the T.Q.M. approach: quality leadership, culture and relationships which are congruent with factors important in school effectiveness and school improvement research. The T.Q.M. problem prevention, culture of 'drive out fear' and customer-centered approach are also investigated although they are not central to the above traditions. The sub-questions are:

1. Is progress related to a student-centered approach?
2. To what extent does the school work towards prevention of failure during work processes?
3. To what extent are the school structure and processes team-based?
4. What is the quality of personal relationships among the members of the school?
5. Is there a perceived link between the style of leadership and improvement of the school?
6. What is the perceived link between a culture of 'drives-out fear' and improvement?
7. What is the perceived link between the values of the staff and improvement?

A further aspect of research was not originally planned but was added subsequently as a result of the pilot study. From the two interviews with deputies as well as from the pilot open questions in the questionnaires, it became clear that according to the participants' views, the special composition of the school body in the three schools, namely, having a large percentage of Russian students, should be considered as a key factor for the school success. This is the rationale for adding this last research area which considers the perceived link between the school composition and its success.

The question is therefore raised of the importance of having so many Russian youngsters in school in relation to improvement in the school.

In order to examine on the operational level whether this system, of T.Q.M., is indeed successfully applied in the three schools under research it was decided to use the case-study approach which enables the combination of several research tools as detailed subsequently.

RESEARCH APPROACH AND TOOLS

In each school:

1. Questionnaires were issued to:

All members of the teaching staff.
All members of the non-teaching staff.
This covers all the people who work at the school and are therefore affected by the implementation of T.Q.M.. There is an exception. Questionnaires were not issued or distributed to students in the three secondary schools under study. Although students are obviously affected by the implementation of T.Q.M. and there was a possibility of asking the students about their view of T.Q.M. in the school, they are considered minors. It is a difficult and a lengthy process to receive the approval of the Ministry of Education in Israel to conduct research with minors. There is an additional difficulty related to the fact that students who had undergone T.Q.M. implementation had graduated from the schools a few years ago. The students who attend school now have not experienced the change but they enjoy its fruits. Moreover, although this omission of students from the study might be significant, as students are the prime customers, it was decided not to deal with students or their parents' perceptions. It was decided to look at the perceptions of a particular group of people, namely, headteachers, teaching and non-teaching staff and it was possible to investigate their views also on what students and parents might think.

2. Semi-structured Interviews were held with:

Three Headteachers.
Three Deputy Headteachers.

These people are the driving force behind the implementation of T.Q.M.

In addition, these case studies included:


4. Study of documents available from the schools.

The Contribution of this research to the Educational System

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To pursue this research three secondary schools in the central district which have adopted the T.Q.M. management approach in education were selected. In effect, little empirical research has been carried out in schools in general on the ways in which the implementation of T.Q.M. has been managed. This applies both internationally and in Israel. It later transpired that these schools are unique in their students body composition since a high percentage of these students who attended the 1999-2000 school year originated from the USSR: school ‘1’ sixty three percent; school ‘2’ fifty three percent; school ‘3’ approximately sixty percent, while the other students are native Israelis. The aim is that by the end of this research:

The nature and importance of T.Q.M. in the schools under research will be explored; The linkages between T.Q.M. school improvement and educational output will be clarified.

The results of this study should also offer an opportunity to understand the opinions, approaches of headteachers, hometeachers, teachers and non-teaching staff who represent a broad range of the educational spectrum, concerning T.Q.M. factors which lead to improvement and effective education in the three schools. In addition, as a result of this study, the educational staff in these schools might gain a better understanding of various areas that are relevant to their institutional situation. For this purpose, the research findings were posted to the teachers who asked for the questionnaires' results. In addition, a copy of the full research will be found in the library of each school.

The next two sections present the literature review. It includes two chapters; the first, chapter two, considers school improvement and school effectiveness; the second, chapter three, T.Q.M. The rationale for this structure is that there is an international and an Israeli movement towards school improvement and school effectiveness, and one way of getting there is through T.Q.M. In addition, the fact that the three schools under study had espoused T.Q.M. and move from being a failure to being successful in a relatively a short time, was the apparent factor which seemed to be the catalyst. In effect, the change might have happened anyway within the paradigms of effectiveness
and improvement. The literature review served as an important tool to understand the valuable change which this research investigates.
THE LITERATURE REVIEW

INTRODUCTION TO THE LITERATURE REVIEW

A copious literature includes the use of different terms concerning the concept of quality in industry, education and particularly the concept of T.Q.M. in educational management. Yet, there is a broad consensus concerning the theoretical concept of quality as being of a positive value although on the practical level there are different ways of implementing it.

The literature review in the current research has two chapters. It develops from school improvement to effectiveness and then to T.Q.M. The rationale for including materials on improvement and effectiveness in a thesis where the focus is T.Q.M. is that there is an international movement towards school improvement and effectiveness which has a particular offshoot in Israel and T.Q.M. is one possible means towards improvement. West-Burnham (1993) explains that these initiatives may be identified as having the same concerns and many of the same outcomes (p. 9). There is an attempt to present the factors and problems which arise from the research which may help to refine those areas of quality that may be particularly relevant to school success in Israel as well as the shortcomings and virtues as they arise in these different areas, namely school improvement and effectiveness and T.Q.M. approach.

In chapter two the literature introduces the research on school improvement and effectiveness in Israel as well as internationally. The issues of implementing change, 'the product', and the 'output' which are common to research on quality in education are considered. The vital need to find the factors which may increase school success raised two questions: what are the factors needed to enhance quality and how is it possible to plan improvement, to change the school and to make it more effective? Thus, this chapter includes research which underscores that the process of change must be well planned and takes into account the various influences and sometimes also objections. The research necessarily takes into account the link between improvement and the culture which should lead to change and focuses on four main
factors identified with improvement: positive climate, security and order; collegiality at work, shared understanding and cooperation; staff development and evaluation. These concepts highlight the international recognition of the need to improve schools. Similarly, in effective schools, the culture of developing high expectations among students, organizing the learning environment, academic atmosphere, leadership and cooperation between home and school are presented. These concepts were repeatedly mentioned in the literature (Barth, 1990; Hopkins, 1994; Zavida, 2000) as vital for understanding the sensitive and complex areas of the educational process and lead to recognition that schools do make a difference. Lastly, criticism of these areas is referred to.

The following chapter reviews the T.Q.M. approach as an overall organizational change in the behavioral and thinking pattern of the organization. In the first place, the concept of quality and T.Q.M. is scrutinized in industry as well as the tools and techniques to improve quality in the organization. From here there is an examination of how T.Q.M. is applied in education in Israel as well as internationally. The problematic aspects of education concerning the educational product and the unique character of the educational process are presented. The key factors of the T.Q.M. approach are outlined in the main areas: leadership in school and the customer in education. The T.Q.M. brings up several inadequacies concerning the implementation of the T.Q.M. in education in the areas of defining the educational 'product', having the product 'right the first time' and the customer-centered approach.

At the end of this literature review the making links chapter is shown where the similarity of the factors that are part of the T.Q.M. theory and are linked with school improvement and effectiveness and the inadequacies of T.Q.M. in the educational system are summarised. The rationale for choosing these three areas is the general purpose of this current research. The research examines the perception of the staff of the impact of the T.Q.M. approach on the performance of the three secondary schools which have undergone a change to the management culture of a T.Q.M. approach. The basic assumption is that real improvement of the school performance and the student achievements will occur only if there is a truly far-reaching implementation of the T.Q.M. approach in the school. This should include the organizational structure,
school culture, communication, school aims and values, assessment methods of
students' achievements and feedback of parents and students. However, could the
success of the schools equally be interpreted through consideration of other
improvement paradigms, or through the change in the nature of the student body?
Chapter 2 -

The literature on school improvement and school effectiveness

INTRODUCTION

In order to understand school improvement and effectiveness research and their link to T.Q.M., it is appropriate to devote a few lines to the background from which they have emerged. In the 1960s and 1970s the social context was the dominant factor. It was believed that 'schools cannot compensate for society.' (Bernstein, 1970). But this approach was discarded by school effectiveness and improvement research which introduce appropriate changes in schools. T.Q.M. approach is one of the possible changes which its implementation may increase accomplishments regardless of what students social background is. This dominant way of interpreting schools is supported by breakthrough studies on effectiveness (Mortimore, 1991; Sammons et al, 1995).

The aim of this section is to examine the issues of school improvement and effectiveness, thus, presenting some of the worldwide concepts and studies on the issues. Special attention is also drawn to Israeli research which tests how successful change is implemented aiming at the reasons why greater progress is made in one school rather than another. This question seems especially relevant concerning the education of disadvantaged students as a whole, and the education of Russian newcomer students in Israel in particular.

Teddlie (2000) in U.S. has chosen to pursue the related but divergent initiative of school improvement because:

"School Effectiveness has customarily celebrated the importance of a very limited range of outcomes, ...School Improvement Research by contrast has often conceptualizes outcomes more broadly." (p. 215)
Similarly, research conducted in the Netherlands in the 1970s implemented "large-scale innovation projects aimed at changing the structure of the Dutch educational system" (Creemers, 1992, p. 50). The more recent work by Gray et al (1996) in the U.K indicates the development of understanding of school effectiveness. In Canada, Stoll and Fink (1994) attempted to apply the characteristics of effective schools to pilot schools. From these sets of research came noteworthy observations for school improvement projects:

- school effectiveness and school improvement can be linked,
- changing schools means changing school cultures,
- commitment is needed from all stakeholders, and
- change comes from within the school.

This research considers the above observation as being the essential foundations required to bring about meaningful changes as they are investigated in this research. In practice, whatever change a school embraces, it should acknowledge the meaning that lies behind school improvement.

The Meaning of School Improvement

School improvement is a movement within the school community in which a school:

"Defines its vision and has strategies to achieve its goals; Enhances pupil outcomes and focuses on teaching and learning; Addresses the internal and external conditions which enhance change; Monitors and evaluates its process, progress, achievement and development."

(Pranckuniene, 1997 p. 1)

Gaziel (1996) adds another element, the focus is on change of processes rather than on students' achievements:
"school improvement means systematic, sustained change to accomplish educational goals more effectively." (Blum and Butler, 1989 p.18-19)

The central tenet is to aim at a real and lasting improvement which must lie in the hands of the school itself (Stoll and Fink, 1996).

Hopkins (1994) concludes that school improvement is:

"an approach to educational change that is concerned with process as well as outcomes." (p. 75)

All authors agree that improvement and change processes are interrelated. This conclusion points at the possible link between the improvement which occurred in the three schools and the T.Q.M. features which were adopted, the most important one being leadership.

CHANGE PROCESSES AND LEADERSHIP

International and Israeli studies have shown a close, clear relationship between change processes and improvement (Ainscow et al, 1996; Creemers, 1992; Friedman et al, 1988; Fullan, 1991; Hopkins, 1994; Stoll et al, 1996). Hargreaves and Hopking (1991) claim that the effective planning is a primary, first stage towards improvement and that change such as T.Q.M. is a continuous process rather than an on-off activity (p. 113).

Fullan and Hargreaves (1991) embrace the idea that a staff united in purpose could direct positive change in a school and leadership is noted as essential to nurturing and directing a staff in their pursuit of a shared purpose though it is not the effective leader's role alone:

"Rather, the leader draws the starting line for others, urging them to take the first step, supporting and encouraging as they renew and challenge themselves." (Barth, 1990 p. 145)
Leaders anticipate and initiate changes without engineering them. Barth (1990) calls this role "the leading learner" (p. 18). Through the leader's orchestration of change, all members of the school will have greater harmony because each of them is a part of the change process.

Some writers (Barkol, 1997; Hallinger et al, 1986b; Levin, 1992; Purkey et al, 1983) emphasize the importance of the leader inter-personal qualities as an individual leader:

“Leadership is not about skills, rules or procedures but about the person and the quality of their relationship with others.” (Murgatroyd and Gray, 1984 p. 47)

In effect:

“leadership should empower people to achieve their own and the school’s purposes.” (Hopkins, 1994 p. 79)

Bolender (1997) agrees and underlies the guidelines to school leaders intent on building a quality culture:

1. The school leader anticipates change by continually scanning internal and external influences and in so doing, acts responsively rather than obtrusively. Obtrusive action by the leader would be to initiate change in a vacuum rather than as a response to contextual factors.
2. The leader asks questions rather than provides answers.
3. The leader facilitates and encourages conversation and contemplation toward change rather than planning or directing it.
4. Mistakes and failures are shared by all.
5. The leaders maintain strict adherence to the core set of beliefs upon which the school community is built. (p. 7)
Such leadership bears “the mark of the principal as central for leading and supporting change” (Fullan, 1992 p.82).

Tzuk (1995) concludes that a school that is successfully receptive to changes tends to exhibit closeness between staff members and students. If schools function this way, they may encounter less resistance to implementing a change such as T.Q.M.

Resistance to Change

Change is often welcomed by staff, but on occasions it can be resisted. Russell and Metcalf (1997) express the tension that might be generated by any change in role:

“many people find that the most challenging aspect of taking on a leadership role for the first time is the responsibility that it brings for the work of colleagues, especially in the culture of teaching which traditionally places a high degree of emphasis on the professional autonomy of colleagues.” (p. 18)

The reasons for resistance are various:

“When people feel threatened, insecure and anxious they generally do not act in sensible or rational ways.” (Russell, 1996b p. 64)

Bilton (1996) expands the list of other possible reasons for resisting change:

“fear of loss of employment;
 fear of loss of confidence;
 fear of loss of status;
 demands energy; and
 demands time.” (p. 1)

He explains that managers must persuade teachers of the benefits the proposed changes (p. 1).
But, whenever change triggers negative reactions, leaders can soften it if they:

"make change processes explicit and visible;
identify key factors relating to achieving success in delivering the changes;
develop insights into the nature of change as processes;
develop appropriate action programmes in the light of acquired knowledge."
(McKenzie, 1999 p. 3, 7)

This model highlights the fact that people should set the parameters within which change is initiated and informed, and thus, the change may become more efficient and effective. McKenzie also outlines themes, related to the actual process of change:

"vision building;
evolutionary planning;
monitoring/problem-coping;
initiative-taking and empowerment;
staff development/resource assistance; and
restructuring." (Fullan, 1992 p. 82)

Fullan (1992) concludes that there are four simplified stages for the change process: Initiation, Implementation, Continuation and Outcomes (p. 48). These stages may be considered appropriate also for the implementation of the T.Q.M. approach in schools as a means to enhance a quality culture.

THE RELATIONSHIPS BETWEEN IMPROVEMENT AND CULTURE

Recently, attention has been directed to the development of conditions conducive to creating effective school culture (Fullan and Hargreaves, 1991). The premise is changes that occur in an organization such as a shift in the function of a school are tantamount, in fact, to a fundamental change in its culture and that can be met with resistance. Researchers (Barth, 1990; Fullan, 1992; McKenzie, 1999; Rutter, 1983) add that any change must take into account various influences especially in the school culture which is defined as:
"the context and setting of the school, its internal processes and the meanings by which staff members make sense of their working world." (Holly and Southworth, 1989 p. 100)

This definition, similarly to the T.Q.M. process, implies an ongoing evolutionary process that is fueled by "external pressures, internal potentials, responses to critical events, and ... chance factors" (Schein, 1985, p. 83-84).

Yahalom (1993) and Zavida's (2000) focus on clusters of variables which create various educational climates. The latter found two typologies of school culture: conservative and academic achievement - oriented and the integrated and open one. It turned out that schools where an open and integrated climate prevails had been able to improve better than those of the first typology.

Hargreaves (1997) suggests two other typologies of school climates:

- The first one, which seems inappropriate for the current research, includes the formal, the welfarist, the hothouse, and the survivalist.
- The second type focuses on two models: the traditional, and the bureaucratic and collegial model.

The traditional, bureaucratic school stresses the student achievement whereas in the school which operates according to the collegial model there is a greater emphasis on the work and culture of the staff. So the latter could be related to improvement in school following Hargreaves' (1997) opinion:

"No school or teacher culture can be shown to have a direct impact on student learning and achievement, and claims to that end are vacuous. But the effects of culture can be conceptualized as trickling down, so to speak, through the architecture-political and micro-political, maintenance and development and service – until they eventually make some impact on what goes on in classrooms." (p. 249)
The research into culture, improvement and change demonstrates that there are several main factors that define the school culture and climate conducive to improvement and change. These characteristics of positive climate, security and order; collegiality at work, shared understanding and cooperation; staff development; and measurement that contribute to a quality culture follow.

FACTORS RELATED TO CULTURE AND SCHOOL IMPROVEMENT

Positive Climate, Security and Order

A prevailing atmosphere of discipline and order seems to enhance the learning process. It also serves as a means to attain the desired student aims but not as an aim in itself. In this case the link between the prevailing atmosphere in the school and it being possibly the factor which facilitated the improved accomplishments is examined.

In Israel, Zavida (2000) headed a research which reveals that a well-ordered and free of violence climate makes the school a suitable place of learning and also indirectly is useful to learning improvement. The main characteristics of a safe school are as follows:

- Clear-cut rules that are firmly, fairly and consistently applied;
- Teachers satisfaction with their work and agreement with the headteacher leadership style;
- Cohesion among teachers;
- Class size and school size which allow personal relations between teachers and students;
- High morale of the staff and of the school in general;
- A feeling among the students that the school as a social system has some meaning for them, and they have control over their lives;
The most important one being the appropriate management of the school, discipline enforcement through personal example of correct behaviour towards staff as well as students.” (p. 6)

Likewise, one of the key factors identified for effective schooling emphasizes a safe and orderly climate where discipline is not a major concern (Mortimore et al 1988; Scheerens, 1992).

Friedman (1988) adds that discipline can be effective only when it is consistent and accompanied by follow-up and feedback.

Yet, along with these findings, Purkey and Smith (1985) strike a note of warning:

“Discipline should be used to communicate to the students the seriousness and the purposefulness which the school attached to the carrying-out of its duties but not as a means to use the stick again.” (p. 350)

Collegiality at work, Shared Understanding and Cooperation

Cooperation and collegiality are crucial components of the change process since any change requires some price of adaptation at all levels of the hierarchy:

“Collegium designates a structure or structures in which members have equal authority to participate in decisions which are binding on each of them.” (Becher and Kogan, 1980 p. 67)

Part of the prevailing atmosphere in the schools maybe related to the relationship among the various school participants. This study examines the quality of the interaction among all the people who participated in this study and also whether it was a dominant factor which led to the school improvement. Thus, there is a need to obtain a general agreement and motivate the participants to accept the change.

The rationale is that an effective school culture values cooperation, where:
"every teacher must be concerned about the health of the school as an organization." (Fullan and Hargreaves, 1991 p. 78)

Leithwood (1992) presents cooperation as a vehicle for sharing power with people rather than imposing power over them. Or as Becher and Kogan (1980) put it:

"the most appropriate way to improve and change processes is to encourage the participation of teachers in decision-making leading to a sense of ownership." (p. 67)

Beare et al (1992) endorse these views explaining why collaborative decision-making is an essential component for a successful change. It:

"gives staff more authority over curricular decisions and allocation of building resources." (p. 358)

It also:

"lets them check their achievements, raises self-confidence and gives the opportunity to get new insights and enlightenment." (Pranckuniene, 1997 p. 3)

Another possible benefit is breaking down teacher isolation and barriers:

"school cultures that participate in shared problem-solving and decision-making place value on interdependence and support among staff members."

(Bolender, 1997 p.6)

Another secondary concept within leadership is teamwork. This study examines whether the school staff indeed acts as a team and to what extent the interaction is strong within and between the teams. In addition, it examines whether teamwork helps to achieve these schools goals.
For Caldwell and Spinks (1992) the effective leader:

"harnesses the talents of all team members... ...and "encourages the participation of teachers in decision-making, leading to a sense of ownership and an enhanced prospect of successful innovation." (Coleman and Bush, 1994 p. 260)

In practice, Deming's (1986) team-based approach may enhance such relationships. Hopkins (1994) explains:

"All members of a school community should actively build and share a common vision of its main purposes." And "The school’s current priorities should reflect its main purposes and its vision, and be generated through consultation." (p. 79-80)

Hopkin's (1994) findings corroborate emphatically this conclusion. He makes use of the concept of synergism which flows from the school staff and other members’ efforts. As a result of the team synergy, staff performance would probably improve, but what is still missing to fuel this synergy is staff development.

**Staff Development**

A very significant component in the process towards improvement is:

"a staff development program linked to specific school improvement concepts can have a positive impact on student achievement and staff performance."

(Gibbs, 1997 p. 1)

Attempting to understand the staff and management perceptions which have inspired the positive developments and changes in the schools under study, the research has included in this section the component of staff development which is vital for the school improvement. It functions as a means of facilitating the attainment of other educational objectives:
"The immediate aim is to improve the performance of those with teaching and management responsibilities." (O'Neill, 1994 p. 9)

Both definitions assert that professional development or 'work bases training techniques' (Deming, 1986) should contribute, directly and indirectly, to an improvement in the quality of student's learning experience.

Likewise in Israel, the Ministry of Education devoted a few lines in its manifesto to schools which explains that plans meant to enhance competence must be geared to the whole staff not to a particular teacher. Proficiency courses should aim at changing attitudes as well not only at increasing knowledge. Moreover, proficiency courses should be tied closely to teaching curriculum and to the needs that the teachers themselves have expressed (Hozer Mankal 1999-2000).

This manifesto also highlights the heavyweight of measurement in the improvement process.

SCHOOL IMPROVEMENT MEASUREMENT

Pranckuniene (1997) claims that the main criterion by which schools were measured was students' accomplishments in one particular aspect of their development which is the level of factual knowledge acquired. In many schools this situation still exists but there has been an important change recently. 'Improving' schools are attempting to focus on the other aspects of students' development, especially skills and values as:

"a rapidly changing society raises new requirements for the schools, they must prepare students for life-long learning rather than attempting to give answers to every question." (p. 2)

Pranckuniene highlights aspects such as, the increase of students' confidence or the ability to discuss and debate issues which should be measured although they are more difficult to assess objectively. This implies that while the measurement of the factual
knowledge is likely to be more quantitative, the measurement of improvement will be more qualitative. Or as he put it:

"this approach can be extended easily to gain information on the softer areas which are so important in the rounded education." (p. 3)

Thus, Sammons et al (1997) suggests evaluation as the key ‘lever’ toward raising standards (p. 18) implying that evaluation:

"will improve the quality of classroom practice and of the wider organizational structures of schooling." (Nixson, 1995 p. 20)

Tzuk (1995) adds that evaluation should be seen not as a linear sequence but as an interactive process for problem prevention. Improvement should be measured and monitored as part of the overall management and planning process of the institution. In order to understand the measurement tools and techniques used by these schools for the purpose of anticipating problems and coping with them, two measurement types are presented.

The Ofsted type:

"in educational terms, we see quality control as operating totally through inspection of outcomes, throwing out what is poor after it has manifested itself." (Ormston and Shaw, 1993 p. 5)

Sallis (1996) extends this idea:

"... It involves the detection and elimination of components or final products which are not up to standard. It is an after-the-event process." (p. 19-20)

However, Ellis (1993) finds that inspection which is a form of quality control is more difficult to apply:
"to a service since once a service has been delivered it cannot be retrieved and recycled. But at least a service can be identified as deficient and steps taken to ensure a better performance next time." (p. 5)

West-Burnham (1994) does not agree with inspection and testing as a means of guaranteeing quality. Tzuk (1995) adds that inspection offers imposed criteria. Thus, the system of quality assurance is offered:

"as more organic, involving everyone in the organization, seeking systematically, with evidence, to ensure that standards are constantly improving." (Ormston and Shaw, 1993 p. 5)

Quality assurance is:

"a before and during the event process. It is made the responsibility of the workforce...rather the inspector, although inspection can have a role to play in quality assurance." (Sallis, 1996 p. 19-20)

This theme seems to be secondary in school effectiveness which concentrates on quantitative indicators, particularly examination results (Bush et al, 1994, 2000):

"The very purpose of school effectiveness is typically defined as identifying factors that are associated with student learning outcomes." (Angus, 1993 p. 341)

West-Burnham (1994) suggests the key components of a management system to assure quality:

- Clearly defined roles and responsibilities;
- Documentation to formalize procedures;
- Identification of customers' requirements;
- A quality policy;
- Clear work instructions and process control;
Procedures for corrective action;
Management audit; and
Inspection and testing. (p. 168)

Measuring school improvement is vital to review school activities, especially those which are concerned with disadvantaged students who greatly need the consistent feedback. The relationships between disadvantaged students and improvement follow.

IMPROVEMENT AND DISADVANTAGED STUDENTS

One aspect of the culture of a school that may impact considerably on its potential for improvement is the extent to which the students of that school are advantaged or disadvantaged (Bush, 2000). Various studies (Mortimore, 1997; Feuerstein, 1999; Friedman, 1988) have revealed a connection between successful schools, namely those who obtain high performance and the kind of students who attend these schools. In effect, the percentage of students who need special care is proportionally lesser in the successful ones. This might partially be the reason why, today, schools are taking into account both students' prior attainment and their socio-economic background (Ofsted 1994).

Hence, acquiring an understanding of these students' community has a pivotal role in enhancing school reform and student success. Moreover, what goes on inside the schools, including instructional methods and the kind of curriculum taught, are very important for disadvantaged and newcomer students' success (Pena, 1997).

Deyhle (1995) adds that the integration of underprivileged students with well-to-do ones, without any educational interference, has no consistent influence upon improving the area of learning, particularly when the disadvantaged population are immigrants:

"who are doing well ... and who moved more or less voluntarily to a new country because they believed that this move would lead to more economic well-being, better overall opportunities, or greater political freedom." (p. 187)
These students' success rests on the willingness of teachers to change teaching patterns, to work harder, and to show greater commitment to change as well as on the headteacher who must adopt a cooperative style of management and provide support and assistance (McKenzie, 1999).

In Israel, the education system has been almost continuously facing with the enormous challenge of integrating large number of immigrant students speaking many languages. The latest huge ‘wave’ of immigrant students, who arrived to Israel in order to have better overall opportunities, was from the former Soviet Union in the 1990s. These immigrants have faced mainly cultural, economic and social problems.

Feuerstein (1999) reports that these students’ difficulties in school derive from two main sources:

1. A language deficit that creates a gap between the teachers, written texts books and students as well as between newcomers and the well-to-do ones.
2. The involvement gap - the distance between what the student perceives as his/her relevant life and experiences and to what is taking place inside the school.

Cohen (1993) adds that the Russian newcomer students have very special traits. Their attitudinal profile reveals students who are highly motivated, success - oriented, work hard and are determined to improve their academic achievements. With the help and support of their parents, they focus on the scientific or art subjects and aspire to succeed in the new society.

Friedman (1988) study expands the discussion on these students' qualities but its conclusions place a greater emphasis on the work of teachers and headteachers:

"resources of disadvantaged should be aimed at enrichment activities which develop the skills and areas of knowledge … The way these resources are used by the staff determines how well they will contribute to improvement.” (p. 32)
In practice, the Jewish Agency has developed a program which supports these students' absorption. Teachers are specially trained in teaching content and Instrument Enrichment. The program includes consultation with parents as well as ongoing supervision and evaluation (Jewish Agency Program, p. 2).

Feurstein (1999), who has run the above program, explains how the dominant culture diverges from and seizes the weaker less traditional culture. He suggests that superior integration in the school is necessary for increasing newcomers students academic achievement and greater success overall. This stance and similar views (Klien and Eshel, 1980) which arose from the need for change, are the main drives towards some Israeli educational reforms.

**ISRAEL EDUCATIONAL REFORMS – IMPROVEMENT AND IMPLEMENTATION OF CHANGE**

From the educational studies that were carried out in the past twenty years, there arose the need to introduce several reforms dealing with improvement rather than effectiveness (Feuerstein, 1999; Friedman, 1988; Zavida, 2000). As a result, the Ministry of Education undertook two major educational reforms:

1. The integration in the schools was meant not to serve the learning goals but to enhance social concerns, such as improving learning self-image or increasing social contacts between different communities.

2. The reforms of the secondary school studies have stressed the process of change such as, learning through experience, using different learning styles and placing the student at the centre of the process.

In order to make these two initiatives succeed, the school culture has become of great importance. This idea is best articulated in the Ministry of Education guidelines to headteachers (Hozer-Mankal, 1998-1999/ 1999-2000). For whenever the prevailing climate is supportive, it leads naturally to social integration and reduces problems and stressful situations while promoting a better understanding among management, teachers and students.
Nevertheless, some researchers (Friedman et al, 1988; Feuerstein, 1999) have been unable to ascertain that integration is influential in improving self-image. This finding corroborates (Klien and Eshel, 1980) findings that ascribed self-image to the personal background of the student so integration in school has very little influence on it.

Tzuk (1995) adds that the nature of school specialization has a real impact on self-image and on attitude towards the school since a student who is referred to a vocational career may see it as a sign of failure. Thus the prevailing trend in Israel today is to combine improvement of learning process with improvement of final 'Bagrut' test results (Zavida, 2000).

In fact, in the past five years as part of a changing policy towards heterogeneous quality and greater school differentiation, there is a marked preference of students towards the academic schools rather than vocational ones (Ichilov, 1995). This trend has brought about the issue of effectiveness in relation of improvement.

**What is effectiveness?**

The need for effectiveness research:

“was born out of a quest for more robust evidence to illuminate a complex area, and to reveal a more accurate picture of the many factors in schools which determine standards amongst pupils.” (Sammons et al, 1994 p. 1)

Mortimore (1991) further explains that an effective school is one in which students progress further than it might be expected from consideration of their intake. Or as Sammons et al (1995) put it:

“an effective school thus adds extra value to its student's outcomes in comparison with other schools serving similar intakes.” (p. 3)
After unpacking the concept 'effectiveness', a discussion about some of the effectiveness research follows.
WHAT IS SCHOOL EFFECTIVENESS -
The International view

The notion that 'schools do make a difference' has been extended worldwide. The last two decades have seen a development of understanding of school effectiveness. It is reflected from the early studies such as those of Coleman et al (1966, U.S.A.) and Rutter et al (1979, Britain), through the writing of Fullan (1982, Britain) or Purkey and Smith (1983, North America) to research of Mortimore et al (1988, Britain) or Scheerens (1992, Holland) and to the more recent work by Gray et al (1996, Britain), Caldwell and Spinks (1998, Australia). These worldwide researches shifted the focus from sociology to the role of schools in learning outcomes.

An equivalent view was presented by Creemers (1994) and Reynolds (1992) who endeavor to place the power on statistically based research techniques and focus on identifying the unique qualities of successful schools. Their research, in fact, continues the notion which Weber’s (1971) work has presented, namely that successful schools even in poor areas have given rise to significant school variables that strongly influence the student’s achievements. His followers (Reynolds et al, 1995; 1998) characterize these schools as having some key qualities. The most common qualities are successful leadership; supportive organizational climate and learning atmosphere; having clear-cut definitions of school’s objectives; giving students the best learning opportunities; being supportive and seeking cooperation between parents and school; and obviously promoting high expectations among students. Similar descriptive lists of effective school qualities were consistently worldwide developed. The focus, though, did not always highlight the same factors or ideas.

Deyhle (1995) regards effectiveness as research which is concerned with student’s achievements but also with attending school regularly, minimizing the drop-out rate in schools, promoting student’s chances to learn in colleges and universities, and even as serving to prevent the problem of juvenile delinquency. In exploring and examining this issue as being derived from Deyhle’s work, Pena (1997) proposes student’s background and behaviour in class as additional characteristics. Both researchers
agree that effective schools should be regarded as a means of challenging and correcting the attitude towards disadvantaged and newcomer student’s results. Such schools can successfully promote the disadvantaged pupils’ accomplishments and minimize the gaps between different races.

Hill (1995) advances the notion of effective schools. He claims that students should acquire experience and show abilities towards self-learning and independent reliance.

What also matters, Creemers and Reezigt (1997) claim, is the strong link between school characteristics and greater achievement of students:

“School effectiveness refers to research studies concerning the means-ends relationships between educational processes and outcomes in particular student knowledge and skills aiming at explanations for differences in student achievement between schools and classrooms.” (p. 401)

Bolender (1997) agrees and touches on the importance of the atmosphere variables as means to achieve the school common goals:

“More recently, as an offshoot of school effectiveness research, more attention has been directed to organizational culture and the development of conditions conducive to creating effective school culture.” (p. 2)

All these characteristics, namely culture, leadership, parents’ involvement, values and school aims are considered when aiming at understanding the complexity of school effectiveness. This research considers these specific characteristics which are so widespread in the findings of effective schools as being the mainspring for school improvement for only by appropriately integrating them the driving force for achieving the school goals emerges from scratch. It seems that this overall complexity about school effectiveness research is also presented in Israeli school effectiveness research.
The Israeli view

Some researchers (Friedman, 1988; Ichilov, 1995) in Israel back up the above findings about school effectiveness. Hen (1976, 1991) stresses the connection between educational ‘inputs’ and educational ‘outputs’ as more than ever vital for effective schools. Glasman and Binaminov (1981) explain that there used to be a strong link between learning achievements and the socio-economic status of the students or the population and their community origin. Feuerstein (1999) strengthens these approaches but his model also incorporates other cognitive accomplishments needed for effective schools.

Ichilov (1995) is critical of the emphasis on students' background as an explanation for their achievements. She argues that:

“there is a great emphasis in schools on student’s background characteristics and on imposing school’s rules as an authority. Less attention is drawn towards teaching and learning methods.” (p. 50)

Other writers (Pasternak, 1994; Sharan, 1986; Zavida, 2000) support Ichilov's (1995) view and strongly object to Jencks et al (1972) approach. They relate to the mutual relationship between people and their surrounding and stress that a student’s personal environment has to be taken into account. It is not obvious whether the environmental components can either be separated or objectively measured, and hence, the emphasis of effective schools should be on interwoven characteristics. The student’s background is important but school characteristics are equally important.

Friedman et al (1988) extend this view. A school’s core role is to provide students with education, but also to provide them with ideological-social education which aims at improving disadvantaged student’s chances and promoting their social mobility. They propose four major components in turning schools into more effective organizations:
• Achieving the organizational goals to a great extent.
• Adjusting to new changes and innovations in the environment.
• Coherence and integration among the school members which can be expressed through an open climate and a creative, supportive atmosphere.
• Having an organizational accountability by motivating the members of the organization (p. 30).

Dar and Rash (1988) and Tzuk (1995) add that effective schools are identified with two main goals that are not interrelated:

A. School should strive to ensure that all its students achieve better learning and educational accomplishments.

B. School should minimize the educational gaps between students from different social classes; pupils from different origins; native pupils and newcomers and it should also progress and promote the disadvantaged students faster than the more to do ones.

The issue of minimizing the educational gaps among newcomers is important to Israeli research and there may be relevance to U.K. research too. The Ministry of Education has its concerns about the newcomers’ students because:

“immigrant children often have difficulty in adjusting to life in a new society-academically, socially, and emotionally - and very often show serious educational gaps.” (Jewish Agency Program, 2000 p. 1)

Feuerstein (1999) explains that:

“the abilities of immigrant children are often underestimated if testing does not take their native language, culture, and customs into account.” (ibid p. 1)

As the education system has faced with the enormous challenge of integrating large numbers of students, mainly from the former Soviet Union, it was decided that:
“the education system should strive to develop appropriate methods to help absorb the newcomers which include teacher training programs geared towards working with immigrant pupils.” (Focus, 2000 p.1)

Ichilov (1995) adds that school integration policy in Israel can be treated as both an aim in itself and as a means of improving the academic achievements of the disadvantaged students:

“the enforced mixture of disadvantaged and advantaged students brings the two groups closer to each other, makes them more respectful of and tolerant towards each other, and, in general teaches them how to live together.” (p. 67)

As well as the emphasis on academic achievement, the emphasis in Israel is on social values towards all students. These national theories and the previous international ones provide a clearer understanding of the effectiveness movement and raise the question of what are the key characteristic of effective schools?

MAIN FINDINGS: THE QUALITIES OF EFFECTIVE SCHOOLS

Researchers all over the world (Caldwell et al, 1998; Creemers, 1992; Friedman et al, 1998; Davies, 1997; Mortimore et al 1988; Sammons et al, 1995) have conducted extensive studies to determine factors associated with effective schools. A commonly held conclusion of these studies is that the school a student attends does affect pupils' development and achievement. The high level of students' achievement can be related to five factors of school effectiveness:

“strong educational leadership;
high expectations of student achievement;
an emphasis on basic skills;
a safe and orderly climate; and
frequent evaluation of pupil progress.” (Reynolds, 1995 p. 133)
These findings were replicated and extended by Lewin (1999). Based on Reynold’s (1995; 1998a) work he has identified the following factors as potentially important in creating effectiveness:

- “The importance of a headteacher’s leadership. Effective leadership can be achieved by a headteacher who influences or encourages teachers’ teaching strategies, record keeping, forward planning and curriculum content.
- A balance between top-down managerialism and collegiality.
- Academic push, involving high expectations of what pupils can achieve, utilizing strategies that ensure a large amount of learning time, utilizing homework to expand learning time and to involve parents.
- Parental involvement, by rewarding achievement and effort and supporting the school for the child’s welfare.
- Pupil involvement, both in the learning situation within the classroom and within the school in societies, sports teams, leadership positions, representative positions and the like.
- Organisational control of pupils, which in turn is generated by cohesion, consistency and constancy within the school. Organisational cohesion is likely to be enhanced by both planning and co-ordination of school activities, and by a degree of ownership of the school by the staff itself, to be generated by a good flow of information. Organisational consistency follows across lessons in the same subjects, across different subjects in the same years and across different years in the pupil learning experiences. Organisational constancy is the final requirement to ensure control, which results from a limited turnover in the people who pass through the lives of young people.” (p. 1-2)

Angus (1993), presenting the British literature, claims that attention should be paid to the nature of knowledge, the culture of schooling and, most importantly, to fundamental issues of everyday life (p. 344). Likewise, the American research stresses the importance of learning, but adds high expectations under the guidance of the leadership of the institution. Its focus broadens out the factors to include aspects of schooling not directly related to the core curriculum:
“Other possible correlates including student sense of efficacy/futility, multicultural instruction and sensitivity and personal development of students.”
(Levine and Lezotte, 1990 p.35)

However in Holland, Bosker and Scheerens (1992) point out that some schools related factors seem to lead to better student outcome than others.

Likewise in Israel, Friedman et al (1988, 1998) point out that combining two or more of these factors can differentiate effective schools from ineffective ones (p. 42). Or as Hopkins (1994) nicely puts it:

“the significance of these principles lies in their synergism: together they are greater than the sum of their parts.” (p. 80)

Nevertheless, schools in similar circumstances perform quite differently. This is due to schools themselves rather than extraneous or background factors (MacBeath, 1998 p. 2). Or as Reynolds (1998) explains:

“whilst not every school is an effective school, every school has within itself some practice that is relatively more effective than some other practice. Many schools will have within themselves a practice that would be absolutely effective, across all schools.” (p. 74)

It seems that there is consistency of school effectiveness findings over time and across different cultural contexts. Most researchers (Lwin 1999; Reynolds, 1995; Sammons et al, 1995) center on the factors that can lead to agreed decisions concerning the goals and priorities of the school through participation and positive environment. Therefore, Stoll and Fink (1996) different approach on the nature of ineffective schools is quite interesting. They have selected three school issues as the characteristics of ineffective schools: lack of vision where teachers have little attachment ‘to anything or anybody’; unfocused leadership; and dysfunctional staff relationships. This might be an alternative to the previous lists in Western countries.
Weller (1997) concludes that the emphasis in school effectiveness literature on teamwork, shared decision making and creating a positive school culture, for instance, closely parallels Deming's philosophy (p. 194). Out of the lists of factors both international and Israeli presented in the literature about effective schools, the following main factors repeat themselves: leadership; developing high expectations among students; organizing the learning environment; support and cooperation between home and school; and the school manifest academic goal based on performance. These factors will now be considered more closely.

**Leadership**

Leadership was discussed earlier in conjunctions with theories of improvement. However, the aspect of the leadership styles which ranges from autocratic to democratic is added. One style concerns for people and relationship, another concerns for production and results (Bush et al, 2000 p. 22). A more updated way is the transactional and transformational leadership. The earlier:

"is based on the exchange of services (from a teacher for example) for various kinds of rewards (salary recognition and intrinsic rewards) that a leader controls at least in part. (Leithwood, 1992 p. 69)

The latter endeavors to empower the staff share leadership functions and develop teachers' own qualities and the relationship between them. This research examines the leadership pattern which exists in each school while underlining among the various participants the necessary interaction which prompts the improvement process. The rationale is that involvement leads to special relationships in schools which may have a great effect on achieving quality and on improving the educational objectives; learning, teaching, motivation, overall atmosphere and student's achievements (Tzuk, 1995).

Sergiovanni (1992) adds another goal of transformational leader 'to practice the ethic of caring' (p. 3) as a means to improving the school climate. Yet, charisma is no
longer enough. A headteacher's awareness that "management works through people." (Shipman 1990, p. 155), particularly through the SMT which is:

"a crucial additional element in providing a clear direction for the school" (Duncan, 1999 p. 31-32)

may serve as an important factor to improve shared decision making and people's accountability. Similarly, healthy personal relationships are of great importance for improving the school culture:

"above everything else, it [T.Q.M.] is about the quality of personal relationships." (West - Burnham, 1997 p. 9)

Thus:

"one of the most important aspects of interpersonal relationships is the quality of trust and respect between leaders and their colleagues." (Harris et al, 2001 p. 5)

Leithwood (1992) adds that transformational leaders share:

"a genuine belief that their staff members as a group could develop better solutions than the principal could alone." (p. 11)

Transformational leadership is also specifically linked with the notion of improvement. Bass et al (1994) refer to transformational leadership as the four 'I':

"1. Idealised influence (leaders are seemed as role models for others).
2. Instructional motivation.
3. Intellectual stimulation.
4. Individualism consideration (including leaders acting as coach or mentor to individuals in the situation)." (p. 2)
This model supports Barth's (1990) definition of the role of the headteacher as "one of enabling rather than controlling" (p. 145) through which people can develop and improve both their performance as well as the school's ones.

This leadership is:

"a more rounded and flexible professional who could be both leader and manager." (Duncan, 1999 p. 40)

Coleman (1994) explains that sometimes headteachers exhibit different styles while aspiring for quality and constant improvement depending on the context within which they are operating:

"appropriate and successful leadership style and behaviour will vary in different situations." (p. 59)

They:

"might have behaved situationally as a manager, facilitator, counselor or change agent depending on circumstances." (Stoll and Fink, 1996 p.192)

Likewise in Israel, some researchers see leadership as 'concerns for outcomes' while others highlight its wider basis. Hen et al (1984) argue that staff:

“can determine success in their work if they are set on having a clear educational policy and be directive and supportive in the organizational and educational efforts to achieve their goals.” (p. 91)

Pasternak and Goldring (1994) extend these theories and claim that the capacity for carrying cooperative tasks through to completion have a strong impact on both ongoing processes towards improvement in school and on student's achievements. Thus, the more collegial style of management is recommended for heads who influence the "capacity to improve from within" (Barth, 1990 p. 36). These heads can be seen as:
“leaders [who] are responsible for establishing and ensuring high standards of teaching and learning in their subject. They play a key role in monitoring, supporting and motivating other teachers of the subject and in setting targets for professional development and improvement. They are critical to school improvement, playing a major role by contributing to policy development at subject and school level and by evaluating impact on teaching and learning.” (Teaching Training Agency, 1996 p. 6)

Leaders can also contribute to improving quality through raising high expectations among students.

**Developing high expectations among students**

Comprehensive surveys clarify that teacher’s high expectation towards their students can affect the students in achieving a high level of performance (Brophy, J.E. 1982/b, Crisci et al. 1986; Deyhle, 1995; Good, 1982; Grant, 1985; Hallinger and Murphy, 1986; Pena, 1995). Brookover et al (1982) found that students’ expectations towards success can significantly predict their level of achievements in their studies. These researchers present effective schools as a place where teachers function by making students internalize expectations and high standards and by constantly rewarding students for their efforts and giving them positive feedback regardless of their home backgrounds. This way, students' needs are at the centre, their efforts win recognition and they feel that they deserve approval, worth and excellence.

The rational basis is that high expectations are:

> “referred to as a "self-fulfilling prophecy" - what you expect from a student is what the student gives you.” (Indiana University, 1996 p. 1)

This may be relevant especially with disadvantaged and newcomer students. This study which includes three schools where there is a high percentage of Russian students and which shows the dominant factors that lead to success among the
Russian students singles out the importance of high expectations as a driving force that ensures their success. The ‘central tenet’ is that:

“students from dominated societal groups are empowered or disabled as a direct result of their interactions with educators in school.” (Deyhle, 1995 p. 21)

Pena (1995) agrees and adds that either low or high expectations help out as a drive to the way students function. When pupils are motivated they achieve desired results along with the responsibility for their accomplishments.

Similarly in Israel, researchers (Bar-Tal, 1980; Friedman et al, 1988) claim that expecting students to achieve results through themselves is a core element. The purpose of teachers is to have positive effect on students so that it results in a higher self-academic image.

Tzuk (1995) adds that predicting through expectations proved to be true. The focus should be on the individual student's needs, regardless of their individual background or their low socio-economic position. This issue is of crucial importance especially with disadvantaged and newcomer students (Feuerstein, 1999).

Freedman et al (1988) concludes by suggesting the academic-disciplinary policy as the means by which high expectations are expressed and good results may be obtained. In addition, if the school sets a high standard for its students, offers the most opportunities to learning and creates an open atmosphere in which success is of great value to them, then quality may be more easily achieved.

The learning environment and opportunities for learning

Purposeful teaching which offers better opportunities to learners and highlights the conditions for better learning is recently added to British research. When there are:

“efficient organization;
clarity of purpose;
structured lessons; and adaptive practice.” (Sammons et al, 1995 p. 8)

students can realize better accomplishments. This research explores the values by which the three schools function in order to establish whether there is a link between them and the school improvement. Zavida’s (2000) research on effective school may be valuable in exploring this issue. For him, such a school is headed by a hometeacher who attaches great importance to relative silence and by a headteacher who focuses on the offering of maximum opportunities to learning. lwin (1999) agrees:

“in the area of literacy, the research shows that reading test scores are affected by ‘opportunity to learn’.” (p. 5)

When consideration is given to maximally increase the relevant teaching time and preserving its scope, it can affect the school achievements while, at the same time, controlling the variable of the school socio-economic background (Brookover et al, 1982; Creemers, 1994; Crisci et al 1986; Reynolds, 1998b; Scheerens, 1992). In practice, effective schools are found to allocate, organize and preserve teaching hours in order to increase, as much as possible, the student opportunities to study:

“Opportunity-to-learn is clearly related to such factors as the length of the school day and year and to the hours of reading experience taught.” (Reynolds, 1998b).

They also concentrate on new teaching techniques:

“there is a shift from the passive learning that occurs in traditional teaching, to more active learning where students must be active discoverers and constructors of their own learning.” (Barr and Tagg, 1995 p. 21)

This shift centers on the students who share the learning process. Smith (1997) asserts that technology can support shift. Such schools also make use of homework as a means to expand the relevant learning time (Reynolds, 1998b). Finally, they use the
student's parents as a useful resource to enhance their child achievements and relate to such support and cooperation between home and school as vital.

### Support and cooperation between home and school

A high level of involvement and support is referred to as ‘social capital’ of the school:

> “building partnership with parents is an expedient task of an effective school. Communicating information with parents and providing a welcoming climate are the first steps, but the school must go beyond these. Parents must be engaged as valuable and necessary partners with the school in the pursuit of educational excellence for their children.” (Bolender, 1997 p. 17)

Thus, Bolender suggests:

> “empowering parents in decisions that directly affect their children’s education is a vital component.” (p. 17)

This factor is especially important in the current research in which the staff presented the possible link between the parents contribution to their children success and the realization of the school goals. It has become clear that teachers who succeeded in developing a model of parents’ involvement in their children’s work have achieved with students a higher level than those who did not develop such a model of involvement (Becher et al 1982; Walberg 1984). Sanchez et al (1991) highlight especially the emotional support that students need in order to learn, which is optimally created when families and school personnel cooperate. She goes on to point the expected improvement in student attendance and behavior and in parent-teacher relations.

In effect, active discussion with staff on their children's learning; help given to the children with schoolwork at home; financial support to various programs; lectures; accompanying students on trips “was beneficial both to the children and to the school” (Holly and Southworth 1989, p. 80).
Sergiovanni (1992) adds the benefits to parents themselves as they gain greater confidence and expertise in helping their children succeed academically.

Sallis (1988) supports:

"mutual accountability, (where) parents have naturally accepted that something is expected of them." (p. 178)

Other researchers (Hallinger and Murphy, 1986b) present different models of parents’ involvement but still ‘every effort might be made to accommodate parental wishes’ (Macbeth, 1993 p.195).

Similarly in Israel, one of the obvious characteristics of an effective school is the extent of parents’ involvement. Yet, Epstein (1986) claims that newcomers may differ widely in the extent to which they are familiar and comfortable with the concept of parental involvement in schools. Sanchez (1991) explains:

"some newcomers may have been actively involved in their children’s education in the home country, while others may come from cultures where the parent’s role in education is understood in very different terms." (p. 6)

Feuerstein (1999) and Cohen (1993) support Sanchez’s (1991) view. Feuerstein's research on the Ethiopian newcomer students reveal that their parents are not very involved in their children education whereas Cohen's research on the Russian newcomer students reveal that the Russian parents show a high level of involvement. The latter involvement is mainly used to enhance Russian children academic performance. The importance of academic achievements in effective school follows.

The school manifest academic goal based on performance

The objective of academic achievements is considered to be substantially connected with school’s perceived organizational effectiveness. Some authors (Friedman, 1988;
Hallinger and Murphy, 1986a, b; Reynolds and Farrel, 1996; Sammons et al, 1995) claim that effective schools are characterized by teachers who can affect its working results by setting out clear objectives and aiming its efforts towards achieving these objectives:

"the quality of teaching has both the most consistency demonstrated impact on student learning and is within the power of teachers to do something about."

(Wyatt, 1996 p. 3)

This study examines the extent of the academic values and atmosphere importance as well as the link between this and the high academic performance of the school. Bolender (1997) explains that it is up to the headteachers to promote this clear sense of direction which can be done by developing goal consensus.

Indeed, a strong belief exists about what can be accomplished and what cannot which can enhance members’ commitment, enthusiasm and loyalty to the school’s goals (Sammons et al, 1995). They define this as:

"unity for purpose;
consistency of practice; and
collegiality and collaboration." (p. 8)

This definition applies for all students, who are given the responsibility to learn, as well as for the other members of the school. Or as Gibbs (1997) put it:

"all children can learn, even those from the most economically disadvantaged backgrounds, and that schools can make a difference if they concentrate on the variables that lead to academic success." (p. 1)

Similarly, Israeli researchers (Friedman et al, 1988; Tzuk, 1995) report that in schools with high-effective teaching levels, there is a consensus of opinion among the teachers in regard with the objective of academic achievements as the most important objective in school.
Hen (1991) contends that such shared school academic atmosphere appears to be a very important force for motivating both teachers and students. When having agreed academic objectives as part of the school educational policy, it shows clearly a certain direction that can guide students to the academic direction, and thus, may increase their academic achievements.

He further highlights the special contribution that Israeli society might benefit from such schools. Schools with definite and consistent academic objectives achieve not only high academic achievement, but also:

“minimize the differences of students’ accomplishments, minimize the gaps between minorities and majorities and especially blur the connection to socio-economic and cultural background of students.” (p. 44)

Of the various effectiveness variables, mentioned so far, some of them are easily measurable and some are more complex to measure. The issue of measuring effectiveness follows.

MEASUREMENT OF EFFECTIVENESS

The two main issues that are highlighted in this section are the importance of having qualitative measures as well as quantitative and the importance of value added.

Hill (1995a) claims that the need for reliable information and measurement of student outcomes as a reflection of school effectiveness is essential. Friedman et al (1988) assert that if an organization is considered successful and effective, there should be a way to check whether its aims were fully achieved. Nonetheless, it is not always that organizational goals are clearly expressed, known to all the members and are measurable. Another:

“difficulty has been that there is little agreement on what is meant by effectiveness.” (Wyatt, 1996 p. 7)
And that:

"school and their various ‘audiences’ may not agree about the nature and aims of education." (p. 312)

Thomas et al (1997a, 1997b) add that while all researches assume that effective schools can be differentiated from ineffective ones, there is no consensus yet on just what constitutes an effective school. Even when using multi-level analysis to measure effective schools variables, still “it is difficult to measure outcomes and test success” (Bush, 1994 p. 64).

In practice, effective school measurement have tended to look mainly at outcome measures. Mortimore et al (1988) suggest four quantitative measures for the evaluation of school performance:

1. public examination results;
2. attendance;
3. behaviour;
4. delinquency.

The Audit Commission of England and Wales (1993) support the use of quantitative measures but admit its limitation:

"Quantitative data may not relate to students’ development of personality, integrity or teamwork, for example. Even for those aspects of the course which are directed at external qualifications, quantitative measures cannot identify fully the quality of teaching and learning.” (p. 62)

Indeed, school quantitative measurement ignores the 'value added' (McPherson, 1992):
“which attempts to describe the educational value that the school adds over and above that which would have been predicted given the backgrounds and prior attainments of the students within the school.” (Wyatt, 1996 p. 7)

Hence, OECD (1994) offers that school's performance is to be judged not on results alone but on the school's contribution to these results since:

“An effective school is one that promotes the progress of its students in a broad range of intellectual, social and emotional outcomes, taking into account socio-economic status, family background and prior learning.” (Chapman, 1991 p. 1)

In Australia, the Council for Educational Research valued most highly the following:

- "positive relationship with learning
- development of a positive self-concept
- sense of self-discipline and self-worth
- student's living skills becoming a productive and confident member of the adult world in time.
- the development of appropriate value systems; and
- the preparation of the student for the next stage of learning.” (McGaw et al, 1992 p. 7)

These factors are more likely to be measured qualitatively than quantitatively.

In Britain, Sammons et al (1994) offer a possible range of factors to measure effectiveness:

<table>
<thead>
<tr>
<th>Type of factors</th>
<th>Examples</th>
</tr>
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<tbody>
<tr>
<td>1. Pupil's personal characteristics</td>
<td>Age, sex, prior achievement</td>
</tr>
<tr>
<td>2. Family structure</td>
<td>Family size, lone parent status</td>
</tr>
<tr>
<td>3. Socio-economic</td>
<td>Parental unemployment, low</td>
</tr>
</tbody>
</table>
In effect, the above list presents factors that could be taken into account in terms of value-added, particularly when the students come from poor families. Yet, the main weakness of the list is that:

"the measurement of the value-added by schools is complex." (Bush and Coleman, 2000 p. 51)

Nonetheless, Robinson (1997) claims that educational measures are unlikely to alleviate the impact of disadvantaged:

"a serious programme to alleviate child poverty might do far more for boosting attainment and literacy than any modest intervention in schooling." (p. 17)

His views are conformed to the thinking of the sociological view highlighting the effective schools barriers.

CRITICISMS OF EFFECTIVENESS

The aspiration of every educational system is to make all schools effective but the situation in reality turns to be different. Effective schools create inequality in education:
"The fact that schools differ in providing quality services means that there are schools in which the learning opportunities are more relevant, more pleasant and more demanding or effective than in other schools." (Hen, 1991 p. 3)

Hen (1991) adds criticism, the common use of the research which examines schools as to how they differ from each other. This approach does not ensure that some factors which characterize successful schools are actually the ones responsible for their success. Therefore, adopting these measures will not necessarily bring the same results in other schools to the same extent that they were obtained in the successful schools (Friedman et al, 1988). In effect:

“There are questions as to whether schools are differentially effective for all of their students, whether they are equally effective across all curriculum areas, and whether they remain effective over time.” (Wyatt, 1996 p. 2)

Gray (1998) expands this idea claiming that even in schools designated as effective as a whole, there will be departments that are less effective and students who ‘have very different experiences of schooling’ (p.23).

These findings support the view that in Israel and abroad (Ichilov, 1995; Mortimore, 1988) the effective school is able to provide knowledge and enhance the students level. But, it is powerless to eliminate the great existing gaps among various social categories of students:

“The problem has been exacerbated by the demand to publish test and exam results in the papers, thus, judging the quality of school: It is, therefore, in the school interest to avoid disadvantaged students who would probably perform badly and lower the position of school.” (Mortimore, 1988 p.1)

In addition, it is argued that even when researchers such as Jencks et al (1972):
"have been successful in identifying the special mix that has led schools to greater success beyond what could have been expected from students in view of their initial skills and socio-cultural background." (Hen, 1991 p. 5)

such studies are often carried out after the success was observed. Thus, it is possible that some factors which could shed some light on this success are phased out.

These various problems with effective school research present the wider limitations of the effective school movement, the heavier critique follows.

CRITIQUE OF SCHOOL IMPROVEMENT AND EFFECTIVENESS RESEARCH

Several academics (Elliott, 1996; Mortimore and Whitty, 1997; Sammons et al., 1996; White et al., 1997) have recently been critical of school improvement and effectiveness research. The criticism has centered around several issues. The first accusation, already mentioned, relates to school effectiveness which inevitably concentrates on restricted 'cognitive' outcomes of schooling and ignores the many other aspects which are important. As a result, researchers have adopted sophisticated statistical techniques which have become difficult to explain. This has led some commentators to reject their use in favour of 'simpler' techniques:

"The main thrust of these statistical models is to attempt to set up mathematical descriptions which are sufficiently complex that they will be able to capture the real life complexity which exists." (Goldstein, 1997 p.3)

There might also be a danger in reducing complex processes such as teaching and learning to a number of correlates:

"though it is attractive to policymakers to believe that there are lists of the characteristics of effective schools to improve their performance, it may also be dangerous to encourage such a simplified view of how schools develop." (West and Hopkins, 1995 p. 3)
In any case:

"it has become increasingly clear that ‘what works’ in one context may lack relevance in others.” (Stoll and Mortimore, 1995 p. 2)

In addition, what researchers perceive as important outcomes of schooling may not coincide with the views of pupils and parents (Stoll and Myers, 1998).

Another charge claims that research is used to blame schools for ‘failing’ on the assumption that because some schools succeed in difficult circumstances, the reason the others do not, must be their own fault:

"in this scenario complexity and context are ignored” (Myers and Goldstein, 1997 p.1)

Reynolds et al (1996) adds some points which reflect critically on effectiveness research:

1. Most studies in the West have been within disadvantaged or deprived contexts rather than with schools in advantaged area.
2. There has generally been less of a focus on classroom processes.
3. "the historic lack of any ‘interface’ between school effectiveness research and school improvement practice.” (p. 139)
4. There have only been rudimentary attempts at theory generation.

Furthermore, the literature has provided a great deal of criticism about giving too much importance to the role of the hero headteacher (Caldwell and Spinks, 1992; Slee et al, 1998). Or as Bolender (1997) puts it:

“the principal has the daunting task of being all things to all people. Nevertheless, the principal’s impact cannot be over-emphasized.” (p. 17)
But just in the last five years, a series of heavier critiques has appeared. It is argued that much school improvement and effectiveness research has been closely concerned with specific government policies which raise moral as well as pragmatic issues (Elliott, 1996; White, 1997). The key point is that the design of such a research is fundamentally flawed and can raise questions such as: 'effective research, for whose benefit?'

Another criticism claims that the ample research may simply mean poor quality. Researchers, by wanting to satisfy government demands for policy actions while also attempting to portray research as academically respectable, lends some substance to the criticism of the quality of these researches (Fielding, 1997).

White (1997) further claims that there is no need for empirical research in order to identify the factors shown to be conducive to effective schools because:

"sometimes logical analysis can show this - both more swiftly and at a fraction of the cost." (p. 34)

Perhaps the most extreme criticism comes from Willmotte (1999). He criticizes the statistical models, oversimplification of the complex 'causalities' associated with schooling and the sidetracking into focusing on 'league tables'. Such models:

"advocate an approach in which it is assumed that 'educational problems' can be fixed by technical means and that inequality is an intra-school affair." (p. 254)

The above authors dislike the notion of improvement and effectiveness partly because they are linked to business models, such as T.Q.M.. Mac an Ghaill (1996) suggests:

"to re-connect that which has become disconnected - the relation between sociology of education, social class, state schooling and inequalities." (p. 164)

In practice, the critics suggest that the government should take initiatives that can address the social issues, and moreover, that schools should do the same.
SUMMARY

School Improvement and School Effectiveness

The educational system, undoubtedly, wishes to turn schools into more successful, effective ones through the overall management of the school. There are constant systematic attempts within the international and Israeli educational systems to promote school accomplishments by improving teaching, learning, teamwork, personal relationship and various processes within the school (Tzuk, 1995). Yet, any change should derive from the school realities. This conception rejects the idea that 'schools do not make a difference' (Bernstein, 1970). A school is the key to effectiveness, by using all of its energy to work towards a common vision. The school's vision must be developed and directed by the staff, rather than be imposed or prescribed externally (Hopkins, 1994). Stoll and Fink (1996) add that many school reform efforts fail because the participants lack an understanding of change.

The move towards a better understanding of any change process, such as implementing T.Q.M., is one of the main tasks required from school leaders. Within the paradigm of improvement transformational school leaders should support successful implementations of change, maintain collaborative cultures, and empower teachers through shared decision-making and collective problem solving (Leithwood, 1992). The leader becomes a guide rather than a gatekeeper (Fullan, 1992a) in the business of teaching and learning.

In fact, much of the literature on effective leadership includes references to the quality culture. Bolender (1997) emphasizes the link between leadership and culture: "they are two sides of the same coin, and neither can really be understood by itself" (p. 2). Healthy school culture correlates strongly with increased student achievement and motivation and with teachers' satisfaction (Bolender, 1997).

Fullan (1992) outlines themes related to the actual process of change and shows how that process must become more organic and dynamic (p. 82).
Consequently, the aspects of how culture is built in schools and what are the main characteristics that enhance positive culture, are raised and explained by Bolender (1997, p. 7).

Bush et al (2000) explain that any progress towards improvement may considerably be influenced by the extent to which the students of that school are advantaged or disadvantaged ones. Integration might, together with a method of teaching and other T.Q.M. techniques, have a better consistent influence that leads to improvement.

In effect, the integration of underprivileged students with well-to-do ones without any governmental interference seems to have no consistent influence upon improving the area of learning. This issue is particularly raised in the State of Israel where a large number of the newcomers are defined as disadvantaged students.

In sum, international and Israeli research (Ichilov, 1995, Hopkins, 1994) support the ‘marriage’ between school effectiveness and school improvement:

“these traditions of educational research have shared input and process variables.” (Clark et al 1989, p. 160).

The main difference is that:

“The orientation of School Effectiveness has been a ‘static’ one concerned with the ‘steady-state’ of effectiveness; the orientation of School Improvement has been a ‘dynamic’ one, focusing upon change over time.” (Teddlie, 2000 p. 216)

Reynolds et al (1993) extend this stance. They identify the main differences between school effectiveness and school improvement:

<table>
<thead>
<tr>
<th>School Effectiveness</th>
<th>School Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on schools</td>
<td>Focus on individual teachers or groups of teachers</td>
</tr>
<tr>
<td>Focus on school organization</td>
<td>Focus on school processes</td>
</tr>
<tr>
<td>------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Data-driven, with emphasis on outcomes</td>
<td>Rare empirical evaluation of effects of changes</td>
</tr>
<tr>
<td>Quantitative in orientation</td>
<td>Qualitative in orientation</td>
</tr>
<tr>
<td>Lack of knowledge about how to implement change strategies</td>
<td>Concerned with change in schools exclusively</td>
</tr>
<tr>
<td>More concerned with change in pupil outcomes</td>
<td>More concerned with the journey of school improvement than its destination</td>
</tr>
<tr>
<td>More concerned with schools at a point in time</td>
<td>More concerned with schools as changing</td>
</tr>
</tbody>
</table>

Based on research knowledge | Focus on practitioner knowledge |

Still, these are complex areas and some researchers (Elliott, 1996; Fielding, 1997; Mac an Ghaill, 1996; White, 1997; Willmotte, 1999) mainly focus on accusations of abuse by government, oversimplification, poor quality and that there is no need for obvious empirical research or business models such as T.Q.M. In effect, the inspiration for worldwide improvement in education led some international and Israeli educational systems, for example Sitka Alaska in the U.S. and 'Mofet' schools in Israel, embrace the industrial model of the T.Q.M. as a means towards school improvement. As the main purpose of this thesis is to investigate what had caused the three secondary schools in Israel to move from being a failure to being effective, and T.Q.M. approach seems to be the catalyst, the section about the T.Q.M. approach follows.
Chapter 3 -

The literature on Total Quality Management

Many commercial, industrial and public sector organizations face a changing environment and have to respond to complex changes. One of the alternatives is adopting the T.Q.M. approach. The aim of this chapter is to summarize the different aspects of quality management theory and to explain its tools, techniques, weaknesses and strengths. Thus, what follows relates especially to the T.Q.M approach as a whole and specifically to the problems of implementing T.Q.M in international and Israeli educational systems. Welton (1995) asserts that T.Q.M is “an instrument of the commercial marketplace. Education is a process…not a cloned product” (p.161). This potential weakness is also repeated by Elkayam and Brier (1993); Kohn (1993a; 1993b) and Sallis (1996).
The particular nature of work done in school is seen as anti theoretical to T.Q.M. Szitjan (1992) provides the critique that changing the 'school as factory' metaphor to 'school as enlightened corporation' metaphor, as some T.Q.M. supporters claim, only perpetuates the business/economic mentality. She raises the questions:

"Does any business metaphor truly aim at socio-economic improvement of society?"
or "Will these metaphors lead us through education to a more humane society?" (p. 37)

Szitjan (1992) would rather have schools as a 'collaborative work of art' (p. 37). Or as Capper and Jamison (1993) assert:

"This industrial symbolism simply validates the traditional styles of education and management that have misguided education from the beginning." (p. 26)

Willis (1993) objects to even using industrial vocabulary in education. He explains that students are not 'products', parents are not 'suppliers' and teachers are not 'transitional means'. Rather, students should be looked at as:

"customers who are well-served by schools - ethically, socially and environmentally." (Hirumi and Kaufman, 1992 p. 33)

West-Burnham (1997) adds a number of possible objections to T.Q.M. in the education service:

1. Managerialism denies professionalism.
2. Hierarchial accountability diminishes collegiality and autonomy.
3. The emphasis on leadership denies democracy.
4. Managerialism denies educational values.
5. Management is inevitably manipulated.
6. Educational outcomes cannot be managed. (p. 11)
However, Total quality may be essential to the success of all efforts to reach effective management. It:

"can be seen as the logical extension in terms of organizational autonomy and maturity in that it focuses all aspects of management." (West-Burnham, 1994 p. 171)

It is appropriate, before going further, to devote a few lines to what is meant by quality.

WHAT IS QUALITY?

The issue of quality:

"has been around for forty years [and]... has always been at the centre of the debate about education." (West Burnham, 1997 p. 6)

This debate still exists. There is no unanimity about the definition concerning the concept "Quality" and the way to achieve it. In fact, the nature of the concept of quality was described as 'elusive' (Green, 1994 p.12), 'controversial' (CHES, 1994 p. 18) and 'problematic' (Liston, 1999, p. 4). In education:

"Quality is at the top of most agendas and improving quality is probably the most important task facing any institution... We all know quality when we experience it, but describing and explaining it is a more difficult task." (Sallis, 1996 p. 1)

Shaw (1994, p. 6) also attempts to understand the important ideas of quality, thus, quoting three of the best known figures who were concerned with this issue W. Edward Deming, Joseph Juran and Philip Crosby. Deming's (1986) philosophical approach is that: "Quality should be aimed at the needs of the consumer, present and future" (p. 42). Crosby (1979) explains that:
"what costs money are all the unquality things – all the actions that involve not
doing jobs right the first time" (p. 1)… quality is …conformance to
requirements" (p. 9)

However, Crosby's definition is criticized:

"We reject the idea that quality means 'getting it right first time' or 'zero defects'.
Mistakes are O.K. …. they must be a source of a new learning experience and of
progress." (Nightingale et al, 1994 p. 165)

Likewise, Juran (1989) does not agree with Crosby's (1979) ideas but supports
Deming's (1986) definition of quality. He claims that "quality is fitness for use" (p.
15). Both, Juran and Deming, do not believe that quality with zero defects is an
achievable goal while Crosby suggests quality as aiming for zero defects.

Greewood and Gaunt (1994) embrace Crosby's definition but stress that quality
largely means customer expectations which should be placed at the centre and "above
all else it must do what the customers wants it to do" (p. 26).

A common thread in all definitions is that quality is a shared aspiration. Successful
organizations experience the quality management system, namely:

"The collective plans, activities and events established to ensure that a
product, process or service will satisfy given needs." (Liston, 1999 p. 159)

The above attempts to define quality give rise to other two associated concepts,
quality control and quality assurance which were previously related to the change
process. The rationale is that management needs an assurance process in order to
ensure the integrity of the relationship between intentions and outcomes. Some
approaches have even provided organizations or structures with explicit criteria to
inspect, inform and design quality control (OFSTED, 1995) in education in England
and a quality assurance system (ISO 9000) in industry. West-Burnham (1994)
concludes that some form of quality assurance is more appropriate as a tool for
managing the learning process, and that total quality goes further and offers a holistic approach which has the potential to enhance outcomes and reduce costs.

Nevertheless, some international and Israeli researchers (Hen, 1991; Fox, 1995) have been critical about the application of ISO 9000 as an example of T.Q.M. and its potential for bureaucracy.

In order to fully understand the quality concept, there is a need to understand where it is rooted.

The Historical Background To T.Q.M.

The quality movement whose aim is:

"to ensure that products conform to their specification and give customer satisfaction and value for money." (Sallis 1996, p.6)

emerged in the years following Second World War. Despite the fact that notions of quality improvement and quality assurance started to attract attention on a large scale in the 1930s and 1940s, it came late to the West:

"Quality became an issue with the advent of industrialization." (ibid p. 6)

as questions were asked about the Japanese success in capturing a larger share of the world market. In fact, Deming's ideas about quality in general and T.Q.M. in particular began to attract attention in Britain and in the U.S.A. only in the 1980s.

Deming focused on the style of American management which: "requires a whole new structure from foundation upwards" (Deming, 1982, p. ix). For him:

"problem of quality lies primarily with management. The basic cause of industrial problems is the failure of senior management to plan ahead." (ibid p. 39)
Along with Joseph Juran (1989), Deming believed that most quality problems could be tracked back to management decisions. He attempted to instill this approach into the American industrial world, unfortunately, American enterprises refused to listen to his ideas since at that time they tended to praise outputs and production and ignored process and quality.

It took Western industries a little longer to realize the importance of the quality revolution. However in 1988, The American Defense Office, the most important customer in the security industry and very “High Tech”, published a formal manifesto which declared that no further business attachment would be made with suppliers unless they implemented T.Q.M. methods (Goldstein, 1990). The new philosophy attempted to improve the organization’s performance and bring about renewed corporate success by following these management issues:

1. Setting an overall organizational policy which is based on quality principles and is appropriate for the organization’s goals and actions.
2. Setting the managerial and organizational processes that are appropriate in order to apply the policy.
3. Incremental improvement of processes.
4. Commitment of the organization’s leaders.” (Tzuk, 1995 p.2)

T.Q.M. has an international appeal and is being implemented in Israel as well, particularly in the industry and business world to promote quality. It has also been implemented more recently in education to improve the quality of teaching and learning and to promote educational outcomes. This is the change that might be adopted by schools which often face political pressures to be effective and to pursue excellence (Tzuk, 1995). The schools under this study faced serious problems of survival so probably by adopting the T.Q.M. approach underwent a fundamental change. For such schools change is not an option:

"change arises from multiple sources … all in the context of the need to survive in an increasingly competitive environment." (Lumby, 1998 p. 191)
It is appropriate at this stage to introduce more explicitly the philosophy behind T.Q.M. and its key components in order to better understand this concept before going on to look at T.Q.M. in education more closely.

THE PHILOSOPHY AND PRINCIPLES OF T.Q.M.

Deming firmly established T.Q.M. and summarizes his idea of quality in the following fourteen points:

1. Create constancy of purpose for continual improvement of products and services.
2. Adopt the new philosophy and abandon traditional ways of working.
3. Move from inspection to building quality into every product and process.
4. Stop awarding contracts on the basis of the lowest bid - specify and buy quality.
5. Engage in a process of continually improving every aspect of company activity.
6. Use work bases training techniques.
7. The emphasis for leaders and managers must be on quality, not quantity.
8. Drive out fear by improving communication.
10. Eliminate slogans and exhortations.
11. Eliminate arbitrary numerical targets.
12. Allow for pride of workmanship by locating responsibility with the worker.
14. Create a management structure and culture that will drive the preceding 13 points.

Deming, the 'guru', clarifies that these fourteen points are the foundation to perform a 'Transformation in American Industry' (Tzuk, 1995 p.5). But still, they are as adequate and sufficient for small as for big enterprises, for industry as for services. The key for success and quality of the change depends on the extent of management capacity to control variables, as changing factors which might hurt quality, can influence any process (Deming 1986).

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Deming's philosophy has been widely adopted and is highly congruent with the two other 'gurus' lists, namely, those of Juran and Crosby. Juran (1964) identifies three particular 'steps to quality improvement':

1. Structural annual improvement plans.
2. Training for the whole organization.
3. Quality directed leadership.

He summarizes his principles of quality management by 'ten steps to quality improvement':

1. Create awareness of the need and opportunity for improvement.
2. Set explicit goals for improvement.
3. Create an organizational structure to drive the improvement process.
4. Provide appropriate training.
5. Adopt a project approach to problem solving.
6. Identify and report progress.
7. Recognize and reinforce success.
8. Communicate results.
10. Build an annual improvement cycle into all company processes.

Juran places great emphasis on leadership and team-work, arguing that quality management is a balance of human relations skills and statistical process control skills.

Crosby's (1988) focus is on senior management and the importance of increased profitability through quality improvement. He is best known for his 'four absolutes' of quality management:

1. The definition - quality is conformance to customer requirements, not intrinsic goodness.
2. The system - prevention, not detection.
3. The standard - zero defects.
4. The measurement - the price of non-conformance.

Crosby is also known for his 'fourteen steps to quality improvement':

1. Establishing full management commitment to the quality programme.
2. Set up a quality team to drive the programme.
3. Introduce quality measurement procedures.
4. Define and apply the principle of the cost of quality.
5. Institute a quality awareness programme.
6. Introduce corrective action procedures.
7. Plan for the implementation of zero defects.
8. Implement supervisors training.
9. Announce zero defects day to launch the process.
10. Set goals to bring about action.
11. Set up employee - management communications systems.
12. Recognize those who have actively participated.
13. Set up quality councils to sustain the process.
14. Do it all over again.

More 'lists' relating to the move towards quality improvement have appeared. Giltow (1987) sees the essence of the management approach by centering on the customer's requirements, delight and feedback and by empowering the workers (p. 14).

Ross (1994) extends the idea of the style of leadership saying that:

“at the heart of T.Q.M. is the concept of intrinsic motivation – involvement in decision making. Employee involvement is a process for empowering members of an organization to make decisions and to solve problems appropriate to their levels in the organizations. It makes sense that the people closest to a problem or opportunity are in the best position to make decisions for improvement if they have ownership of the improvement process.” (p. 121)
Tribus (1991) takes the same view but set emphasis to T.Q.M. as an approach which uses 'long-term teams and short-term teams in order to face specific assignments.' (p. 18) in order to raise the quality issue to a high level and to change it from a technical issue to an important main stream one.

Banks (1992) highlights another T.Q.M. key factor; the probable benefits that organizations may have when avoiding work repetition. By eliminating waste and preventing internal failures such as: scrap, rework, reinspection of rework, downtime caused by defects and investigation of failures, 'the cost of non-conformance' (p. 97) can be saved. Organizations should look at the cost of appraisals or 'the cost of conformance': that is, the in-process inspection, set-up for testing and administrative costs for quality assurance personnel. After comparing them, Banks concludes that "conformance costs are much less than non-conformance costs" (p. 97). Tzuk (1995) adds that 'quality costs a lot of money whereas T.Q.M. aims for eliminating waste' (p. 7).

Ronen (1992) adds that improvement is a long, incremental process and not a quick fix, which can be enhanced through the quality of personal relationship by all the members of the organization. Thus, leaders should support and supply their workers with the proper conditions and resources for achieving quality and success.

Dobbins (1990) agrees but centers on organizational quality culture. Or as Sallis (1996) put it:

"T.Q.M. is about creating a quality culture where the aim of every member of staff is to delight their customers, and where the structure of their organization allows them to do so." (p. 19)

Thor (1998) concludes that viewing each employee as an internal customer, empowering teams, and encouraging prevention rather than inspection, highlight T.Q.M.. The emphasis is put on processes as the core contribution towards the final product. All managers should, accordingly, have their personal style of leadership, taking into account their personality, the staff they work with, their customers and the
specific characteristics of the products. This approach aims at harmony among all the people in the organization though it may be problematic in practice since the gap between the industrial philosophy of T.Q.M. and experiencing it in public organizations may be difficult to overcome.

Yet, in order to relate these areas of T.Q.M. to practice some of the representative, generic T.Q.M. tools and techniques that are used to achieve quality improvement follow.

T.Q.M. TOOLS AND TECHNIQUES FOR QUALITY IMPROVEMENT

T.Q.M. incorporates mainly quantitative but also qualitative tools and techniques. Some of them are fairly simple aids in order to have better communication and structured problem-solving, and some are strictly statistical control methods. As a statistician Deming put the emphasis on statistical control methods. Capper and Jamison (1993) present the different techniques:

"Overarching all T.Q.M. technique is data collection, statistical procedure, and scientific methods, including Pareto charts, fish-bone diagrams, and scattergrams." "...Basic methods of data collection and analysis are relied upon to identify, understand and reduce special and common causes of variation in the production process. The ultimate aim is to use data,... to eliminate product variation, and to render production processes in a state of regulated, statistical control." (p. 25)


In addition, Banks (1993) introduces some of the most accessible tools; the histograms, control charts, statistical process control (SPC) and concurrent engineering but notes that:
“Many of these techniques are quantitative and very complicated, as they are aimed at engineers and specialists.” (p. 159)

Since this study deals with the educational setting which is essentially different in its aims from the industrial world, it is practically impossible to choose all T.Q.M. principles and implement them in education. Sallis (1996) agrees that not all tools are appropriate for use in all applications (p. 94).

He further claims that these tools are powerful only if they are routinely used and highlights a very important technique which is already in use in many organizations, namely, the team-based approach. Belbin (1981) has probably done the most significant work on teams. He claims that teams which are successful:

"develop well informed self-insight and took appropriate action in managing their style of operation." (p. 50)

The importance of team work as a tool for quality improvement is also reflected in Reynold’s (1994) work:

“A well organized team can perform much better than a collection of individuals. This phenomenon is known as synergy- the whole is greater than the sum of the parts.” (p. 42)

Katzenbach et al (1993) embrace this idea, explaining that:

"... teams are more flexible ... teams are more productive than groups ... teams and performance are an unbeatable combinations." (p. 15)

This idea of team-work is repeatedly documented. Dyer (1977) pinpoints some interesting points which may improve quality:
"Identifying the team;
Develop the team: teach group problem-solving, openly share data, build norms of shared and collaborative action, and teach team members to reinforce one another;
Identify team goals;
Empower the team members;
Recognize team accomplishment regularly;
Maintain the team." (p. 139)

Nonetheless, some authors (Sashkin and Kiser, 1992) focus on the idea that these tools are the most accepted means of identifying and creatively solving problems, but they are not T.Q.M. in themselves:

“Not even training every employee how to use these tools and techniques will effectively implement T.Q.M. T.Q.M. only operates when the value of quality for customers is an important part of the organizational culture.” (p. 40)

The overall aim of the use of these techniques and tools is to bring about the improvement leading to quality in the organization. The importance of quality emerges in various fields.

QUALITY AND T.Q.M. IN EDUCATION

Shaps (1993) claims that quality nowadays touches nearly all aspects of industry and:

“This new consciousness of quality has now reached education. ...institutions need to demonstrate publicly that they too can deliver a consistent quality service.” (Sallis, 1996 p. 2)

But although there is universal support for the need for quality, the differences between industry and education should not be overlooked. While the emphasis in the industrial world is on maximizing output and profit, the main emphasis in the
An educational institution is on providing "the best possible quality of education" (ibid p.4).

Another difference is reflected in Goddard and Leask's (1992) definition of quality in education where:

"the requirements of the customer are not defined in an undimensional relationship. Quality looked at through the eyes of parents, students, government, local communities and business has different characteristics." (p. 5)

They prefer to emphasize processes and structures in order to achieve quality in education rather than focusing on outputs. T.Q.M. can be harnessed in the pursuit of continuous improvement of processes in education (Tzuk, 1995).

Bostingle (1992) who raised the idea of applying T.Q.M. to educational systems claims that morally and technically the same factors that improve services and products in the industrial world, are bound to succeed in educational systems, too. Nonetheless, he places the emphasis only on four out of Deming's fourteen principles, namely the customer/s (in education); the incremental improvement in the organizational structures as well as in the learning and teaching process; a continuous process. and the headteacher's accountability. (p. 6)

The rationale is to adapt the appropriate T.Q.M. principles so that T.Q.M. being:

"a practical but strategic approach to running an organization which meets or exceed the needs and wants of customers." (Sallis, 1996 p. 28)

will successfully be implemented.

In practice, attempts to put the industrial theoretical models and different techniques into operation in the educational world have recently reached a new stage (Bonstingl, 1992; Inbar and Friedman, 1992; Leonard, 1991; Sallis, 1996; Schenkat, 1993). A
growing number of secondary schools in Israel have adopted T.Q.M. (‘Ort’ chain schools). Some of these schools are comprehensive in nature while others are academic ones.

The emphasis in these schools is put on some of T.Q.M. leading characteristics: the school vision and style of leadership; culture of 'driving out fear', building teams, breaking down barriers, problem prevention and the customer at the centre (Tzuk, 1995 p. 6).

Another T.Q.M. key principle that should be applied in schools is quality culture. When education is based on fear, the student is not expected to be creative or independent and significant learning is avoided (Roger, 1961; 1969). Deming (1986) suggests that the school should drive out fear from students as well as from the school staff relationship:

“Security is the basis on which staff motivation depends. Deming believes that people genuinely want to do a good job providing they work in an environment which encourages them.” (Sallis, 1996 p.42)

This way, everyone may work effectively as a team and break down barriers. The total quality way is to develop a close and long-term relationship in order to “constantly improve the system of teaching and learning” (Kaufmann and Zahn 1993, p.49).

West-Burnham (1993) adds a view of main ideas of quality in education:

<table>
<thead>
<tr>
<th>Focus</th>
<th>Internal and external customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Meeting customer requirements</td>
</tr>
<tr>
<td>Scope</td>
<td>Every aspect of the organization</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Everyone</td>
</tr>
<tr>
<td>Standard</td>
<td>Right first time-Fitness for purpose</td>
</tr>
<tr>
<td>Method</td>
<td>Prevention not detection</td>
</tr>
<tr>
<td>Measurement</td>
<td>Zero defects</td>
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</table>
Sammons et al (1997) extend the last idea. Similarly to the T.Q.M. approach, they regard quality culture as a significant factor towards school success. In effect, both school and departmental culture could play a key role in fostering the academic effectiveness of secondary schools. They highlight a combination of three features as the best chance of fostering progress:

A culture which promotes a strongly student-focused approach;
An academic focus;
An orderly school climate where students' academic outcomes are perceived as the highest priority in classes, subject departments and at the school level.

West-Burnham (1993) summarizes that:

"T.Q.M. organizations are about much more than responding to clients. They are as much about creativity, team-work, celebration, growth and excitement as creating effective processes." (p. 8)

However, in practice a main barrier arises to the application of T.Q.M. from the nature of teaching. The teacher who stands at the base of the educational process is isolated in the classroom. This situation contradicts the quality idea of decreasing autonomy and increasing co-operation and feedback from others. Co-operation especially in decision-making is an essential move towards “improvement in the processes of producing better goods and services” (Sallis 1996, p. 41).

Also the educational objectives or 'products' are different in kind and are difficult to define. A discussion about possible educational objectives or 'products' follows.

The educational 'output'
Bush (1986) claims that it is difficult to test success in educational institutions as the educational products are complicated, problematic and can be interpreted according to different educational trends:

“There are no clear-cut educational equivalents to such major private sector objectives as profit maximization, output maximization or product diversification. Schools and colleges are expected to develop the personal capacity of individuals, to inculcate the accepted values and beliefs, to look after children and young people for set periods of each day and to prepare pupils and students for the next stage of education.” (p. 5)

In addition:

- Industrial production is mechanical whilst education is creative and organic.
- Industrial organizations have clear-cut goals whilst the objectives in education are diffuse, varied and conflicting. (Maw et al, 1984 p. 13)

Fox (1995) agrees with the problematisation of the last mentioned issues. Yet, she claims that teachers and management members are not, directly, responsible for the quality of the educational output. Bashi (1989) strengthens this idea:

“the differences among schools in the number of students who take the 'Matriculation' exams and who are entitled to get the final diploma, depends on students different social-economic background.” (p. 5)

He explains that many educators, if asked, do not take full responsibility for their student’s failure since the grades reflect only one way of measuring success.

Rhodes (1992) relates to the issue of students' achievements differently. He claims that the grades are the final product of a process. Compromise can be reached in industry where the future exported products are differentiated as quality products or as defective ones. However, schools do not have the possibility to classify students as high-mark students or worthless ones.
Moreover, Alboim-Dror (1987) highlights the old-fashioned status of pupils. She argues that there is a basic relationship in school between the teachers who have the knowledge expertise, and the student who lacks this knowledge. This view highlights the top-down compulsion directed at students and focuses on teachers as experts.

The quality approach refuses to accept this last narrow view or explanations for faulty products. Instead, it suggests:

"significance and responsibility of every employee to be recognized in an organization's pursuit of its mission." (West - Burnham, 1997 p. 122)

This systematic treatment towards improving processes and involving everyone may lead to a better functioning of the whole organization and consequently raise workers satisfaction. This is the essence of education, stressing the processes that lead to desired results (Tzuk, 1995).

Thus, Maw et al (1984) conclude that the importance of school is recognized not only in the student's achievements but mainly in the processes that students undergo. One possible way of improving schools is by taking on the concepts and tools offered by the T.Q.M. method, so that they can influence the thinking processes of the workers within the educational organization.

The T.Q.M. tools seem to be successful in the industrial setting. Thus, the idea of applying these tools and techniques as a drive for improvement in the educational system tends to be appropriate (Bostingle, 1992). The educational system seems to be in the need for such a quality system in education.

**REASONS FOR THE DEVELOPMENT OF QUALITY IN EDUCATION**

The international view
The need for quality improvement has internationally increased in the educational field. This desire for change or innovations is reflected through various theories which have raised the questions of what needs correction in the educational system and why.

**Theories related to Quality**

Origins of some of the ideas that link T.Q.M. to education can be found in the work of Dewey (1859–1952) who was one of the ‘fathers’ of the progressive approach in education and who strongly criticized educational institutions. He claimed that education as it exists turns students into passive persons because the traditional educational has at its base a compulsion method imposed from the top and the outside. This method makes students obey the imposed rules for the desired behaviour and force them to study the national curriculum which is:

> “a cultural product of societies that assumed that the future will probably be similar to the past, and thus the curriculum is taught as an ‘educational food’ in a society where change is the rule and not exception to the rule.” (Cohen, 1983, p.14)

Dewey aimed at qualitative educational changes. He believed that self-expression and fostering the individual personality can replace the top-down compulsion aimed at students, raising the standard of free-activity can replace rigid discipline and studying out of experience can replace the old books.

According to Dewey there is a strong connection between self-experienced processes and education. If the main purpose of education is to make the young fit for the future by making them take full responsibility for their learning and success in life, then, there must be cooperation and common interests in order to achieve quality and success.

The quality movement approach has similarity to Dewey’s ideas. Both aim for qualitative changes, for collective responsibility and for common interests. Deming (1986) strongly opposed experts who claim they own knowledge.
In more recent times, other theorists and researchers endorse 'quality' ideas. Postman and Weingartner (1969) oppose the government’s curriculum which turns the student into an “old science walking encyclopedia” (p.11). The students study:

“The total of material, objectives and demands that were chosen by general consent, and were sacred in the past, are fixed, supervised, censored and have one-sided answers.” (Cohen, 1983 p. 160)

Goodman (1971) also protests against the top-down educational philosophy. He adds that it can minimize any acts of the teachers’ own creative initiative, can depress student’s creative potential and, thus, ignores the student’s psychological needs and intellectual talents. For him, a school that shuts its eyes to the surroundings is not affected by its needs. Such a school has become ‘a universal trap’ which ‘imprisons’ students by making them indifferent and uninterested in the reality of life changes (p. 14). Long (1972) adds that school has failed its mission to train and prepare students for life. The student should be ‘delighted’ by the appropriate teaching methods and qualitative curriculum which is not based on past events.

Another objection to the top-down educational philosophy is raised by Postman and Weingartner (1971) who claim that the students have little freedom and may suffer from too much fear and bureaucracy.

Similar criticisms have been repeated and some writers (Bonstingle, 1992; Rhodes, 1992) suggest that educational institutions should adopt modern organizational approaches and endorse quality approaches. They explain that the educational institution must free itself from traditional understanding and must strive for improvement. The implementation of T.Q.M. can be considered as a way towards improvement since:

“Essentially, it enables managers to design their organizations the same way engineers design bridges and airplanes.” (Coppula, 1997 p.16)
A review of the Israeli literature on the reasons for development in education indicates a similar picture.

**The Israeli view**

The criticisms leveled against the Israeli educational system seem to echo international opinion expressed elsewhere. Also in Israel, it is perceived that there has been a need for quality changes in the organizational structure, in the government curriculum and in teaching methods (Friedman, 1988, 1998).

Sharan (1976) claims that the traditional teaching methods that are mainly being used in Israel compel teachers to stay isolated. The autonomy in teaching which is expressed through the exclusive control that every teacher has in the classroom, has become a sacred value. This autonomy has built a partition between teachers and their colleagues, and between teachers and the public. On the one hand, the partition ensures that teachers are well shielded from criticism, on the other hand, it limits cooperation among teachers, especially in the planning, teaching and assessment domains. This limitation may have an effect on teacher's professional progress, may serve as a barrier to teachers' involvement and to educational progress and may consequently lead to indifference and ineffectiveness.

Eden's (1978) research on teachers' lack of motivation to take initiatives or to accept changes and innovations indicates that:

"the teachers main power is not in accepting innovations...the class is the teacher's fortress." (p. 25)

Yet, the Israeli Ministry of Education took the initiative of 'Bagrut 2000' in twenty two secondary schools in the years 1994-5. The schools which took part in this project were entitled to use an alternative assessment like, H.W. or papers in up to three subjects for the final grade in the 'Bagrut' diploma. Exams were only one way of assessing the student and still this initiative was partially successful mainly because of practical problems.
Possible ways to overcome these limitations could be achieved by changing school organizational structure and by changing teaching techniques (Tzuk, 1995).

Alboim–Dror (1987) embraces this idea since she sees the school organizational structure as being very simple and standard. She blames the national curriculum for the class progress in a regular ‘route’. The pace is homogeneous and the time is fixed. This means ignoring interpersonal differences among students because:

“as a matter of fact, the educational institutions remain rigid, standard and unequal.” (p.119)

Hen (1989) also sees the organizational structure as over–simple with very little specialization. In his view, the educational inner structure lacks the tools that can guarantee correlation between objectives and the changing society.

Nonetheless, Gali (1979) and Friedman (1998) point out that the educational organization has undergone many changes and schools have made progress. Gali asserts that Israeli society has new demands on school staff. Therefore:

“the school’s old norms where the hegemony of seniority and experience dominantly rule school must change as in recent years, we can discover more intensely than in the past, some new trends that demand improvement and innovations.”(p. 58)

In order to refine the situation and to respond to the needs of Israeli and worldwide educational systems, T.Q.M. was applied in the U.S. and in Israel. Yet, the possible gap between principles and application raises the question how appropriate it is to schools.

APPLICATION OF T.Q.M. TO EDUCATION
T.Q.M. has become popular as it claims to offer a holistic approach to managing and improving schools. West Burnham (1995) develops this idea:

"Total quality is a philosophy with tools and processes for practical implementation aimed at achieving a culture of continuous improvement by all the employees of an organization in order to satisfy and delight customers." (p. 13)

Bush et al (2000) find this definition as helpful in stressing what may be the most salient aspects of education and add the main implications of it:

"The emphasis on totality - it is inclusive of all the employees. In education this would include support staff as well as teaching and lecturing staff; There is shared understanding of an explicit set of values with implications for leadership and management style; There is a planning process to allow for practical implementation; Tools and processes include monitoring and evaluation with an emphasis on prevention rather than inspection; Attention is given to customer rather than provider needs and customers are both external (e.g. students and parents) and internal (e.g. staff)." (p. 62)

One of the best known examples of a total quality school is Mt. Edgecombe High School in Sitka, Alaska, U.S.A. This school is able to point to a number of significant quantifiable indicators which have improved since the introduction of Total Quality. The school reports considerable improvement in attendance, disciplinary incidents, graduation rates, employment and completion of higher education. Sallis (1996) advocates the idea of pursuing quality in education and presents the four ‘Quality Imperatives’ which are:

"the drivers or motivating forces that challenge any institution that seeks to take a proactive stance on quality issues" (Barlosky and Lawton, 1995 p.151).

The first imperative is the moral one:
"the duty of educational professionals and administrators to have an overriding concern with providing the very best possible educational opportunities."
(Sallis, 1996 p. 4)

The second is the professional one in which educators have a commitment:

"to ensure that both classroom practice and the management of the institution are operating up to the highest possible standards." (ibid p. 4)

The next is the competitive one:

"In a new educational marketplace educators must meet the challenge of competition by working to improve the quality of their products, services and delivery mechanisms." (ibid p. 5)

The last imperative is the accountability one. The emphasis is placed on:

"promoting objectives and measurable outcomes of the educational process and providing mechanisms for the improvement of these outcomes." (ibid p.5)

The existence of these imperatives is so vital that in case of "failure to meet even one of these imperatives" it "can jeopardize institutional well-being and survival" (ibid p.5).

In support of these imperatives, West Burnham (1994) argues that total quality has much to offer schools in that it is:

"value driven; i.e. has a clear moral imperative; customer focused, i.e. existing for a driven by the needs of young people, parents and community, and based on prevention, i.e. concerned with optimizing outcomes." (p. 172)
The adoption of T.Q.M., the above authors would agree, is feasible in schools in their broad framework. However, T.Q.M.'s guiding principles can mean different things to different schools and there is no uniform model. Thus, the applicability of the most common denominators of T.Q.M. such as: team-based management, customer-based approach and quality culture, depend on two main educational figures: the headteacher and the customer. The headteacher tends to be a very important force for motivating both teachers and students and for implementing changes. The customer, students, staff and parents, should be delighted and satisfied by the school which should employ a cohesive and coordinated strategy which represents a sincere responsiveness to the needs and requirements of the customer (Brownlow, 1995).

In effect, many writers have offered varied principles of T.Q.M. but the headteacher and the customer seem to be repeatedly mentioned as vital in T.Q.M. (Dillon and Brown, 1983; Inbar and Friedman, 1992; Friedman, 1998; Fullan and Miles, 1992). This study examines to what extent the management leader, namely the headteacher who is a key figure for any change implementation and the staff who are the internal customers who should carry out the changes, are committed to these changes and act to ensure their success. From the latter perceptions it is possible to learn also about the commitment and actions of other customers, namely students and parents.

The Headteacher

Beare et al (1993) have produced a set of ten generalizations about leadership gleaned from studies of leadership of the last decade. Four of these generalizations relate to leadership and vision:

- Outstanding leaders have a vision for their organizations.
- Vision must be communicated in a way which secures commitment among members of the organizations.
- Communication of vision requires communication of meaning.
- Attention should be given to institutionalizing vision if leadership of the transforming kind is to be successful. (p.147)
Kotter and Heskett (1992) agree that the visionary or competent leader at the top is the single most visible factor that distinguishes successful changes from those that fail. Since leadership is a vital component in T.Q.M., the headteacher has a key role in starting a change in climate and eventually leading it to a qualitatively different culture (Dillon and Brown, 1983).

Leaders are expected to communicate the vision before qualitative changes are implemented:

“It is essential that the leader of a school or college has a vision or mission for the institution and that the leader can transmit their own commitment into one that can be shared by others” (Coleman, 1994 p. 64)

Wendt (1994) further expands the expectations of a headteacher who should have:

“school wide-involvement in systematic and incremental improvements, high-performance targets and measuring results; focus on the needs of customers; participate in teams; and empowerment of both workers and teachers.” (p. 11)

Fullan and Miles (1992) attribute to headteacher’s leadership the impact on teacher’s morale; on their professional performance and even on student’s learning. Schneider et al (1994) add the feature of creating the appropriate atmosphere.

Sallis (1996) explains that this impact towards success can be achieved (p.41). Once the strategy has been decided upon, and the vision of what the school wants to achieve, and where a school wants to reach has been defined, the implementation of T.Q.M. can be quite understood.

Murgatroyd and Morgan’s (1993) sum the key issues, that leaders and management should aim at, in their ‘3cs of T.Q.M.’:
• Culture- a culture that values innovation, where status is secondary to performance and where empowerment and continued development provide self-motivation.
• Commitment of all to shared goals.
• Communication which must be free and effective between all levels and areas of the organization. (p. 65)

Nonetheless, Chitty (1997) argues that the idea that one individual, or even group of individuals, can 'turn school around' is superficially attractive but somewhat lacking in plausibility. Thus, the T.Q.M. offers that everyone in the organization should be involved in the move towards quality, ensuring that standards are constantly improving.

The Customer

Kaufman and Zahn (1993) point out “the commitment to define and deliver quality” (p. 22) to the customer. This quality management, Bostingle (1992) claims, should pay great attention first to its customer and supplier. Schools serve as a ‘supplier’ of the learning environment, thinking tools and teaching methods for the ‘customers’, namely, the students and their parents amongst others who have a legitimate interest in education and its results.

Inbar and Friedman (1992) expand this idea by seeing anyone who holds a position at school as a customer. West-Burnham (1992) backs this view saying:

“Thus the child is the customer in the classroom, the parent is the customer for reporting procedures, the LEA, DES, and HMI are equally customer in context.” (p. 57)

Fridler (1993) highlights the importance of another customer, namely the worker. Any organization applying T.Q.M., which cannot satisfy its workers, will not be able to satisfy its customers. Thus, it means that management is based on cooperation between management members and teachers and on constant consultant with students
and their parents. In terms of schools, teachers and other workers in the school should strictly be regarded as customers.

Greenwood and Gaunt (1994) assert that there are two kinds of customers in educational institutions; the internal and the external customer, and there are the suppliers as well:

"The internal customers include the students, their parents, the teachers and the workforce (secretaries, support staff etc.). The external customers include the prospective students, their parents and teachers, other schools, commerce, industry and the local community." (p. 34)

All these customers, internal and external, have to be served and should be delighted by the school (Brownlow, 1995 p. 12).

O’Neill (1994) echoes the customer’s needs but highlights the learning process. He defines two roles in the management of the learning process, that of the supplier and that of the customer, and discusses the different responsibilities that each role has:

"In a T.Q.M. partnership the role of the supplier is to clarify needs, meet needs, measure success in meeting needs and modify action in light of the above. The customer role is to articulate needs, participate in monitoring and review.” (p. 15)

The key figures in T.Q.M. in schools may be the headteacher and the customers but unless all the people involved enter into the spirit of T.Q.M. it is not T.Q.M. Therefore, the headteacher and the customer, are not the only principles of quality management.

OTHER PRINCIPLES OF QUALITY MANAGEMENT

West-Burnham (1993, 1995, p.28) concludes and summarizes some key features of quality management in schools:
• "Quality is defined by the customer, not the supplier
• Quality consists of meeting stated needs, requirements and standards
• Quality is achieved through continuous improvement, by prevention not detection
• Quality is driven by senior management but is an equal responsibility of all those involved in any process
• Quality is measured by statistical methods, the cost of quality is the cost of non-conformance.
• Quality has to pervade human-relationships in the workplace, teams are the most powerful agent for managing quality
• Quality can only be achieved by a valued work force; education, training and personal growth are essential to this
• Quality has to be the criterion for reviewing every decision, every action and every process." (p. 26)

The West-Burnham focus is on both customer-centered philosophy and on everyone’s involvement in school which leads to commitment for quality through team-work and training.

In addition, Kaufman and Zahn (1993) consider that Deming’s fourteen points can be fully applied to education. They ‘translate’ Deming’s principles into the educational setting. For example, Deming’s constancy of purpose for improvement of the product and service is likened to student’s accomplishments and success, or the new philosophy which puts the customer at the centre is likened to the teachers’ students centered approach.

Despite of the possibility of fully or partly ‘translating’ Deming’s ideas into the educational setting, T.Q.M. has been subject to various accusations and concerns about the applicability of principles which after all were developed for industry.

WEAKNESSES OF T.Q.M.

West-Burnham (1995) claims that T.Q.M. is a supplier-led approach:
"The integrity of the relationship between a supplier and external customer is often formalized in terms of contractual responsibility or in terms of accountability. Such structures are often not available (or appropriate) for the relationship between suppliers and the internal customer." (p. 21)

The notion of the product is also problematic. Sharan (1986) adds another criticism. Teachers normally do not take part in the financial decision-making and the economic setting of the school policy. Rather, their main role tends to be achieving goals that are connected to transferring knowledge to students; developing cognitive skills, values and behavior. These goals belong to the wider context of education and do not focus on outputs or financial profit.

Rhodes (1992) concludes that most of these goals are quantitatively impossible to measure and the idea of results-based analysis is inappropriate.

A different reservation is held by Tribus (1991). The core principle of T.Q.M. is incremental improvement through reducing variations with the intention of getting uniformity. But, students and teachers are individuals who differ from one another in many ways. They should not be forced to follow the corporate line exactly. A T.Q.M. school is expected to be a place where:

"administrators empower teachers to modify the system to achieve a high quality state so that despite the wide variety of student characteristics, all students attain high quality education." (Downey et al, 1994 p. 125)

Similarly, Capper and Jamison (1993) regard schools as 'machine bureaucracies', orderly and rational systems in need of management and instructions, because such an educational system responds to the needs of system control and not to the need of student empowerment. Furthermore, they note that:

"while T.Q.M. decision-making processes imply power sharing, those processes do not challenge the established hierarchy of control... T.Q.M. implementers do
not consider other organizational structures, such as cooperatives, which do not rely on the deliberate separation of ‘management’, ‘worker’ and ‘customer.’” (p. 26)

They further claim that there are different levels of customers, some are stronger than others, and that such criticism could be applied to parents specifically:

“T.Q.M. advocates blithely assume, without question, that all ‘customers’ have equal access to resources and services, and ignore power differences that would enable and constrain customer decisions.” (p. 28)

But, the most grounded critique is presented by West Burnham (1994, 1997) who concludes a number of possible objections to T.Q.M. in the education service:

"A. Professional autonomy... Teaching is often perceived of as an essentially solitary activity which therefore creates a high degree of individual control. Such an approach is clearly alien to the co-operative ethos of T.Q.M. However, serious questions have to be raised as to the validity of this approach. The twinned requirements of the self-governing school and the national curriculum argue heavily against the validity of the individualistic approach. Schools are increasingly having to respond as organizations and the management of the national curriculum requires high levels of integration and collaboration whilst preserving team and personal discretion.

B. Managerialism - 'management is about conformity, education is about preparing the individual to live in a democratic society'. This view argues that education and management are inimical... T.Q.M. is a process which derives its content and values from the needs of its clients. Indeed it could well be argued that the respect for the individual central to T.Q.M. is preferable to the reactive, ad hoc, routinised administration that passes for management in some educational institutions."
C. Problematic outcomes - if education is viewed as a liberal, humanising, long-term and heuristic process then an objective-driven approach such as T.Q.M. seems alien.

D. The customer - there has always been a problem in defining whom education is for, the child? the parent? the taxpayer? the state? The T.Q.M. response is to accept all claims to client status. It is the process that defines the customer and accountability and not a debate between alternative value systems... One of the problems in applying T.Q.M. to education is how potential tensions between these customers might be reconciled." (p. 56-57)

The above points highlight the inadequacy of the T.Q.M. in the educational setting. First, in school every teacher can teach independently, is not dependent on his/her colleagues and sometimes does not even meet other teachers or exchange professional views with them. Thus, there is no control, no co-ordination among teachers but there is rather a professional isolation in the classrooms. Second, the educational system organizes and designs itself so that it can guide the actions and opinions of students. The aim is to develop a new kind of students who posses active, flexible, creative, tolerant and liberal personalities. This view is inimical to the conformity offered by the T.Q.M. In addition, school puts the emphasis on the student's various accomplishments. The idea is to let students devote their time and thoughts to getting knowledge, moral, ethical and social values, thus developing their personality. This is contrary to the clear industrial product which can be quantitatively measured. Finally, it is difficult to function in a system where there is multiplicity of customers. There might be a serious gap between the different perceptions of teachers, workers, students, parents and management of school which may lead to tensions.

Oakland (1995) suggests that such problems are likely to happen whenever there is:

"No formal strategy.
Failure to provide incentives by recognition.
Lack of effective communication
Narrowly based training." (p. 437)
These problems will then give signs of:

"Skepticism due to a lack of integration and organizational focus on quality." (p. 436)

In effect, problems may arise in implementing any change:

"embedded in this aphorism is the notion that change for the better is complex and problematic, seldom occurring without struggles or tensions." (Duncan, 1999 p. 35)

Thus, Welton (1995) suggests a set of alternative proposals: identifying the views; values and needs of users of the service; designing a strategy which is able to provide for the needs of the users; make sure that everybody will receive appropriate training; continuing evaluation of all who are involved in providing a high quality education service; assessing progress and giving feedback to providers in order to judge performance. These elements are identical to the T.Q.M. principles. Nonetheless, he raises the concerns expressed already about the appropriateness of T.Q.M. to the educational world. T.Q.M. is highly mechanical, it ignores professional expertise, it relies on a great deal of training and a large bureaucracy and it can be management imposed. Hence, T.Q.M. in education should cease.

The above potential problems can be prevented if there is long-term management commitment with clear objectives and the right tools to achieve the targets, or else T.Q.M. will lose credibility for the teachers (Tzuk, 1995).

THE KEY ISSUES OF T.Q.M. IN SCHOOLS

- The customer. Is the focus on the student-centered approach?
- The quality of the relationships among staff; personal and work relationships.
- The quality of leadership. Is there empowerment, vision and cooperation?
The quality of the schools' culture. Is there power delegation, collective style and supportive climate?

T.Q.M. problem prevention approach, namely using statistical techniques, ISO 9000. Is the 'zero-defect' approach realistic in schools?

T.Q.M. technique - teamwork. Is work based on shared decision making, problem solving and communication?

The quality of the educational products based on school's aims and values.

In fact, these issues formed the basis for the development of the current research questionnaire.

SUMMARY

The concept 'quality' which originally came from the industrial world and dealt with questions about the quality of products, has become wider throughout the years. In the past quality meant mainly fitness for requirements but the quality movement changed the meaning of the concept and focused on the process behind the product (Crosby, 1988; Deming, 1986; Juran, 1964). This new philosophy brought up for discussion the need for quality in other fields such as: life quality and quality in education. The fact that schools are organizations that act within the constantly changing surrounding and strive for quality, made the quality management approach a major issue in schools. Some authors, (Bonstingle, 1992; Dobbins, 1990; Giltow, 1987) claim that quality will be achieved only when the emphasis is put on principles such as: a continuous process; leadership; empowering the workers; ownership and on a wide range of measuring techniques. Still, this approach has its pros. and cons.

On the one hand, Kaufmann and Zann (1993) claim that the T.Q.M. approach can assist and improve the educational system. T.Q.M. may be the answer to minimize the organizational gaps, strengthen the shaky joints, have a deeper, wider hierarchy, form interaction between teachers and between teachers/management members, define the school policy and have a control process.
On the other hand, organizations experience difficulty in measuring the quality of processes. Contrary to industry where quality measurement and product classification are possible, in education there is a long-term process with no clear-cut ‘products’ (Bush, 1986). Because the educational ‘product’ is concerned with transferring knowledge, developing cognitive skills and forming values and behavior, it is impossible to apply the concept of industrial profit to education. As a result, there is a difficulty of applying organizational approaches that are not directly derived from the educational discipline (Elkayam and Brier, 1993).

In addition, the T.Q.M. approach puts the customer at the centre and in education there is a problem to define whom education is for. There are different levels of customers (Capper and Jamison, 1993) in the educational system. Students, parents, the Municipality and the Ministry of Education are regarded as external customers, and teachers are regarded as internal customers who are responsible for quality of the processes and for the student’s ‘delight’.

The next section focuses on the differences and similarities between the two traditions, namely School Improvement and Effectiveness and the T.Q.M.

Making links

Aiming to gain a deep understanding of the direct and indirect influences of the T.Q.M. approach on school performance, it is vital to focus on the most important qualities and aspects of the T.Q.M. approach in education. However, T.Q.M. prime concepts such as effective leadership, effective teams, culture, people and customers, are found to be parallel to and overlapping with concepts found in the literature relating to school improvement and school effectiveness.

The literature review reveals that without effective teams that provide healthy relationship, open and robust communication within and between the various teams in the organization (Reynolds, 1994), without transformational leadership where organization vision and goals are widely shared and understood (Leithwood, 1992), without focusing on activities that are designed to meet customer’s needs (Bostingle,
without focusing on school culture (Bolender, 1997) and without working towards prevention rather than detection of failure during work process (West-Burnham, 1995), every organization, including the school would probably flounder for lack of a leader who can initiate and enable these changes. The following table shows the similarities of the factors that are part of T.Q.M. theory and that are linked with school improvement and effectiveness.

Table 02 - The similarities of the factors

<table>
<thead>
<tr>
<th>T.Q.M. Factors</th>
<th>School Improvement factors</th>
<th>School Effectiveness factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Long-term goals and plans based on a vision for the future and new innovations.</td>
<td>1. Vision building. Effective change takes time, people have to understand the change.</td>
<td>1. Shared vision and goals.</td>
</tr>
<tr>
<td>3. The task of management is to lead the improvement process and ensure that there is an ongoing process of improvement in operation.</td>
<td>3. Collaboration and collegiality. Top-down and bottom-up together work effectively.</td>
<td>3. Leadership with a collegial approach.</td>
</tr>
<tr>
<td>4. Training is a vital tool to achieve quality improvement.</td>
<td>4. The study, discussions and development of teaching skills and strategies will facilitate school</td>
<td>4. Staff development is vital in order to constantly learn and improve learning and teaching.</td>
</tr>
</tbody>
</table>
5. The appropriate environment is stressed.

6. Quality culture of 'drive-out fear' puts everyone in the company to work together.

7. Process emphasis. Quality is not to be measured only by the output of the process.

8. Customer-centered approach.

improvement.

5. The school addresses the appropriate internal and external conditions which enhance change.

6. The real agenda is identifying the positive factors in order to cooperate with the change in culture.

7. The main focus is on change and on school processes.

8. Students are regarded as central in the picture of changing the standards in school.

5. A learning environment through clear discipline and an academic focus. Responsibilities are given to the students.

6. Quality culture where everyone is accountable and involved in the improvement process.

7. Focus on school outcomes and data driven.

8. High-expectations and involvement of students.


Yet, there are some T.Q.M. principles such as 'right the first time', a clear-cut product and the exclusive customer, that do not equate with school improvement and effectiveness since they were originally designed to the industrial setting. Capper and Jamison (1993) assert that T.Q.M. theories pay little attention to differences between customers and their ability to affect the nature of services:

"T.Q.M.'s naive belief that the customer's voice will be heard ignores the forces that elevate some customers voices and silence others." (p. 28)

Consequently, an important question emerges, 'who is the customer in the school?'. The T.Q.M. approach fails to provide a solution regarding the identity of the customer whose needs must be met by the school activities. Is it the student, his/her parents,
society in general or the supervisory body. The school effort can also be wasted and pulled into different directions, presumably if trying to please all the customers.

Professional educators also experience difficulties in being committed to industrial ideas which fail to define the pedagogical product. It could be argued that the educational system contrary to the business world is a much more complex and problematic process. This is why many schools opt to define the product in very broad terms.

Further, the T.Q.M. approach has not provided an appropriate response to the difficulty which arises in students and parents involvement in the educational process and the nature of it. As customers of the educational system they are indeed involved in the academic and disciplinary aspects of the educational process or even in formulating the school discipline regulations. Yet, there is always some difficulty in having the parents participating in the discussions revolving around school pedagogical improvement issues. This is due to the student's right to privacy and confidentiality of data and also due to the professional expertise of teachers.

Furthermore, the 'drive out fear' principle is special about T.Q.M. and it might have made a difference in the schools where the security seems to be the basis on which staff motivation depended in order to create an environment which encourages teachers and workers. Thus, secondary concepts such as, teamwork, openness and allowing criticism, are also considered in relation to leadership.

In spite of these difficulties, the attempt of the current research is to understand the management process of three secondary schools in Tel Aviv area in practice. The case study approach is chosen for the present research as it allows an insight of the management issues through the use of multiple research tools. Despite the complexity of the task, it is decided to conduct semi-structured interviews as well as observe team work, post questionnaires and use documents. The main nature of the research methodology has to be qualitative rather than quantitative since there is no other way in which the researcher could capture the reality of these three schools. The emphasis is, therefore, on school improvement but also relates to school effectiveness. The data
are presented, using a quantitative approach within the case studies, namely, the researcher uses statistical analysis of the questionnaire data. The researcher adapted Bolam’s questionnaire (1993) about effective management and West-Burnham’s questionnaire (1997) about the T.Q.M. approach, so it might be possible to show similarities between T.Q.M. as a style of management and effective management. The aim is to gain a deep understanding of T.Q.M.'s direct and indirect influence through the descriptive data from the in-depth interviews and the data gathered by the other research tools. The use of several tools would also allow triangulation and provide the rounded picture of each case study.

The next section presents the research methodology, which includes the various research approaches, the different research tools and the pilot study.
Chapter 4 - RESEARCH

METHODOLOGY

INTRODUCTION

The present research examines the way the heads and their staff perceive the school policy, the management method and the central factors that constitute the major components of the educational experience. The main aims of this study were to link T.Q.M. to schools' current practice, paying particular attention to implementing change and innovation and to analyze how instilling T.Q.M. in education can be successfully managed.

Having presented the focus of this study, the preliminary research question that was raised in chapter one is 'Is T.Q.M. perceived to have been successfully implemented in the schools?'. Considering this question it appears that there is an underlying hypothesis that is related: 'There will be linkages between the existing management style in the schools under study, and the improvement of their educational achievements.' It is though important to highlight the point that hypotheses are usually linked with quantitative and not qualitative work, where the researcher wishes to 'prove' or 'disprove' something. In the current research, the researcher does not aim to 'prove' or 'disprove' anything but rather to explain how T.Q.M., as a means to school improvement, works in practice. Hence, a key question and several sub-questions were raised.

The Research Questions:

Key Question

Do headteachers, teaching and non-teaching staff in the three case study schools in the Tel Aviv area perceive that the introduction of a T.Q.M. initiative has contributed to school improvement?
The sub-questions are:

1. Is progress related to a student-centered approach?
2. To what extent does the school work towards prevention of failure during work processes?
3. To what extent are the school structure and processes team-based?
4. What is the quality of personal relationships among the members of the school?
5. Is there a perceived link between the style of leadership and improvement of the school?
6. What is the perceived link between culture of 'drive-out fear' and improvement?
7. What is the perceived link between the values of the staff and improvement?

A further aspect of research was not originally planned but was added subsequently as a result of the pilot study. The question is therefore raised of the importance of having so many Russian youngsters in school in relation to improvement in the school.

The present research attempts to support the definition that educational research is a type of social research that:

“refers both to the collection and analysis of information on the social world, in order to understand and explain that world better.” (Hitchcock et al, 1995 p. 5)

While generally the term ‘research’ refers to:

“systematic inquiry that is characterized by sets of principles, guidelines for procedures and which is subject to evaluation in terms of criteria such as validity, reliability and representativeness.” (Hitchcock et al, 1995 p. 57)

In the world of education, research refers to the process of obtaining and analyzing information and data:
"in which the central organizing feature is a dominant commitment to the field of education." (McGaw, 1996 p. 62)

The current research focuses on understanding the performance of three secondary schools in the Tel Aviv area in Israel that underwent a T.Q.M. process within the last nine years. The student population in these schools is unusual as they share the characteristic of having a high percentage of Russian newcomer students who tend to be very motivated and talented. The review of literature revealed that studies of T.Q.M. in education (Sitka Alaska 1991; Tzuk, 1995) have focused on describing T.Q.M. implementation rather than on the impact of the management of T.Q.M. In addition, in Israel there has been no research with disadvantaged Russian students as one variable of the study. The present project has placed issues such as: leadership, culture, team work, problem-prevention and student centered approach as central to the research. The main purpose is to identify whether the management of T.Q.M. has improved these schools and if so in what ways. For example, the T.Q.M. approach regards prevention of faults as the best way to manage an organization. Do these schools use ‘zero-defects’ approach despite the fact that:

“zero-defects as a performance standard is hopelessly unrealistic in relevance to schools” (West-Burnham, 1993 p. 17)

The extent of improvement of the schools is analyzed through the views of teaching and non-teaching staff and through the management team’s perceptions of their schools’ performance although the researcher recognizes that this group of people might be aware of the theoretical framework of T.Q.M. Thus, there is a danger that some of what this research received is actually based on their knowledge of T.Q.M. process in the school. Schools' documents are also analyzed to study the schools' management ‘reality’.

THE RESEARCH DESIGN

The present research presents three case studies. It is mainly qualitative in nature but incorporates a quantitative dimension to the research and, thus, includes four phases:
• In-depth interviews with the secondary headteachers and deputy headteachers in the three schools.
• A questionnaire posted to all teaching and non-teaching staff in the three schools.
• Observation of staff meetings.
• Analysis of school's documents.

The qualitative study seeks to establish through in-depth semi-structured interviews and observation, the T.Q.M. contribution on schools' performance. The quantitative element in the study, a large-scale survey, also seeks to establish different views about school performance. The questionnaire was posted at the beginning of the academic year 2000-2001.

The pilot research took the form of two in-depth interviews with the pedagogical deputy heads in schools one and two. The quantitative dimension of the pilot was added through twenty-five postal questionnaires which included closed questions but also space for comments. Hence, important data could be used to complement the interviews. The questionnaire was adapted from Bolam et al's (1993) questionnaire and from West-Burnham's (1997) questionnaire. The rationale for the inclusion of questions about effectiveness and improvement (Bolam et al) and questions about T.Q.M. (West-Burnham) was that there were identical concepts in these three areas. T.Q.M issues such as leadership-vision and values, people-their relationship and communication, customers, problem-prevention, team effectiveness and school culture mainly coincide with major concepts of school effectiveness and improvement.

After identifying the study and the research questions, it is still necessary to consider the most appropriate methods and the constraints of the present research. This reflects Johnson's (1994) view that social research of any kind is a skill and needs careful planning. She suggests that every researcher must match the research design to the resources available.
In taking at the present research, all three schools with a high proportion of Russians, the researcher is taking those schools that are similar so that some of the variables are eliminated between the case study schools.

**PRACTICAL ISSUES TO BE CONSIDERED**

- All three schools introduced a T.Q.M. approach and apply the ISO 9000 assessment.
- Limited Time - the researcher is working and all school's management members are in full time paid employment, which means that the researcher has to search for common free time to conduct the interviews. It was agreed to have these interviews during evenings or after work.
- Geographical Criteria - the researcher has chosen schools geographically close to her workplace to help with the difficulties of time constraints although other schools in Israel have undergone T.Q.M. process. The main purpose to have the research only in one district was to eliminate some of the potential differences that might exist if schools from differing regions were chosen.
- Financial Consideration - personal expenses are kept to a minimum since no funding is available for the research.
- Access – the access to the respondents in the three secondary schools is permitted by the heads and practicable. Yet, it is necessary to consider the fact that the researcher's role in school '1' is as an insider researcher which might have an unintentional bias either pro or against the school. This fact also inevitably gives the researcher a different view as to the other two schools where the role is as an outsider one. In practice, every effort was made to minimize the potential bias. The researcher took a year vacation while conducting the research and it was made very clear in the follow up letter that the researcher comes to the research from a place of a researcher and not a friend.
The style of research – the qualitative style is the dominant one in the research through six interviews with heads and deputy heads. The survey style is additionally used through 207 questionnaires.

The student population in the three schools is special – there is a high percentage of Russian newcomer students who tend to be motivated and talented. Nevertheless, it was decided not to have students as a focus for the current research but rather to investigate the staff views on what students might think. There are particular problems in Israel when research is conducted with minors, namely students under the age of eighteen. The researcher must have a written consent from the Ministry of Education and from each student's parents. Such a process is lengthy and practically difficult to apply.

Underlying research approaches

The current research makes use of two differing approaches that can be adopted in the social research community. The normative, objectivist approach stressing empirical evidence which is largely linked to positivist quantitative research and the interpretive, subjectivist tradition also known as relativist which is linked to qualitative research (Cohen and Manion, 2000 p. 9-33). The researcher of this study includes both approaches since:

"the complexity of education demands the use of very many different research techniques and models." (Hitchcock, 1995 p. 25)

In the current research the interpretive approach is used through the interviews and to some extent, the observation:

"to appreciate the different constructions and meanings that people place upon their experience." (Easterby-Smith et al, 1994 p.8)

The aim is to conduct research without interfering with the processes of social interaction. There is a need to have a well based argument by empowering the
respondents and eliciting the 'meaning' of events and phenomena from the point of view of participants (Usher, 1996 p.18).

Thus:

"the central endeavour is to understand the subjective world of human experience. To retain the integrity of the phenomena being investigated, efforts are made to get inside the person and understand from within." (Cohen et al, 2000 p. 22)

Cohen et al (1994) explain that interpretive research aims to allow the researcher to gain insight into a particular perspective or social setting and through a variety of qualitative methods it is considered possible to build up a picture of social 'reality'.

Hence, Burgess (1989) suggests four common characteristics for qualitative methods:

1. the researcher works in a natural setting and is thus the main research instrument;
2. qualitative methods are characterized by flexibility thus concepts can be modified as data are collected and analyzed;
3. many qualitative studies are conducted within a theoretical framework, focusing on social processes with a view to understand how participants perceive situations;
4. in qualitative research theories emerge from data - data are not used to refute or support hypotheses.

The main shortcoming is that qualitative research is difficult to replicate and, thus, is more open to bias.

In contrast, the main idea of positivism is that the world exists externally and aspects of it can be measured through objective methods:

"Knowledge is only of significance if it is based on observations of this external reality." (Easterby-Smith et al, 1994 p.77)
Thus, the observer is independent of what is observed and the research is intended to be value-free.

This approach is mainly used with numerical data which often can be comparatively straightforward to analyze (Wilson et al, 1994). Cohen et al (2000) add that the normative approach relies on general theories of human-behaviour which are rooted in the past, and external environmental stimuli have an effect (p. 22). However, the disadvantages are that data might be relatively superficial and not explore underlying reasons, beliefs or feelings as the present research aspires to do. The tools that are usually used in quantitative research are: surveys, structured interviews and questionnaires which are used as one of this research tools.

Nonetheless, as this research places many individuals at its centre seeking for their meaning of the culture and effects of the T.Q.M. context, the most appropriate approach appears to be qualitative based on in-depth case studies. Moreover, although the two approaches, positivist and interpretive, seem to belong to different philosophical bases, in practice the researcher adopted a model which combines the two approaches. Johnson (1994) supports such a balance between these approaches:

"while these two approaches do have a different philosophical basis, a growing body of social research takes a stand somewhere between the schools of thought." (p. 7)

Indeed, in practice, research may encompass elements of the two apparently opposed paradigms, quantitative and positivist and qualitative and interpretive. Quantitative research is concerned with measurement, precision and accuracy. Its data is straightforward to analyze and easy to code. In fact, in qualitative data appropriate instrumentation and appropriate statistical treatment of data may enhance the research validity and reliability. On the other hand, qualitative research is concerned with understanding and interpretation of events and situations. The aim is to catch the complexity of issues through appropriate instrumentation such as interviews and observation. Through accuracy and comprehensiveness of coverage the researcher
may minimize the subjectivity of respondents' views. In addition, as the present research is engaged in a case study and particular complex and sensitive issues are examined, it is possible to enhance the research validity and reliability by combining the two above approaches.

Thus, to undertake the present case study work successfully, a range of research tools are used. Interview is used. The questionnaire is also used within the case study especially when 'surveying scattered, specialist populations' (Johnson, 1994 p. 42) to cover so many individuals. There are other two main reasons for broadly operating within these paradigms:

1. The qualitative approach is strong on undertaking the 'reality' but the information analysis may be selective and biased. Adding the quantitative approach is often comparatively straightforward to analyze. Thus, the research design includes four research tools:

   a. In-depth semi-structured interviews with secondary headteachers and their deputies from the three schools.
   b. A questionnaire for teachers and others in the schools which includes closed questions but also contains space for comments.
   c. Semi-structured observation attempting to remain relatively independent and uninvolved; the observation of staff meetings in order to compare what is done to what is said and also to pick up features of situations that would probably not be mentioned in interview.
   d. Documents available from the schools which include; minutes of past and present meetings of the management teams, ISO 9000 documents and any documents relating to training materials and staff courses.

2. All methods are required in order to triangulate data. Triangulation is essential in educational research (Denzin, 1997).

SUMMARY
Taking into account the resources available for this research—a single-handed researcher investigating the school’s staff perceptions of T.Q.M. possible effects, the case study approach seems particularly suitable. The focus is on the subjective experience of the individual that can be refined by the researcher to build up a picture of a social ‘reality’. ‘Case study provides a data base for analytic description of processes’ (Johnson, 1994 p. 106) and this is the objective of the present study; it seeks to present a synthesis of the views and values of the three school’s staff about T.Q.M. as a means towards school improvement.

Moreover, a case study approach allows to ‘put under an umbrella’ the different methods and to incorporate the subjectivist, relativist tradition which is linked to the qualitative research and the normative, objectivist approach that stresses the quantitative research. But, as the purpose of this research is to look more closely at the views of the population in the three schools, the focus is on the qualitative research particularly through in-depth interviews. This can allow areas of particular note or interest to be developed through the use of follow-up questions. The quantitative dimension is added through the postal detailed questionnaire although space was left for comments which can provide a considerable amount of qualitative data in addition to that provided through the interviews.

SELECTION OF THE CASE-STUDY SCHOOLS

This research has adopted a case study approach which subsumes the qualitative and the quantitative approaches and several tools. Three schools were chosen for the present research. School ‘I’ is located in the southern part of the city of Tel-Aviv. This secondary school consists of seven hundred and forty students, four hundred sixty seven are from the former USSR, sixty three percent, who come from different parts of the city but some also come from the suburbs nearby. It also has eighty nine teaching and non-teaching staff. The school is academic, not vocational, and offers students various compulsory and some optional subjects to study. It focuses on the national curriculum as well as on a high level of scientific subjects (Physics, Math, Chemistry etc). Thus, students are prepared for their final exams that they must take
in the twelve grades, but they are also encouraged to reach a high scientific level and
taught skills for the future.

School '2' is located north of the city, five kilometers from Tel-Aviv. This secondary
school also consists of a high percentage of Russian students, three hundred forty four
students, fifty six percent, who come mainly from the outskirts. Six hundred and
thirteen students study in this school which emphasizes arts, sports and culture as well
as the national curriculum subjects. There are seventy seven teaching and non-
teaching staff in the school. Some teach the main subjects, Hebrew, Math, English etc,
and others specialize in arts and sport's activities.

School '3' is located in Herzelia which is about twenty kilometers from Tel Aviv but
still belongs to Tel Aviv region according to the Israeli Ministry of Education. This
secondary school is the smallest among the three. It consists of two hundred and
seventeen students, one hundred thirty one from the former USSR, approximately
sixty percent of Russian students, who come from different parts of the city. The
school has forty one teaching and non-teaching staff. The school is academic, not
vocational, and similarly to school '1', it focuses on the national curriculum as well as
on a high level of scientific subjects.

The constraint of the limited time for the present research keeps the number of case
studies to three. The following parameters were also taken into consideration in
selecting the three secondary case studies:

1. The type of school. All schools are academic ones (not vocational schools).
2. All schools belong to the Ministry of Education (not private/religious schools)
   which means that they all use the national curriculum.
3. The geographical location. The three schools are in Tel-Aviv area. If spread through
   the country, they might be very different. In order to establish the likelihood of any
   common factors relating to the possible effects of T.Q.M., it is preferable to eliminate
   some of the potential differences.
4. The school's population. High percentage of Russian newcomer students in each
   school.
5. Each school has undergone T.Q.M. implementation and has ISO 9000 assessment. School '1' made use of ISO 9000 requirements for eight years, school '2' for seven years and school '3' used to have the old ISO 9000 assessment for seven years but now it uses ISO 9002.

6. The three schools have all improved radically.

Access to the three schools was negotiated on June 2000 at a meeting with the headteachers of the schools selected. The timetable of the research and the methods to be used were discussed. The researcher explained the need to build up a reliable picture of the social 'reality' in these secondary schools. In order to understand in depth the meaning that staff place upon its experience, the way they perceive improvement in their schools and whether improvement is linked to the management of T.Q.M., the researcher considered using four research tools. The combination of questionnaires with detailed semi-structured interviews, observation of teachers meetings, and documentary research can provide comprehensive data on the three schools.

Johnson (1994) identifies different approaches to research: surveys; documentary research; experimental research; non-reactive research; action research, case-study and a range of research tools. This approach provides a useful classification whereas Drever (1995) suggests other approaches according to style of research - ethnographic, survey or experimental. The approach taken here is the case study approach including a variety of research tools, and it fits with the Drever's classification. The survey style of the research usually requires a large sample and two hundred and seven respondents to who the questionnaire are posted, are held to be a large scale number.

Approaches to Research

CASE-STUDY

The case study approach is the main research approach adopted in the present research and its treatment is therefore detailed:
“It is ‘the study of an instance in action’ enabling readers to understand ideas more clearly than simply by presenting them with abstract theories or principles…. Case studies can penetrate situations in ways that are not always susceptible to numerical analysis.” (Cohen et al, 2000 p.181)

Sarantakos (1998) adds that the case study approach is characterized by openness, communication and interpretation of the data. Other researchers (Adelman et al, 1984; Sturman, 1999) focus on the various methods of case study and regard ‘case study’ as an umbrella term used to define a family of research methods focusing enquiry round one case (Adelman et al, 1984 p. 94).

Bassey (1999) sets out seven stages in case study research which could be used as a frame for this thesis, with the exception of generalization:

1. Identifying the research as an issue, problem or hypothesis.
2. Asking research questions and drawing up ethical guidelines.
3. Collecting and storing data.
4. Generating and testing analytical statements.
5. Interpreting or explaining the analytical statements.
6. Deciding on the outcome and writing the case study report.
7. Finishing and publishing (p. 65-73).

Bassey adds that particular case studies of general issues can lead to 'fuzzy generalizations', namely general statements:

"which built in uncertainty … an appropriate concept for case study research in areas like education where human complexity is paramount." (p. 51-52)

Johnson (1994) thus suggests:

“surveys and case study approaches can be used to complement each other.” (p. 24)
She highlights the strengths of this method as it observes effects in ‘real-life context’ and uses multiple sources. As such, it can incorporate triangulation and is able to cope with complexity and be compared to other examples. The idea is that ‘the whole is more than the sum of its parts’ (Cohen et al, 2000 p. 181).

Yin (1994) backs up Johnson’s (1994) idea and emphasizes the definition of a ‘case’ or ‘unit of analysis’ in case study research. For him, a single individual, an institution, a school or an event can be regarded as the ‘case’ and those within the unit of analysis must be distinguished from those outside it. He also highlights the point that the more cases being studied, the better potentiality for generalization (p. 137). Nonetheless, Nisbet et al (1980) consider case study as ‘not generalisable’ except where other researchers see the application whereas Cohen et al (1994) suggest that generalizations can apply. In the current research, although case studies allow generalizations, the purpose was to provide insights into only three secondary schools. Hence, the researcher would be able to undertake very limited generalization, if any, about academic schools in Tel Aviv with large proportions of Russian immigrants.

Drever (1995) supports such a purpose. He explains that in a case study the researcher does not aim to cover a whole population and extract common factors, but to provide an in-depth picture of a particular area of the educational world. The focus is often on a number of people who work together but have different roles and the aim is to understand them as a group with their different but independent functioning and ways of thinking (p. 7).

Hence:

“It is becoming clear that the case studies frequently follow the interpretive tradition of research - seeing the situation through the eyes of participants - rather than the quantitative paradigm.” (Cohen et al, 2000 p. 183)

In fact, data can be collected using normative or interpretive methods once the ‘individual unit’ is defined as:

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"the purpose of such an observation is to probe deeply and analyze intensively the multifarious phenomena that constitute the life cycle of the unit." (Cohen et al, 1994 p. 107)

Bell (1993) emphasizes the other strengths of the case study method as it copes with complex phenomena, is intelligible, provides non technical findings and can provide interpretations for other similar cases. This method:

"allows the researcher to concentrate on a specific instance or situation and to identify, or attempt to identify, the various interactive processes at work. These processes may remain hidden in a large-scale survey but may be crucial to the success of failure of systems or organizations." (p. 8)

Case studies, however, can lack scientific rigour although they provide unique material and the researcher must be familiar with a range of research skills and tools. The intention is to make a study in the 'round' but the researcher may be 'led by the data' and thus, it can result in an untidy bundle of findings, rather than a rounded picture (Johnson, 1994 p. 23-24). Nevertheless, the advantages of such an approach can outweigh the disadvantages. Case study approach can provide interpretation of other similar cases. Although full generalisability can not be claimed for case studies, they have the property of 'relatability' (Bassey, 1981). Further, different sources of information allow the achievement of greater validity and reliability, utilizing the benefits of one tool to overcome the deficiencies of the other tool (Sarantakos, 1998). Case studies usually involve interviews, observations and analysis of documents. The present research investigates complex issues such as leadership, culture and interactive processes in schools through mainly conducting interviews. Other tools are also used, namely a survey, observations and documents, in order to understand the 'reality' of the schools under study. More detailed information of these tools are given in the 'research tools' section (p. 130).
The above mentioned justification for the choice of case study may partly explain why other approaches such as the experimental are not adopted in the present research. The explanation follows.

**EXPERIMENTAL APPROACH**

The experimental approach was not considered applicable by the researcher to the present research purposes since it uses the scientific approach of one control and one experimental group. The conditions of the experimental group are varied according to the hypothesis. Although it might have been possible to have compared a school that has adopted T.Q.M. with one that has not, the difficulty then, would be to rule out all the other variables that might affect the ways in which these schools operate.

Johnson (1994) agrees that this approach is not well adapted in educational management practice:

> “in research involving human subjects it is however rarely possible for the investigators to undertake true experiments. Uncontrolled variables intervene to cloud the experiment.” (p. 28)

This means that the results may be because of factors other than the ‘experiment’.

Cohen and Manion (1980 p. 188) claim that this kind of an empirical study is quasi-experimental rather than experimental and has causal relationships. The groups with which an education researcher works are likely to be ‘intact’ groups; groups constituted by means other than random selection. It identifies simple connections between variables which can readily be understood and may be replicated. Yet, it is problematic to plan experiments in advance.

**OTHER RESEARCH APPROACHES**

Another approach is the documentary research which can be regarded both as an approach and as a tool. The documents are used here as a useful supplement tool to other sources of data and ‘deal with data that already exist’ (Cohen et al 2000 p. 160).
The researcher requested access to documentary evidence on June 2000 from the three headteachers. It was agreed that written documentation would be returned to the school after use and would not be photocopied without prior agreement. The documents agreed on are, minutes of management team meetings; ISO 9000 documents and documents about teachers’ training materials.

Furthermore, although the survey method could have been used in the current research, the researcher chose not to. In fact, the survey approach, although used in the present study throughout the questionnaire, is more at a level of a tool within the case study. The researcher might have chosen a big survey of lots of schools rather than a case study of three but the choice of a large number of schools was impossible. These three schools were a purposive sample from the rest of the school population in Israel for several reasons: T.Q.M. has been introduced there, improvement has taken place in these schools, and in spite of the fact that the researcher knew at the time of the selection that there are newcomer students in the three schools, it was later revealed that these schools mainly have Russian student population. A letter was posted to other schools in Tel Aviv area to participate in the research provided that they could follow the three requirements. Though some schools were willing to participate in the present research, they were found inappropriate for the research purposes. There was also an attempt to identify approximately how many schools have undergone a T.Q.M. in Israel but it did not prove possible as the Ministry of Education seemed to be reluctant to convey this information.

Surveys can be used for other purposes too:

"Surveys gather data at a particular point in time with the intention of describing the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events." (Cohen et al, 2000 p. 167)

Thus, Cohen et al (1994) claim that the survey is 'perhaps the most commonly used descriptive method in educational research' (p. 83) as they allow the possibility to
generate data without the direct involvement of the researcher. In addition, their anonymity allows respondents the opportunity to 'speak out' and the findings of large-scale surveys are believed to be both reliable and valid. Thus:

"If the aim is a large scale survey, then questionnaires are ideally suited to that purpose." (Drever, 1995 p. 5)

In the present research, this approach was used within a case study approach allowing breadth of coverage in the three schools. It was possible to approach a large number of respondents as well as to collect a lot of information in a short time and in a low-cost.

Johnson (1994) defines surveys as:

"eliciting equivalent information from an identified population." (p. 13)

The information gathered may be facts, attitudes or opinions. Bell (1987) strengthens her definition, but adds the representativeness feature:

"In most cases, a survey will aim to obtain information from a representative selection of the population and from that sample will be able to present the findings as being representative of the population as a whole...In surveys, all respondents will be asked the same questions in, as far as possible, the same circumstances." (p. 8)

Robson (1993) presents a more detailed explanation. Surveys:

"can provide information about the distribution of a wide range of 'people characteristics' and of relationships between such characteristics." (p. 127)

The survey in this research is used as an additional tool which was posted to a wide range of 207 teaching and non-teaching staff. The aim was to obtain information about the school processes without the direct involvement of the researcher.
However, surveys are unsuitable to examine with a probe some sensitive issues. Although they allow respondents to 'speak out', they do not have the flexibility to provide when needed supportive atmosphere, encouragement and a sense of rapport to the respondents. Another limitation is that bias may arise from a low response rate, especially when using a postal questionnaire (Johnson, 1994, p. 18).

**SAMPLING**

The researcher of the current research is taking a purposive sample of schools. It should be borne in mind that although the use of survey could probably cover all the secondary schools in Israel, the purpose of the present research is to stress the qualitative approach by presenting an in-depth look through case studies at a small number of particular schools. The case studies, three secondary schools of similar students' composition that underwent a T.Q.M. approach and followed the ISO 9000 assessment and the national curriculum were selected on identical basis.

The sample of teachers within the schools have been chosen by the heads only for the pilot phase on the basis of their typicality and the specific needs of the current research. This group might indicate most clearly the characteristics which contribute to increased school effectiveness and which led to school improvement. In the main research all teaching and non-teaching staff, except those involved in the pilot, take part.

Nachmias (1998) asserts that the sample is proportional to the size of the schools to represent the population more precisely. Yet, according to Anderson (1990) sampling raises the problems of reliability and external validity:

"one cannot generalize from the sample to anything other than the population from which the sample was drawn." (p. 196)

Cohen et al (1994) have a different view while explaining the process of sampling and suggesting that:

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"Researchers...collect information from a smaller group or subset of the population in such a way that the knowledge gained is representative of the total population under study. This smaller group or subset is a ‘sample’." (p. 87)

There are several sampling methods identified by some authors (Blalock, 1994; Cohen et al, 2000; Johnson, 1994). The two main kinds of sample used in social research are probability and non-probability:

"The essential feature of a probability sample is that each individual in the entire population, to which a generalization is being made, must have a known probability of appearing in the sample." (Blalock, 1994, p. 97)

The non-probability samples are those in which the probability of selection is not known. They may be used frequently in small-scale research (Johnson, 1994 p. 16). Quota sampling is the most common form of non-probability sampling. Yet, surveys lose some of their quality of providing generalisable information if probability sampling is not employed.

Johnson (1994) adds that if the interviewer operates intelligently and with an understanding, he/she can provide rich qualitative data even when using the quota sample which:

"like a stratified sample a quota sample strives to represent significant characteristics (strata) of the wider population." (Cohen et al 2000, p. 103)

Moreover, any bias that may arise in the selection of individuals within the quota groups is unlikely to be serious (Johnson, 1994 p. 16).

The following table summarizes the different sampling techniques.

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<th>PROBABILITY SAMPLING</th>
<th>NON-PROBABILITY SAMPLING</th>
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<tr>
<td>Simple Random Sample.</td>
<td>Convenience Sampling.</td>
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The most common type in which every person has an equal chances of being selected. This is also known as accidental sampling where the nearest people are chosen.

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<tr>
<th>Systematic Sampling.</th>
<th>Quota Sampling</th>
</tr>
</thead>
<tbody>
<tr>
<td>A modified version of simple random sampling which involves selecting subjects in a systematic way (e.g. every 10th person)</td>
<td>The equivalent of stratified sampling where a quota is set.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stratified Random Sampling.</th>
<th>Purposive Sampling.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The population is sub-divided into groups and a number of respondents is chosen from each group in proportion to the total</td>
<td>Cases are handpicked on the basis of their typicality.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cluster Sampling.</th>
<th>Dimensional Sampling</th>
</tr>
</thead>
<tbody>
<tr>
<td>This involves dividing the population into groups and then choosing some of each of the groups to collect data</td>
<td>A refinement of quota sampling which identifies various factors of interest in a population</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Multi-Stage Sampling</th>
<th>Snowball Sampling</th>
</tr>
</thead>
<tbody>
<tr>
<td>This is an extension of cluster sampling which involves selecting the sample in stages (taking samples from samples)</td>
<td>A small number are identified and are then used as informants to identify others who qualify for inclusion, and they identify yet others.</td>
</tr>
</tbody>
</table>


The resources relevant to the present research are the time available, financial resources as appropriate, and the software and hardware to be used in comparing and recording data.
SUMMARY

Having considered these approaches in relation to the research issues, the following comments should be considered:

- Although all research approaches lend themselves to gathering data, some approaches favour exploration in-depth to which a qualitative approach is more appropriate.
- Exploring the issue of the nature of the school culture and management style due to the implementation of T.Q.M. involves gathering views of teaching and non-teaching staff. The management members’ views are explored through face-to-face interaction.
- Triangulation is recommended so that reliability and validity are improved. Using both approaches, qualitative and quantitative, can help in achieving triangulation.

To sum-up, this research includes mainly qualitative research but also quantitative research within the case study approach. This approach is intended to be effective and complementary, as it allows a degree of triangulation using various research tools.

Research Tools

Johnson (1994) considers research tools as means by which different approaches are operationalized. She lists four major research tools: questionnaires, interviews, observation and the use of documents. All tools are used in the present research, thus, marrying the use of qualitative and quantitative research.

Bassey (1999) refers to three of these methods as follows: asking questions, observing events and reading documents (p. 81). In the current research, interviews were conducted with the heads and their deputies, asking them the same open questions. Similarly, all the survey participants had the same questions, mainly rating scale ones but also open ones. There were also observations of subject coordinators and their
teams, heads and staff general meetings and management meetings. Finally, present and past documents were used as a tool for triangulation of data.

THE QUESTIONNAIRE

One of the research tools used in the present study is the posted questionnaire. The questionnaire was chosen in order to allow 207 respondents complete the same questionnaire the way they choose and when convenient. This way, equivalent information can be collected that may confirm information gathered by the other research tools.

Cohen et al (1994) support the use of questionnaires in educational research (p. 83). The main reasons for using a questionnaire as a research tool and not a semi-structured interview are explained by Johnson (1994):

"It is in the hands of the respondent, and is completed by him or her… It empowers the respondent, who may read all the questions before completing any, may complete and return the questionnaire at a time convenient to themselves, or fail to complete the questionnaire at all." (p. 37)

Johnson (1994) suggests four main considerations before using a questionnaire:

1. Ensuring that the questionnaire is comprehensible and clear,
2. Getting it to the appropriate population,
3. Motivating the target population to complete and return the questionnaire and
4. Making effective administrative arrangements for its return. (p. 41)

Oppenheim (1996) concludes that there are a number of key areas such as; question type, question writing, design, piloting and distribution and return and how the responses are analyzed, where care is advised. Questionnaires can be used within an institution where access to the researcher is possible or in the case of research instruments, sent as a postal questionnaire which can be much more cost-effective than interviews:
"The specialist role of questionnaire recipients mean that they will recognize why they as individuals have been contacted." (Johnson, 1994 p. 43)

Yet, non response occurs especially with postal questionnaire and raises:

"a problem because of the likelihood - repeatedly confirmed in practice that people who do not return questionnaire differ from those who do." (Bell, 1993 p.86)

In order to follow up, an exact date for return of the questionnaire was given in the covering letter. In case of failure to return the questionnaire in time, a follow up letter was addressed which restates the importance of completing the questionnaire. It also stresses that if there is any reason why a respondent feels he/she cannot complete the questionnaire, he/she can sign and return it anyway or if he/she wishes to discuss it the researcher can be contacted at a given number.

Another question is raised about using the postal questionnaire technique, 'whether respondents who complete questionnaires do so accurately' (Cohen et al, 2000 p.264). As it can reduce the validity of the data, it is recommended, prior to coding, to check the questionnaire. Cohen et al (2000) suggest to check the question of accuracy by means of the intensive interview method that includes familiarization, temporal reconstruction, probing and challenging.

**The questionnaire design**

In the present research, it was decided to use mainly closed questions (rating scale) but also the open, verbal ones. The closed questions are quick to complete and straightforward to code and the open questions enable respondents to add any remarks, qualifications and explanations to the categories. This choice was made because the design of the questionnaire is critical to its effectiveness as the researcher does not attend at the time of the completion of it:
“Its design must minimize potential errors from respondents... and coders. Since people’s participation in surveys is voluntary, a questionnaire has to help in engaging their interest, encouraging their co-operation, and eliciting answers as close as possible to the truth.” (Cohen et al, 1994 p. 92-93)

Cohen et al (2000) add that there is a need to ensure that the questionnaire:

“is clear on what needs to be included or covered in the questionnaire in order to meet the purposes; is exhaustive in its coverage of the elements of inclusion; asks the most appropriate kinds of question; elicit the most appropriate kinds of data to answer the research purposes and sub questions and asks for empirical data.” (p. 247)

Questions should be clear and unambiguous. Certain types of questions should be avoided: leading questions, which suggest the preferred answer; double questions, which include two separate issues; presuming questions, which make assumptions about the attitudes of respondents and hypothetical questions (Bell, 1987 p. 62-63).

Munn (1999) concludes the various aspects relating to formulating a questionnaire:

“types of questions- open, closed, ranked responses, scaled responses, question order, question routes, and overall design and layout, stressing the need for an attractive, clutter-free design.” (p. 31-32)

Bell (1993) identifies several types of questions:

<table>
<thead>
<tr>
<th>Verbal/Open</th>
<th>Expected response a word, phrase or extended comment. Some content analysis may be needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>List Category</td>
<td>A list is offered, anyone may be selected. Respondent can only fit into one category</td>
</tr>
<tr>
<td>Ranking Scale</td>
<td>Could be used with careful handling for the respondent to place qualities or categories</td>
</tr>
</tbody>
</table>
in order, various scaling devices may be used (nominal, ordinal, ratio, interval)

<table>
<thead>
<tr>
<th>Quantity Grid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response is a number, a table or grid is provided to record answers to two or more questions at the same time.</td>
</tr>
</tbody>
</table>

In the present research, the verbal questions were used in the interviews and to some extent in the open space questions in the questionnaires. The aim was to allow respondents express their views more openly. The five option rating scale was used throughout the closed questions in the questionnaires too.

Johnson (1994) suggests questionnaires should be short with not many questions as response tends to fall off with lengthy questionnaire (p. 43). Munn (1999) adds that questionnaires should be piloted, ideally using a small sample with similar characteristics to the final sample. Piloting was essential at the present research as the researcher needs to gain feedback about the structure, format and layout of the questionnaire. The changes to the main study questionnaire were made on the basis of which questions are left unanswered or answered confusingly.

Munn and Drever (1999) summarize the strengths of using a questionnaire:

“Efficient use of time in reacting to large numbers and in analyzing responses if closed questions are used; Good at producing straight-forward descriptive information; Potential for anonymity [and] Potential for high return-rate.” (p. 11)

The limitations are:

“More difficult to get at explanations; even if questions are clear, responses can be superficial, time needs to be set aside for thinking about the purpose of the questionnaire, drafting questions, piloting.” (ibid, p. 11)

INTERVIEWS
Six face to face semi-structured interviews were conducted with heads and deputy heads of the three schools in the present research. The aim was to adopt a more flexible style which may enable the researcher to explore the respondents' in-depth thinking and gather information. This way, the researcher may also deal successfully with sensitive and complex educational issues. Thus, respondents can be encouraged to express themselves freely and, if needed, rapport can be used. Miller (1997) supports using interviewing as a vital tool in social science research:

“Interviews have a particular focus and purpose. They are initiated by the interviewer, with a view to gathering certain information from the person interviewed.” (Johnson, 1994 p. 43)

Barker (1998) claims that interview talk can be regarded as professional practice. As such, it is important to notice ‘the facial expressions, gestures and other non-verbal messages conveyed by the other’ (Powney and Watts, 1987 p. 31). Drever (1995) adds that interviews can provide depth of explanation within a particular context (p. 8).

Types of interviews

As previously mentioned, the semi-structured face to face interview was used in the present research. Yet, there are several categorizations of types of interviews. Indeed, most interviews are one-to-one and face to face, but there are other types of interviews such as telephone interviews or group interviews (Denscombe, 1995). Some interviews such as the structured ones are in the positivist tradition and the more unstructured ones are likely to be identified with the more interpretive, qualitative tradition.

Cohen et al (1994) identify four major types of interviews:

1. The structured interview, with a schedule, seen as a closed situation and is successfully used for gathering quantities of information. But, it seemed inappropriate in the present research since there is an attempt to catch and
understand the 'reality' of the three schools in-depth through six semi structured interviews.

2. The unstructured interview where “the research purposes govern the questions asked, (but) their content, sequence and wording are entirely in the hands of the interviewer” (p. 273). This type was not used in this research since it may 'lead' respondents. In contrast, conducting the semi-structured interview can motivate respondents to speak in order to grasp the in-depth picture of the management processes in the three schools but also enable the use of rapport when necessary.

3. The non-directive interview where freedom is given to the respondent to express feelings. This type seems not suitable in the present research where sensitive and complex issues of the educational process were investigated since it does not allow the issue of rapport and consequently can accumulate lots of 'dross'.

4. The focused interview which is similar to the non-directive, but which:

“focuses on a respondent's subjective responses to a known situation in which she/he has been involved and which has been analyzed by the interview prior to the interview”(p. 273).

Johnson (1994) also identifies the two main types of interviews. The unstructured interview that may be used in exploring an area in preliminary research, or at a later stage and the structured interview. The latter type is used in large-scale surveys with closed questions and in such an interview the social interaction is kept to a minimum. She adds two other types. The first is the specialized interview which is individually tailored for particular role-holders or individuals. Its questions may be largely prepared in advance, or the interview may be unstructured and its aim is to acquire complementary information. The second type is the semi-structured interview which is used in the present research, is a more flexible style and is adapted to the interviewee and deals successfully with the issue of rapport. The aim is to encourage the respondents without 'leading' them. This type is often used in a small-scale survey (p. 44-47).
Drever (1995) agrees and discusses the semi-structured interview main characteristics with contrast to two other types. First, the highly-structured interview is used in professional surveys, which are of little use in small-scale research except as an oral questionnaire in special cases. Second, there is the ethnographic interview in which the researcher tries to understand another person's culture through a fairly lengthy non-directive approach (p. 16-17).

Drever's (1995) conclusion that semi-structured interviewing is especially suitable for investigating professional concerns and issues in educational policy and practice is adopted in the present research. It:

"is a very flexible technique, suitable for gathering information and opinions and exploring people's thinking and motivations; it yields rich information and guarantees good coverage; it takes time to do and analyze and so requires realistic planning; it cannot cover large numbers (a questionnaire is used for that); it requires a degree of skill (which comes with practice); it is useful in mini-surveys and case studies and it can be used along with other methods." (p. 8)

Wragg (1994) mentions some practical issues to be considered. One is the location of the interview; confidentiality and comfort as important factors. The other is the timing of the interview; when people are not too tired and their memory is reasonably fresh. These factors were taken into consideration before conducting the interviews. All six interviews were conducted during evenings or after work at the convenience of the participants in order to allow a relaxed and free disturbances atmosphere. Another practical issue that was considered is the recording of interviews. Unstructured and semi-structured interviews rely almost entirely on open questions, which leaves the respondent free to reply in their own words. Based on Williams (1984), recording seems the appropriate tool to use if both, the researcher and the interviewee, agree to have such a recording. The interviews of this research are recorded using a tape recorder. In addition, notes are made for insurance. Yet, transcribing is time consuming. It is recommended that after the interview transcribed, notes and labels should be made regarding the dates, time and person interviewed (Johnson, 1994 p. 50).
OBSERVATION

It was decided to use the semi-structured observation at the present research as the purpose was to let the elements of the situation speak for themselves with no concern how a situation in one team compares with another situation in a different team. Thus prior to observation, the researcher had an agenda of management issues. The purpose was to gather data in order to illuminate the agenda issues in a far less pre-determined or systematic manner. In addition, the researcher attempted to remain relatively independent and uninvolved. While conducting this study the researcher attended some teams meetings, mainly in the morning periods, however as a non-involved bystander did not raise questions nor made any remarks. The meeting procedure: remarks, decision-making process, the perceived interrelationship and the overall atmosphere was duly noted during these meetings. These remarks were reworked according to the various research aspects later that day.

All observations included one management team meeting and two subject coordinators and their staff meetings (English and History teams in school ‘1’, Hebrew language team in school ‘2’, and English and Bible teams in school ‘3’). The choice of these teams was taken because of the teams’ schedules and their willingness to be observed. All these meetings lasted 45 minutes each. There were also the head and staff general meetings which lasted in each school for about two hours. The aim was to focus on management aspects. Thus, the researcher focused on catching the dynamic nature of management issues such as participation, decision-making, problem solving, support and helpfulness among the members of the teams. Notes were made about the content of talking and about the communication as reflected in ‘real time’. The above mentioned purpose and the way of action turned the observation into a research tool, or as Johnson (1994) put it:

Observation is an everyday activity, but it becomes a research tool to the extent that it:

1. Serves a formulated research purpose;
2. Is planned systematically;
3. Is recorded systematically and related to more general propositions rather than being presented as an interesting description, and
4. Is subjected to checks and controls on validity and reliability.” (Johnson, 1994 p. 52)

Traditionally observation has been characterized as non-interventionist, where researchers do not seek to manipulate the situation or subjects, they do not pose questions for the subjects (Adler and Adler, 1994 p.378).

Further, Simpson (1995) relates to the major advantages of observation as a research technique:

“Observation can give direct access to social interaction… it is also the case that many events occur in the life of a social group so regularly that they are never commented on, or questioned by the participants; It can be used to compare data collected in the same way and in different settings, can enrich and supplement data gathered by other techniques.” (p. 16-17)

Observing the teams in the schools under study mainly provided a profound picture about the personal and work relationships among the members and also about the decision-making process. This tool was also used for triangulating data from the other tools used in this research and so helped to enrich the researcher understanding of the actual educational process.

Patton (1990) adds that observational data should enable the researcher to enter and understand the situation that is being described (p. 202).

West-Burnham et al (1998) highlight the point that observation is used “to ensure a realistic and valid appreciation of actual practice” (p. 83). Indeed, in the current research observation is used to grasp the 'reality' of the three schools and to confirm what has been said through the other research tools. Yet, the relationship of observer to observed is a sensitive issue (Cassell, 1993). The disadvantage is the possibility of the presence of the observer affecting the behaviour that is occurring:
"In essence there will always be an element limitation of artificiality, of contrivance, if nothing else because of present of non-participant observer."
(West-Burnham et al, 1998 p. 83)

Simpson (1995) adds that observation has two other main weaknesses:

1. Its high demand on time, effort and resources, and
2. Its susceptibility to observer bias because the observer records what he/she thought occurred rather than what actually did take place, or because of the observer's lack of attention to significant events (p. 18).

Johnson (1994) concludes three ways where observation can be used:

"In social research, to record behaviour or as a primary method of data collection to provide an accurate description of a situation; to gather supplementary data which may qualify or help interpret other sources of data; or it may be used in an exploratory way, to gain insights which can be tested by other techniques." (p. 52)

There are two main types of observations, structured or unstructured although the terminology differs among different writers, e.g. observation can be formal or informal, participant and non-participant.

In the present research, it was decided to use the semi-structured observation as it allows the researcher to focus on selected issues such as culture and relationships, of T.Q.M., school improvement and effectiveness and on spontaneous occurrences which are of interest to the understanding of the possible effects of the T.Q.M. initiative.
Ethical and moral aspects

There are some questions of ethics to be borne in mind before, while and after conducting research (Deyle et al, 1992):

"Ethics is ubiquitous.... certain sorts of ethical issues are more likely to arise in educational than other settings...principles of honesty, justice, and respect for persons, for example, are not unique to qualitative research. However, there may be typical, repeated sets of qualitative research circumstances that give rise to research specific ethical dilemmas regarding such things as deception, the propriety of intervention, possible harm to participants, contract obligations, informed consent, and even social rights and wrongs." (Hodkinson et al, 1993 p. 117)

Lee (1993) suggests giving thought also to the issue of doing research on sensitive topics. Cohen et al (2000) suggest several ways. Before the researcher undertakes the study, it is important for him/her to reveal fully his/her identity and background and fully explain to the subjects the purpose and procedure of the research. Thus, a letter (appendix 3) was posted to all respondents. All participants informed consent should be sought, in Israel a researcher does not need a special consent letter from each participant provided that his/her age is at least 18 years old, and subjects should know and have the option to refuse to take part and the right to terminate their involvement at any time. All agreements reached at this stage as well as the dignity, privacy and interests of the participants should be honored. Arrangements should be made during initial contacts to provide feedback for those requesting it and the last suggestion is that the research should be as objective as possible. This will require careful thought being given to the design, conduct and reporting of research (p. 71).

These techniques are adopted by the researcher of the present study who wants to maintain respect for participants, to be sensitive to what could go wrong and to safeguard the rights of participants. The considerations that are taken into account follow:
Privacy - the participants are asked to give permission for the research in order to collect information from or about them.

Anonymity - to overcome the problem about having information about participants without their permission, they will not be required to give their names. This way, they can speak and act free of any threat of being identified.

Confidentiality - whatever information and data is provided by participants, it will be treated as confidential.

Avoiding lies and deceit - 'the deception lies in not telling the whole truth'. The subjects know the purpose and procedure of the research and can contact the researcher about any questions they may have. (Cohen et al, 2000 p. 60-63)

Another aspect which was previously mentioned is that although students are obviously affected by the implementation of T.Q.M. and there was a possibility of asking the students about their view of T.Q.M. in the school, questionnaires were not issued or distributed to them since they are considered minors. It was decided not to investigate students or their parents' perceptions but rather to look at the perceptions of a particular group of people, namely, headteachers, teaching and non-teaching staff and it was possible to investigate their views also on what students and parents might think.

Validity and Reliability

Validity is the touchstone of educational research. This concept relates to the fitness of purpose of the research instrument and to whether the data are replicable (Cohen et al, 2000 p. 106). Gronlund (1981) claims that validity should be seen as a matter of degree rather than as an absolute state as it is impossible for research to be 100 percent valid. Maxwell (1992) suggests that 'understanding' is a more suitable term than 'validity' in qualitative research. Cohen et al (2000) add that:

“it is the meaning that subjects give to data and inferences drawn from the data that are important.” (p. 106)
The concept of reliability is a necessary precondition of validity and it relates to the data (ibid p.105).

Both concepts are terms used:

"in qualitative data validity might be addressed through the honesty, depth, richness and score of the data achieved, the participants approached, the extent of triangulation and the disinterestedness of objectivity of the researcher." (ibid p.105)

Whereas

"in quantitative data validity might be improved through careful sampling, appropriate instrumentation and appropriate statistical treatments of the data.” (ibid p.105)

However, bias may especially occur in qualitative research through:

"the attitude and opinions of the interviewer; a tendency for the interviewer to see the respondent in her own image; a tendency for the interviewer to seek answers that support the preconceived notions; misperceptions on the part of the interviewer of what the respondent is saying; and misunderstandings on the part of the respondent of what is being asked. Studies have also shown that race, religion, social class and age can in certain contexts be potent sources of bias.”

(Cohen et al, 1994 p. 282)

Thus, the interview schedule was piloted and was found to be clear although there was a need for additional questions, mainly about the Russian newcomer students. In addition, the current research questionnaire which was derived from the key issues of T.Q.M. in schools (see p.106, 107), was changed in response to the pilot study in order to enhance validity. Changes were made on the basis of the respondents’ remarks and according to the item non-response where questions were left either unanswered or answered confusingly. Some open questions were added as well, thus,
enabling respondents a more free way to express themselves. In addition the researcher gained a high response rate to both, the pilot study and the main research questionnaire, which enhanced the validity of the current research.

Indeed, Silverman (1993) argues that because interviews are interpersonal, it is important to minimize the amount of bias as much as possible. He suggests that the reliability of interviews can be enhanced by careful piloting of interview schedules and training of interviews. Yet, the single handed investigator is unlikely to have any researcher training. Therefore, Johnson (1994) suggests to get some experience of techniques of probing and to pay attention to ways in which the researcher tries to stop the interviewee from telling an unnecessary tale, for example, by using 'rapport' (p. 46-47).

In the present research, additional few steps were taken in order to minimize the invalidity or bias of both the researcher and the respondent.

In the design stage, great efforts were made to ensure that the questionnaire was well designed. The questionnaire was pretested in the pilot phase on respondents who had the same characteristics as the population to be approached in order to face any language, format or layout problems. Further, validity may be enhanced by the use of previously developed questionnaire. In this case, the researcher adapted Bolam's questionnaire (1993) about effective management where the questions were found to be identical to some T.Q.M. concepts, and West- Burnham's questionnaire (1997) about T.Q.M.

The interview was a less rigorously standardized approach than the questionnaire, though it followed the same pattern as the questionnaire, allowing comparison with the gathered data. The same format and sequence of questions was chosen for heads and deputy heads although the researcher probed and developed questioning whenever she felt it is necessary. The interview schedule was piloted on two deputy heads and was found to be clear and understood. The focus was on a more flexible style, adapting to the personality of the deputy head. This careful piloting of the
interview schedule have probably enhanced greater reliability and also enabled some training for the researcher.

Selecting the appropriate methodology, a mainly qualitative one, for answering the research questions can also ensure validity. Hence, the case study approach was chosen so that other validity problems that might arise in the case study were tackled by using different research techniques to cross check the data; in-depth interview, questionnaire, observation and documents. This triangulation of the interview data with data obtained through other research tools may help to show the data to be valid. Moreover, the fact that there was a high response rate from the posted questionnaires in the pilot phase from the three schools may indicate a potentially minimal amount of bias in the research.

In the data gathering stage, some steps were taken to avoid non-response. The enclosed letter explained to respondents why they were individually approached for the T.Q.M. information, what would be made of the gathered data and that anonymity and confidentiality were guaranteed. The researcher offered some incentives to complete and return the questionnaire. Each respondent received a stamped, addressed envelope with a pen for completing the questionnaire in order to increase the return of the completed questionnaire and if respondents wish, they would have the data results.

Regarding the interviews, the researcher had the interviewees consent to write notes and record the interviews or stop the recording if they wish. In order to build on their motivation, interviewees were encouraged to speak as freely and for as long as they wished and they chose the time and place for conducting the interview. In addition, attempting to avoid distortion and give a true, clear account of the information, at the end of each interview a written account of the acquired information was submitted for confirmation of the data.

A similar approach was applied with the semi-structured observation. There was an agreement of the subject coordinators to be observed and the team had already been informed about the project purposes through the posted questionnaires. The researcher felt that she was accepted by the team members during their meetings and attempted
to be as unobtrusive as possible. Notes were taken on the spot in a special notebook and at the same day, the full version of the observation was transcribed and typed in Hebrew into the computer.

At the stage of data analysis and data reporting, the SPSS computer program was used to analyze the questionnaires’ data and improve the data validity through the appropriate statistical treatments of the data. Further, the researcher tried to avoid selective use of data in the interviews and equally treated the positive and the negative aspects that were raised by respondents. The aim was to avoid subjective interpretation of data by attempting to present the data without misrepresent the respondents’ message.

In sum, it would be naive to claim that threats to validity or reliability were erased completely though great efforts were made to minimize these threats and the amount of bias as much as possible.

CONCLUSION

The appropriate approach used in the present research, a combination of the qualitative and the quantitative, provided a wealth of data. The population of the three schools, all teaching and non-teaching staff were surveyed by postal questionnaires whereas the senior management members were interviewed. Part of the population were observed in meetings and relevant documents were collected. Thus, triangulation of findings was possible in order to enhance reliability and validity.

Having decided about the means to conduct the research, the pilot study tested out questionnaires and interviews within the case study which appeared to be effective and complementary. Although only two interviews were conducted with the pedagogical deputy heads, they probably provided insight into interview’s schedule.

In order to have high rate of return of the postal questionnaire a cover letter was included. Space for the participant’s comments was given at the end of every section to encourage more detailed replies that could also provide richness. Using these two
research instruments in the pilot study would likely lower the threats to validity and reliability and allow better triangulation of the data collected.

The report of the findings of the interviews, survey observations and the documents of the main study are presented in the next chapter.
The Pilot Study

INTRODUCTION

The piloting of the present research is only of the interview and the questionnaire within the case study. It was decided not to pilot observation as the researcher experienced difficulty in observing teams at the period of the pilot phase due to the frequent Jewish holidays at the beginning of the school year. Further, the main purpose of this pilot study is to make any revisions necessary both in the questionnaire, the interview design and questions through piloting:

"has several functions, principally to increase the reliability, validity and practicability of the questionnaire." (Cohen et al, 2000 p. 261)

In effect:

"Any piloting, whether of questionnaires or interview schedules, gives a last opportunity to spot whether some vital question has simply not been included." (Johnson, 1994 p. 40)

THE PILOT STUDY POPULATION

The decision was made to undertake a quota sample within the school and concentrate in the pilot study on twenty seven participants who 'have the same characteristics as the population to be approached' (Johnson, 1994 p. 39). They were selected for conducting the survey with the cooperation of the headteachers, after identifying them as:

1. taking part of the T.Q.M. process.
2. belonging to teaching and non-teaching staff because T.Q.M. involves all levels of the members of the organization.
In addition, the two pedagogical deputy heads out of the bigger secondary schools were selected for the interview in order to provide a strong sample of the management perceptions. The chosen staff, were issued with letters (appendix 3) which explain the research and their potential involvement in it. They were requested to answer the questions, write about any misunderstanding or disadvantages of the research tool and were given a specific date to return the questionnaire. They were provided with guarantees of confidentiality and have the possibility to have the information about the survey after it is analyzed.

THE APPROPRIATE METHOD FOR THE PILOT STUDY

The questionnaire and the interview were chosen. Although most statements were adapted from previous researchers (Bolam, 1993; West-Burnham, 1997) which have the advantage of being pre-tested, some statements were added or amended. The changes were made to fit the questionnaire to the purpose of the present research and to avoid the danger of appearing 'bolted on'.

Piloting the questionnaire aims to provide the researcher with feedback on the questionnaire. It was decided to use a postal questionnaire in the research as the most effective tool since the research population is scattered throughout Tel Aviv, in the outskirts and in some rural areas. This way, data can be collected quickly within a limited time and inexpensively. In order to encourage participants to return the postal questionnaire, it is accompanied by the cover letter with a stamped, addressed envelope and with a pen for completing the questionnaire.

The five option rating scale (strongly agree, agree, don't know, disagree, strongly disagree) is used throughout the questionnaire as the most appropriate technique for collecting data on how the staff feel and understand the events in school. Ary et al (1996) claim that there might be bias in using this tool as it may be affected by the following errors:

- Halo effect - the general impression of a school affects the rating on every aspect of the school.
• Error of generosity - participants tend to give a favourable rating.
• Error of severity - the opposite of error of generosity, participants tend to give an unfavourable rating.
• Error of central tendency - participants tend to give a medium rating.

In order to avoid these errors, the questionnaire is defined as clearly as possible and open space is left for written comments in order to encourage more detailed, accurate responses. In addition, the questionnaire was numbered and posted in the third week in October 2000, just before the eight days Jewish holidays which enable participants enough time for response. The participants’ names were numbered in order to follow the response rate, and the numbered names and their school address were entered to the database before mailing the questionnaire.

The actual pilot study

INTRODUCTION

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Chapter 5 - The Pilot Study

INTRODUCTION

The piloting of the present research is only of the interview and the questionnaire within the case study. It was decided not to pilot observation as the researcher experienced difficulty in observing teams at the period of the pilot phase due to the frequent Jewish holidays at the beginning of the school year. Further, the main purpose of this pilot study is to make any revisions necessary both in the questionnaire, the interview design and questions though piloting:

“has several functions, principally to increase the reliability, validity and practicability of the questionnaire.” (Cohen et al, 2000 p. 261)

In effect:

“Any piloting, whether of questionnaires or interview schedules, gives a last opportunity to spot whether some vital question has simply not been included.” (Johnson, 1994 p. 40)

THE PILOT STUDY POPULATION

The decision was made to undertake a quota sample within the school and concentrate in the pilot study on twenty seven participants who ‘have the same characteristics as the population to be approached’ (Johnson, 1994 p. 39). They were selected for conducting the survey with the cooperation of the headteachers, after identifying them as:

1. taking part of the T.Q.M. process.
2. belonging to teaching and non-teaching staff because T.Q.M. involves all levels of the members of the organization.
In addition, the two pedagogical deputy heads out of the bigger secondary schools were selected for the interview in order to provide a strong sample of the management perceptions. The chosen staff, were issued with letters (appendix 3) which explain the research and their potential involvement in it. They were requested to answer the questions, write about any misunderstanding or disadvantages of the research tool and were given a specific date to return the questionnaire. They were provided with guarantees of confidentiality and have the possibility to have the information about the survey after it is analyzed.

THE APPROPRIATE METHOD FOR THE PILOT STUDY

The questionnaire and the interview were chosen. Although most statements were adapted from previous researchers (Bolam, 1993; West-Burnham, 1997) which have the advantage of being pre-tested, some statements were added or amended. The changes were made to fit the questionnaire to the purpose of the present research and to avoid the danger of appearing 'bolted on'.

Piloting the questionnaire aims to provide the researcher with feedback on the questionnaire. It was decided to use a postal questionnaire in the research as the most effective tool since the research population is scattered throughout Tel Aviv, in the outskirts and in some rural areas. This way, data can be collected quickly within a limited time and inexpensively. In order to encourage participants to return the postal questionnaire, it is accompanied by the cover letter with a stamped, addressed envelope and with a pen for completing the questionnaire.

The five option rating scale (strongly agree, agree, don't know, disagree, strongly disagree) is used throughout the questionnaire as the most appropriate technique for collecting data on how the staff feel and understand the events in school.

Ary et al (1996) claim that there might be bias in using this tool as it may be affected by the following errors:

- Halo effect - the general impression of a school affects the rating on every aspect of the school.
• Error of generosity - participants tend to give a favourable rating.
• Error of severity - the opposite of error of generosity, participants tend to give an unfavourable rating.
• Error of central tendency - participants tend to give a medium rating.

In order to avoid these errors, the questionnaire is defined as clearly as possible and open space is left for written comments in order to encourage more detailed, accurate responses. In addition, the questionnaire was numbered and posted in the third week in October 2000, just before the eight days Jewish holidays which enable participants enough time for response. The participants' names were numbered in order to follow the response rate, and the numbered names and their school address were entered to the database before mailing the questionnaire.

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Chapter 6 - FINDINGS OF THE SURVEY

The researcher conducted a study of three secondary schools in the Tel Aviv area, which had possibly improved (see table no. 1) as a result of the introduction of a T.Q.M. type initiative. The purpose is to investigate whether T.Q.M. served as a means towards school improvement. Thus the study describes the T.Q.M. approach in practice through the eyes of the heads, deputy heads and the teaching and non-teaching staff of those three schools. There was a key question and several sub-questions that were important for the inquiry:

Key Question
Do the headteachers, teaching and non-teaching staff in the case study schools in the Tel Aviv area perceive that the introduction of T.Q.M. initiative has contributed to school improvement?

The sub-questions are:

Is T.Q.M. perceived to have been successfully implemented in the schools?
8. Is progress related to a student-centered approach?
9. To what extent does the school work towards prevention of failure during work processes?
10. To what extent are the school structure and processes team-based?
11. What is the quality of personal relationships among the members of the school?
12. Is there a perceived link between the style of leadership and improvement of the school?
13. What is the perceived link between culture of 'drive-out fear' and improvement?
14. What is the perceived link between the values of the staff and improvement?
Another question of the importance of having so many Russian youngsters in school in relation to improvement in the school is asked.

As the purpose of this project was to understand better the performance of the schools, a range of data was collected by the researcher. The data included:

- Heads and deputy heads interviews.
- Teaching and non-teaching staff attitudes measured by questionnaires.
- Information gathered from documents about school policy, students' attainments etc.
- Information gathered by observing teachers' meetings.

The researcher conducted six in-depth semi-structured interviews with secondary headteachers and their deputies from the three schools. More data was gathered by a posted questionnaire for teachers and others in the schools which included closed questions as well as open ones with space for comments. The semi-structured observation that attempted to remain relatively independent and uninvolved added some data as well. All observations included one management team meeting and two subject coordinators and their staff meetings (English and History teams in school '1', Hebrew language team in school '2', and English and Bible teams in school '3'). The choice of these teams was taken because of the teams' schedules and their willingness to be observed. All these meetings lasted 45 minutes each. There were also the head and staff general meetings which lasted in each school for about two hours. The researcher also toured the schools during school day. Documents were also included; there are minutes of past and present meetings of the management teams (3), minutes of meetings of the head and the staff (2), ISO 9000 regulations, a school brochure, the students' schedule and documents relating to training materials and staff courses.

Three heads and three deputy heads were interviewed. The head of school '3' had been running the school for a number of years, he was appointed in 1996 after the T.Q.M. approach was implemented. The other two heads and all deputy heads were in school from the start. Despite this different background, there was a lot of agreement among the answers.
All answers from the interviews and the replies from the questionnaires were treated with complete confidentiality. The participants were kept anonymous, despite the fact that the results would be made open to everyone. The purpose was to let respondents answer with no fear of criticism from any negative perceptions they might have expressed.

The overall response rate of the three schools was rather high. The posted questionnaires were completed and returned by fifty three out of seventy nine staff members (67%) in school ‘1’, forty eight out of sixty seven (71%) in school ‘2’, and twenty three returns out of thirty six (64%) were received from school ‘3’.

The response rate to the introductory part of the questionnaire is given as a percentage as there were different numbers of replies to each question. The percentage presents the number of particular replies out of the total number of replies to that specific question. However, the SPSS program was used to generate the mean and the standard deviation of each rating item in the questionnaire.

SCHOOL ‘1’

School ‘1’ is located in the southern part of the city of Tel-Aviv. It exists for 50 years and its premises are old - fashioned. The head is running the school for 15 years. This secondary school consists of 740 students, 467 are from the former USSR, 63%, of whom come from different parts of the city but some also come from the suburbs nearby. It also has 89 teaching and non-teaching staff. The school is academic, not vocational and focuses on scientific studies such as Physics, Chemistry and Math. In effect, documents reveal that this school nearly faced closure by the Tel - Aviv Municipality. The school has adopted the T.Q.M. techniques with the help of an external consultant. Today this school is leading in the national 'Olympiad' of math and Computers. ('Tel Aviv newspaper' 9/02/01)
Current staff profile

as indicated from the returned questionnaires.

- Teachers completed 94% of the returned questionnaires and the non-teaching staff returned only 6%.
- 61% of the respondents have been working at school up to 11 years and 39% of respondents are senior, working 12 years or more.
- 55% of respondents have worked in two schools, 17% of respondents have worked in 3 schools and 28% have worked in 3 schools or more.
- 72% of the returned questionnaires were completed by women and less than third, 28% of the returned questionnaires were completed by men.
- 61% of the respondents who returned the questionnaires were old-timers and 39% of the respondents were newcomers.
- Most respondents 72% hold permanent teaching posts, 28% of respondents did not hold teaching permanency. As 6% of the respondents belong to the non-teaching staff, only 22% of teacher respondents do not hold permanent teaching posts.

School ‘I’ had been desperately in need of a shake-up in the years 1988-1991 in order to cope with the threat of closure by the city of Tel-Aviv:

“we should choose a model with the help of an outside consultant. One which we all agree to follow in order to solve the severe problems of our school.”

(management and staff minutes of meeting, 17.04.1991)

When asked why T.Q.M. initiative was implemented the head, in interview, explained:

“There was a clear need for reorganization, change of low self-image, improvement of achievements, raising of the staff morale, and dealing urgently with the problem of school population decline.” (head 1)

The deputy head supports this conclusion:
"We had to inject a lot of adrenaline by infusing new blood into the school in order to put the school on the path to success... this was done with the help of an outside organizational consultant who had spotted the problems, mapped out a plan and suggested to introduce T.Q.M. approach into the school." (deputy 1)

The school staff corroborated what was said about the need for change and approved the ways of implementing it; ‘the very existence of the school was in jeopardy’, (teacher 1) or ‘we were prepared for its closure’ (teacher 2).

At present, a few years after introducing this method of operation, namely T.Q.M., the school seems to clearly be on the path to success. The school population has doubled and now it consists of 740 students. The students’ achievements are on the rise, in 1993 only 28.5% of graduates achieved the final diploma, the Matriculation certificate whereas in 1999 71.4% of graduates achieved the Matriculation certificate (‘Hair newspaper’ 2.12.2000).

Or as the head puts it:

“The school is becoming an effervescent workplace, full of creativity and its success is assured so much so it is now a contender for Education Prize.” (head 1)

The process to gain success in school ‘I’ has been documented in a special school booklet and reflected three stages. The first was acceptance that school had a bad reputation, low rate of student’s registration and a problematic organizational structure; the second planning of the change process and finally implementing it. The success story has been published several times in different newspapers (‘Hair newspaper’ 19.01.2001, ‘Tel-Aviv newspaper’ 19.01.2001). The findings of the newspaper testify to the fact that fundamental changes have been made and the process was management-led.

In the following section the researcher focuses attention upon aspects of both T.Q.M. approach and school improvement and effectiveness. This section would be
introduced on the order of the questionnaire, namely: Managing T.Q.M.; Professional working relationship; School ethos, aims and policy; Leadership and management and Structure, decision making and communication.
Managing T.Q.M.

The findings about these main aspects based on the staff and management perceptions may help us to study the issue of change which this research investigates in-depth.

**TECHNIQUES**

One of the most essential changes, which took root in the management operation, was the use of statistical analysis with the drive to constant self-improvement:

"The tools are very effective, very real and this became a way of life." (head 1)

The following table shows the extent of assimilation and spread of the techniques and tools which school ‘1’ uses. These data may clarify the issue whether the school indeed operates to anticipate problems and how it is done in practice.

<table>
<thead>
<tr>
<th>The headteacher and SMT</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define and specify all key strategies to achieve school goals</td>
<td>4.22</td>
<td>0.55</td>
</tr>
<tr>
<td>Manage systematic results analysis to prevent failure</td>
<td>4.28</td>
<td>0.46</td>
</tr>
<tr>
<td>Use measurement to improve teaching and learning</td>
<td>4.50</td>
<td>0.51</td>
</tr>
<tr>
<td>Build evaluation into class practice</td>
<td>4.06</td>
<td>0.80</td>
</tr>
<tr>
<td>Produce documentation to consist of standards</td>
<td>4.28</td>
<td>0.46</td>
</tr>
<tr>
<td>Require an appropriate external validation of quality assurance strategies</td>
<td>3.41</td>
<td>0.51</td>
</tr>
</tbody>
</table>

In this set of data the mean score is mostly above 4 which indicates a strong agreements with the statements concerning T.Q.M. techniques in school. Yet, the
mean 3.41 indicates that staff agree but do not strongly agree with the statement that the head and SMT require an appropriate external validation of quality assurance strategies. The standard deviations are mostly low and also show that there is no great difference of opinion among the staff. One statement received a higher standard deviation namely 0.80 which testifies to the fact that staff is divided on their opinion regarding this statement.

The findings clearly show that following up student achievements is one of the foremost subjects which the teams deal with:

"My first duty is for the students." (teacher 3) Or "I am interested that the student would have some motivation to acquire greater achievements." (teacher 2)

For example, the deputy head, in the interview, illustrated the weekly procedure of using the computer sheets. These sheets are distributed weekly to every teacher in order to fill in certain information about daily attendance, homework, tests, exams, and discipline problems. The information drawn from these findings are submitted to the care of the deputy head and the hometeacher and analyzed. Later conclusions are drawn and in case of severe problems, parents are informed about it and share possible ways of dealing with the situation.

The interview with the head identifies that the school has also adopted the standard label ISO 9000 and works according to its requirements. Quality is measured according to students' achievements, the results of the Matriculation exams; final exams, equalizing tests, satisfaction feedback and national competitions Olympiad (head 1).

Another important aspect of the new managerial approach was the transition to team based work:

"This was a real departure from the old system. The management was obliged to allocate time in the school schedule for meetings between teams and so doing
has to plan carefully and to define goals…in the past no time was set aside for such activities and when there were rare and occasional meetings it was done on the fringes.” (deputy 1)

### Table 04 Professional Working Relationship

<table>
<thead>
<tr>
<th>In this school teachers:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are committed to working as a team</td>
<td>4.39</td>
<td>0.61</td>
</tr>
<tr>
<td>Regularly discuss teaching methods in detail</td>
<td>4.39</td>
<td>0.70</td>
</tr>
<tr>
<td>Regularly engage in joint planning of new approaches in some detail</td>
<td>3.89</td>
<td>0.76</td>
</tr>
<tr>
<td>Often prepare teaching materials together</td>
<td>4.44</td>
<td>0.70</td>
</tr>
<tr>
<td>Often seek and give each other practical advice about classroom learning</td>
<td>4.39</td>
<td>0.70</td>
</tr>
<tr>
<td>Often observe each other teaching and give constructive feedback</td>
<td>2.94</td>
<td>1.00</td>
</tr>
<tr>
<td>Experiencing difficulties receive support from their colleagues</td>
<td>4.17</td>
<td>0.51</td>
</tr>
<tr>
<td>Are constantly striving to improve teaching and learning</td>
<td>4.50</td>
<td>0.62</td>
</tr>
<tr>
<td>Have developed effective strategies for record-keeping</td>
<td>4.00</td>
<td>0.77</td>
</tr>
</tbody>
</table>

The mean score of seven out of nine statements that deals with the way teams perform is 4 and above which indicates that staff strongly agree with these statements. The statement about teachers regularly engaging in joint planning of new approaches in some detail meet the acceptance of staff but they less agree about it. The exceptionally low mean score 2.94 was given to the statement about teachers observing their colleagues’ lessons. It seems that the staff disagrees with this statement. Its standard deviation 1.00 is relatively higher than the other standards and it also indicates that there is diversity among the staff.

Overall, the findings back up the fact that school staff operates in teams. Together, they elaborate materials for their lessons and so there is a collective sense of
commitment to improving the student learning ability. These findings and the following description of the school structure may provide an answer to the question which was raised in the research namely, ‘To what extent are the school structure and processes team-based?’
Structure of school 1

The 'flattened' organizational structure of school 'one'
As a result of implementing T.Q.M. approach, the pyramidal structure where the headteacher stands at its apex was flattened. Instead, a new enlarged management body was put in place, made up of the various department heads and subject coordinators.

The purpose was:

"to delegate powers to subordinates along the chain of command, to improve the channels of communication between the teams and management, to foster team work and to include as many as possible staff in the process of decision making." (head 1)

Documents reveal that another of the main changes effected according to T.Q.M. principles was the abolition of the homeroom class which was replaced with learning groups. For every discipline was organized around the streaming system according to the level of difficulty and each student was assigned to his/her stream. The student was perceived as an autonomous learner with the ability to move on and to improve his/her achievements according to his/her will and investment in the studies:

"The idea of the learning groups was to enable each student to learn according to his/her ability and personal preferences and thus to offer individual response to the needs of every student in the system." (head 1)

However, the head seems to be aware of the difficulties in implementing T.Q.M. approach:

"There are undoubtedly problems in the process of assimilating the T.Q.M. approach in the educational system." (head 1)

For example, due to several difficulties that were detected, the tendency today is to go back to the old system of homeroom class and to reduce the numbers of streams. First:
"the hometeacher lost his/her preeminence and had troubles to locate the students who were scattered in various group studies." (head 1)

Further, in effect:

"there was no real interaction between the class students since most of the time they were learning in various streams in different classrooms." (head 1)

In addition:

"there was a lack of adequate classrooms to provide sufficient space for every learning activity and additional disciplines created a real shortage of learning space." (deputy 1)

Time was also wasted during the transition from one classroom to another according to the streaming system 'the transition was not in the interest of maximum teaching and learning' (teacher 3) and:

"Obviously, the student himself/herself lost the attachment to his/her class and also to the school since he/she did not feel any responsibility for his/her class as he/she moved along from one stream to another." (deputy 1)

The following findings present the staff perception about the issue: who is the customer, what is his standing and how it is interpreted in relation to school '1' improvement. This may help us to find an answer to "Is progress related to a student-centered approach?"

The customer

The interview with the deputy head highlighted a different aspect of implementing T.Q.M. in the educational system:
"The main school customer is obviously the student but the student family and
the Ministry of Education are also our customers although secondary ones."
(deputy 1)

Although from the point of staff it is clear that the student today is placed on a higher
level of reference than it has been in the past, nonetheless:

"The student is not one hundred percent the centre of all the educational
process, only a part of the customer scale." (teacher 4)

The following examples demonstrate more of the staff viewpoint about the student;
'the student of course has some influence but it is not however decisive.' (teacher 2)
or 'the student is very important but we do not cater to all his/her whims.' (teacher 5)

Some problems also arise from the need to define the 'product'. The head and the
deputy head concur that there are three main 'products' in the educational process;
academic achievements, cultural and social achievements and finally discipline
achievements. Some are seen in the short run and some are revealed in the long one:

"I agree very much with the general outlook of T.Q.M. but post factum notions
such as 'product' 'right the first time' are better fitted for the world of business
and industry than for the educational work." (head 1)

Similarly, the deputy head agreed:

"The very use of the industrial lingo disturbs me very much." (deputy 1)

Yet, in spite of the above shortcomings, the head is adamant in his belief that the
decision to operate the changes with the help of T.Q.M. approach was absolutely
necessary then:

"I am unequivocal about it. T.Q.M. approach brought about a change into a
system which had already collapsed. T.Q.M. had awakened the institution to
some new thinking, more creative, to a need for a dialogue between colleagues, brainstorming and had injected a renewed vigour into the system.” (head 1)

The school seems to mark itself as a quality school. School ‘1’ is a unique school that offers individual learning and teaching excellence’ ('Hair newspaper', 19.01.2001)

Or as the deputy said:

“We are now a special quality school because nothing is left to chance or to routine work. We check everything. There is a system of control for every subject and issue, there are clear and definite goals. We work on a time axis in order to achieve our goals and we set the means for it.” (deputy 1)

**Professional working relationship**

The picture that the head offers about work relationship is rather rosy:

“Everybody works in harmony while cooperating with his/her colleagues.”
(head 1)

The reality of the quality relationship in school ‘1’ may help us to understand the subject of the culture of ‘drive-out fear’. This reality may show whether there is a link between the prevailing culture and improvement in school ‘1’.

**Table 05 Professional Working Relationship**

<table>
<thead>
<tr>
<th>In the school team you are in: (If you are in several teams, choose one and state which one it is.)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers develop new skills by undertaking management tasks</td>
<td>3.94</td>
<td>0.73</td>
</tr>
<tr>
<td>Teachers feel that senior managers support their work in the classroom</td>
<td>3.78</td>
<td>0.55</td>
</tr>
<tr>
<td>Members support the senior management team</td>
<td>3.94</td>
<td>0.73</td>
</tr>
</tbody>
</table>
Indeed, twelve statements out of a group of sixteen statements that deal with professional working relationships received the mean above 4 and this testifies to the fact that the staff agrees or strongly agrees with these statements and that the relationships among the staff are fruitful and efficient. Yet, the mean of the above four statements was below 4 but above 3.72 which shows a general agreement among the staff. The standard deviations of these statements are not very high and this indicates that there is no great difference of opinions.

As a whole, relationships within the professional teams look good and are at times very good. In the observation of the English team, the members cooperatively prepared an equalizing exam for the 11th grade. Findings also reveal that teachers prepare learning material together, consult each other and exchange learning material, ideas:

“I feel that we stimulate each other on the team, I also help new teachers with tips about the ways to deal with kids or concerning their parents.” (teacher 6)

Or

“I am an Internet freak and material that I found there which is relevant to our teamwork, I download it and distribute it to the team teachers.” (teacher 1)

There are teams that have even cultivated true friendship:

“We celebrate together birthdays and go to each others’ family events.” (teacher 5)

The head justifies this position also by the fact that there are many who wish to play a part in the system:
“In the past many rejected accepting important roles, serving as hometeachers etc. This is undoubtedly a refreshing change.” (head 1)

And by the view that:

“work relationship creates synergy of energies which are directed to the improvement of the educational process.” (head 1)

Indeed, it seems that as far as teachers-management visible relationship is concerned, there is a fair level of cooperation, assignment carrying-out and a low dose of conflicts. Yet, on a deeper level, unseen to the naked eye there is probably also a low amount of frictions, disagreements between management members and teachers:

“In the presence of the head, everybody behaves like lovebirds but we do have some bickering over power structure.” (teacher 7)

**School ethos, aims and policy**

In the interview with the head, three school areas were given the highest importance; academic, social and behavioral (discipline). In his view these three are equally important and are interwoven and dependent on each other:

“I see these areas as one piece and we can not allow to have one of them weakened.” (head 1)

These areas were articulated in a very clear way in the school vision as it appeared in the brochure which was given out to each member of the staff at the start of the school year:

“Our school has attained exceptional achievements by teachers and students in all these three areas. Next year we will focus on advancing the school towards the new century. We will set new horizons of improvement in order to achieve
even better quality educational results.” (school '1', academic year brochure p. 2)

And to establish breakthrough paths:

“each component in the school will have to assume responsibility and commitment for being active participant in the education school process.” (ibid p. 2)

The head sees a clear and direct linkage between achieving goals such as high academic results, consideration for the student needs, realization of his/her ability, and the performance and quality of the staff:

“It is clearly understood by the staff that the success of the school does not hinge on management alone but the teacher has an essential role to play. It is him/her who implements actually the nice theories, teaching methods and educational ways and means. He/she is in fact the person who shapes the school environment.” (head 1)

Moreover, the deputy defines the school as a school for science which endeavours to achieve excellence. This definition on the operative level finds its expression in the allocation of many teaching hours to the study of science; Physics, Chemistry and Mathematics. The school schedule underlines the importance of these disciplines:

“We provide our students quality as well as unique learning programs especially in the field of science due to the special character of the school population which was exceptionally drawn to this school.” (deputy 1)

It seems from school schedule that in order to attain these goals the students start their school day at seven thirty a.m. and end in the late afternoon:

“Obviously they have a good reason to get up early and to return home very late...no doubt that in the field of science school is very effective. The results
are here to show for it and there is a marked improvement in comparison with the past.” (deputy 1)

Furthermore, one of the most important achievements probably due to implementing the T.Q.M. approach about which the head and the deputy concur is the systematic overview in the school which was achieved by connecting learning programs, special projects and the existing needs:

“The school vision to realize the potential of each student finds its concrete expression in the elaboration of a learning program which is designed to fit the needs of the students. There is a backup system to help failing students, social programs to meet social needs and goals and unique projects to combine learning programs with the social ones.” (deputy 1)

The deputy head adds that programs are not unstructured as dictated but through the cooperation between teachers and management:

“Everyone understands the school vision, participates in the selection of the material for the optional subjects and in elaborating the social program so there must be a great deal of identification with the school goals.” (deputy 1)

And the head further adds:

“I expect that subject coordinators and the various department heads seek the cooperation of the staff in shaping the school projects so whoever participates in the school processes identifies himself/herself with their ideas.” (head 1)

No doubt, according to the head, the teacher education level contributes to the teaching quality:

“There is an exceptional quality level in the school staff today. The process of becoming more efficient took its toll of the staff, and teachers who no longer fit into this process felt burnout and chose to opt out in retirement.” (head 1)
Instead of the retired teachers:

"we recruited new, better equipped and high educated teachers who teach in various teaching methods." (head 1)

The findings reveal that all teachers hold teaching certificates. In addition to the teaching certificate, 45% of the teachers have a B.A degree. They also show that high rate of teachers 44% have a master degree and 11% have even a Phd degree:

"These highly qualified teachers are the magnet which attracts quality students and that testifies to the ability to overhaul the school and to make it a quality school where the process of becoming more efficient is ongoing." (head 1)

Further, according to the head a large percentage of the school body is composed of immigrants from the U.S.S.R. and it also contributes to the school quality:

"This population is characterized by a high level of motivation and a drive to succeed in their studies in order to succeed well in the new society." (head 1)

The findings about the values which have been described so far may help us to understand the link between the most important values which have been applied in school ‘1’ and subsequent improvement. Also the findings concerning the way the school is run may help us clarify the link between the current leadership and the improvement process.

**Leadership and Management**

<table>
<thead>
<tr>
<th>The Headteacher</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is easily accessible to staff</td>
<td>3.78</td>
<td>0.88</td>
</tr>
<tr>
<td>Is open to other people’s ideas and suggestions</td>
<td>3.61</td>
<td>0.50</td>
</tr>
</tbody>
</table>
Fifteen statements deal with the staff perception of the performance of the headteacher. The findings show that the staff in general perceives the head in a positive light since eight out of fifteen statements received a mean of 4 and more. Also the standard deviations for these statements indicate that most of the staff shows no great difference with these statements. About half of these statements received a mean starting with 3.39 up to 3.94 and this testifies to the general agreement with these statements but not in an overwhelming way. Three of the above statements received relatively high standard deviations, 0.86, 0.88 and 0.92. These results testify to the fact that the staff is divided on the following statements: the availability of the headteacher and personal communication between the staff and headteacher.

There are various ways of making leadership available, but the head of school '1' favoured leadership which combines elements of mission, collegial, and decentralized style:

“I believe that getting staff members involved in decision making processes or sharing the school vision are main aspects of my role as a head.” (head 1)

**LEADERSHIP STYLE**

**Decentralization**

The head underscores that the style of his leadership has gone through changes in the course of years:

| Provides excellent leadership for the school | 3.65 | 0.61 |
| Promotes management development activities | 3.94 | 0.54 |
| Often communicates personally with team members to express appreciation for special effort | 3.61 | 0.92 |
| Has a structured dialogue with each member of staff at least once a year | 3.44 | 0.86 |
| Often communicates personally with pupils to praise special effort | 3.39 | 0.50 |
“In the beginning I was a very centralist type of manager, however today I tend to decentralize my authority and devote more time to the team development.”  
(head 1)

This being also said:

“I still strive to be a leader who shapes and gratifies. In my opinion, the leadership style must be related to the real situation of the school. At times it has an air of authoritarianism. I am not consistent in this respect and I act according to the given situation.”  (head 1)

The remarks obtained from the staff corroborate the above management approach; ‘He is open, accessible and listens to other views and he consults members of the management.’  (teacher 8), ‘however, he does not hesitate to determine some definite targets.’  (teacher 5). Or ‘He is a demanding type and requires that tasks be done in the appointed time.’  (teacher 7). One of the subject coordinators added:

“As a subject coordinator, I enjoy a certain amount of leeway and can work autonomously but at times my work is checked and if mistakes were made, he will go to lengths to explain to me where I went wrong.”  (Bible coordinator)

As mentioned previously, the head attaches great importance to transition from centralism to decentralism in his work and he relates this change to the implementation of T.Q.M. principles:

“The T.Q.M. approach forced to delve into the various management issues, as a result I had to change as a head and to clarify the issues in a deeper way.”  (head 1)

The deputy supports this:
“One of the most significant contributions of the T.Q.M. approach was the deepening of the awareness of the educational process which led management to bring in additional people into the educational process and decision making.”
(deputy 1)

Table 07 Professional Working Relationship

<table>
<thead>
<tr>
<th>In the school team you are in:(If you are in several teams, choose one and state which one it is.)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership is shared according to the needs</td>
<td>4.11</td>
<td>0.58</td>
</tr>
<tr>
<td>Team members are committed to the team objectives</td>
<td>4.39</td>
<td>0.50</td>
</tr>
<tr>
<td>Team members are encouraged by the head to share their experiences and successes</td>
<td>4.22</td>
<td>0.55</td>
</tr>
<tr>
<td>Team members share collaborative decision-making</td>
<td>4.50</td>
<td>0.71</td>
</tr>
<tr>
<td>The team abilities are fully utilized, the members are trusted</td>
<td>4.28</td>
<td>0.46</td>
</tr>
</tbody>
</table>

Five statements out of a group of sixteen statements deal with the cooperation of the staff and its commitment to the school. All these statements received a mean starting with 4.11 and more and this indicates that the staff fully agrees with these statements. Also the standard deviations show that concerning these statements opinions do not vary greatly. However, most of the answers had focused on ‘agree’ or ‘strongly agree’.

Hence, the findings of the questionnaire show that tasks are shared and responsibility as well. The head feels that:

“with the help of the ‘flattened’ structure and the setting up of teams every person in the school can be involved. Thus, it is possible to relate to each area and meet the existing needs. The teams are managed with knowledge experts and definite tasks. Thus, each one knows his/her position and duties in the overall complicated system.”
(head 1)
There are those who attribute the right management which brought about success and efficiency to the head’s personal skills and character. They offer remarks such as; ‘he is a warm person, very cordial and sensitive, who believes in a quiet atmosphere in order to achieve results’ (teacher 9) or ‘it is fun to work with him, there is almost no friction which can not be resolved in the positive atmosphere that he generates’. (teacher 8)

The deputy agrees:

“He is rather a tolerant person, open minded and also very meticulous. Everything is well-planned with him before he brings it to the forum. He has a well organized staff work.” (deputy 1)

Elsewhere, the deputy adds that the level of coordination must be attributed to the fact that many are involved, to the managerial approach which operates according to ISO 9000 instructions:

“In this system tasks and duties are well defined and responsibility is shared by everyone. Every document and circular which are given to the teams is precise in defining duties and tasks so everyone knows exactly what is expected from him/her.” (deputy 1)

Parents involvement

Table 08 School Ethos, Aims and Policy

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents are welcomed and integrated</td>
<td>3.72</td>
<td>0.57</td>
</tr>
<tr>
<td>Most parents are proud that their</td>
<td>4.22</td>
<td>0.43</td>
</tr>
<tr>
<td>children attend the school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents’ evenings are well attended</td>
<td>3.94</td>
<td>0.42</td>
</tr>
<tr>
<td>The needs of the students’ parents are</td>
<td>3.33</td>
<td>0.49</td>
</tr>
<tr>
<td>recognized</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As far as the issue of ethos and the school aims is concerned there are thirty-seven statements and four out of them deal with the relationship between parents and school. The statement that deals with parents' pride regarding the fact that their children learn in the school stands out with its high mean 4.22 so we can say that most of the staff agrees with this statement. The rest received a mean starting with 3.33 up to less than 4, here the staff less agrees with the statements that deal with parents' participation and their needs. Also the standard deviations show that staff is unanimous about these statements.

The head, on one hand, sets great store by the importance of having parents as involved partners:

"It is crucial to use the knowledge that parents have about their children, their problems and their needs.... We cooperate with them in bearing the burden of educating their children." (head 1)

The deputy connects this increased cooperation with parents and school with the change that happened in the school:

"The more the school became less centralist so the more parents assume greater influence and responsibility.... Parents today are partners and involved in every area, social, cultural and to a certain extent in shaping the school orientation.” (deputy 1)

On the other hand, some teachers have complained about the nature of parents involvement; 'parents tend to interfere in the school educational issues and its learning program' (teacher 5) or 'parents are not qualified to have a say in professional areas.' (teacher 4)

The head illuminates the problem from a different perspective:
“There is an obvious difficulty in having parents and students participating in the educational process because of the confidentiality of certain information and the need of privacy.” (head 1)

**Structure, decision making and communication**

The current school structure created additional communication channels (see p. 164). Every professional teacher reports to his/her coordinator, the coordinator is helped by the pedagogical coordinator and the last one is in touch with the head. Also every hometeacher is in touch with the department head and the last one connects with the head on a weekly basis:

“There is a flow chart about the existing nexus in the school so nothing is untied although a difficult situation can occur when someone does not follow the flow chart.” (head 1)

Checking the issue of meetings with the deputy it is clear that there is a gamut of various meetings which take place in different frequency. Some are weekly in which the hometeachers participate, there is also a meeting where the subject coordinators and the department head participate.

Approximately once a month and when the need arises, there is a general meeting where subject coordinators meet with the professional teachers and this was not helpful as it was shown in the questionnaires. ‘I feel that there is a need to meet every week with my subject coordinator’ (teacher 7). The deputy who is in charge of scheduling the timetable of each teacher is aware of this problem but claims that:

“there is an organizational problem which prevents the possibility of having weekly meetings between professional teachers and their coordinators although some say it is needed.” (deputy 1)

The head, on the other hand, is quite happy with the current structure:
"The existing structure is a good one that provides adequate answers to the problems although there is always room for improvement." (head 1)

Probably the Achilles’ heel of the school management of this size lies in the everyday communication among the various levels of communication which must be constantly updated for everyone involved in the process:

"It is hard for me as a head to reach everyone in the organization and at times communication passes through several levels of the hierarchy. So it is hard for me to assess whether the message I sent was received by everyone in the manner I meant it without being censored or changed along the hierarchy channels." (head 1)

Observation of team work (management meetings, English and History teams) revealed that the head’s circulars are being discussed in various forums and documented appropriately. Then, in the weekly management meeting major points which have been discussed in the teams are brought forward for a deeper review and to reach final decisions.

Table 09 Structure, Decision Making and Communication

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers are regularly briefed by the senior management team about day to day issues and news</td>
<td>3.72</td>
<td>0.67</td>
</tr>
<tr>
<td>Each member of teaching and non-teaching staff has easy access to school policy documents</td>
<td>3.61</td>
<td>0.50</td>
</tr>
<tr>
<td>Communication within the teams is an open-relaxed communication</td>
<td>4.83</td>
<td>0.38</td>
</tr>
<tr>
<td>Communication between the teams and the rest of the school is an open-relaxed communication</td>
<td>3.72</td>
<td>0.83</td>
</tr>
</tbody>
</table>

In this group there are fifteen statements which deal with decision making and communication. Four out of these statements deal with direct and indirect communication in general, between teams, within teams and between staff and
management. The highest mean of these four statements 4.83 was given to communication within teams and here the standard deviation was very low so here most of the teachers agree absolutely with this statement with no great difference of opinions. The rest of the statements received a mean starting with 3.61 up to less than 4 and this indicates that a wide agreement prevails among the staff. The standard deviation that deals with communication between teams is 0.83 and this is relatively higher than the rest and it indicates that there is some difference of opinion among the staff.

Thus, the findings from the questionnaire show that in general the communication among the team members is open and forthcoming but the situation differs between the various teams. There is also less direct communication between the team members and the head. The head is well aware of this problem and he acknowledges it:

"It is hard for me to maintain a dialogue with so many people. My day schedule is overburdened. I support the idea of empowering subject coordinators and department heads and I expect from them to carry on conversations with every team member." (head 1)

A detailed picture about what is taking place in the school can be obtained from the deputy:

"The school today is rather large. The school is divided into groups and sub-groups in the social area and also in the professional one. There is a division according to a common denominator. In my opinion, we can not expect to have close relationship between all the members of the team, the school staff being so very large." (deputy 1)

Some attribute the improvement of the communication in the school to new spirit: 'T.Q.M. has transformed the school and eliminated the low spirit which had prevailed in the past', (teacher 1). Or 'many problems of violence, discipline were commonplace and teachers were afraid for their livelihood and their future, they were
quite distressed, withdrawn and were afraid to voice their feelings in an open way for fear of suffer of it' (teacher 2). Or as described by one of the teachers:

"I feel I am now part of a success story, the student population is rather good, the percentage of success in the 'Bagrut' test is higher than ever and there is a feel of things done in the air. I can refer problems to the subject coordinators and department heads in order to obtain results."(teacher 9)

**Table 10 School Ethos, Aims and Policy**

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline is not a major problem</td>
<td>4.12</td>
<td>0.49</td>
</tr>
<tr>
<td>Vandalism by pupils is not a major cause for concern</td>
<td>4.00</td>
<td>0.34</td>
</tr>
<tr>
<td>The building and grounds are well maintained</td>
<td>3.94</td>
<td>0.73</td>
</tr>
<tr>
<td>Teaching, non-teaching staff and pupils feel safe and secure</td>
<td>4.11</td>
<td>0.58</td>
</tr>
<tr>
<td>There is relaxed but purposeful working atmosphere</td>
<td>4.39</td>
<td>0.50</td>
</tr>
</tbody>
</table>

Five out of fifteen statements in this group show the way the staff perceives the general culture of the school. Four out of these five statements have a high mean namely above 4 and this shows that there is almost a unanimous agreement among staff that indeed the atmosphere is relaxed and discipline problems are rare. Also the standard deviations show the agreement of the majority. The statement which deals with 'the building and grounds are well maintained' received a mean of 3.94 and this shows that the staff agrees in a generally way but not wholeheartedly. Also the standard deviation which this statement has received 0.73 is higher than the other standards and this also testifies that part of the staff does not agree with this statement and there is a diffusion of opinions.
Nevertheless, in general the findings of the questionnaire support the fact that now the school culture has greatly improved and this helps the educational process. The head claims that:

“teachers feel that they are challenged by the class spirit and motivation, they are more self-confident to express their views and are very proud of the noticeable results so much that the school is contender for the national Prize of Education.” (head 1)

In order to illustrate the positive culture of the school, the deputy head describes the process prior to decision making:

“Every teacher receives the agendas to be discussed prior to each meeting which allows greater cooperation with teachers. The subject coordinator who has a group of teachers with whom he/she meets approximately twice a month receives information and views about the given topics. Few days later, every member of the staff is provided with minutes of the different meetings. This way the management reflects its appreciation to teachers sharing their time and expertise. Thus, gaining positive atmosphere and respect among the members” (deputy 1)

Table 11 Structure, Decision Making and Communication

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers feel that they have a share in major decision making</td>
<td>4.18</td>
<td>0.39</td>
</tr>
<tr>
<td>Teams are ready to accept the responsibility which goes with shared decision making</td>
<td>4.00</td>
<td>0.49</td>
</tr>
<tr>
<td>Decisions are made by expert knowledge</td>
<td>4.22</td>
<td>0.43</td>
</tr>
<tr>
<td>Meetings are usually purposeful</td>
<td>4.67</td>
<td>0.49</td>
</tr>
<tr>
<td>Meetings are usually well chaired</td>
<td>4.72</td>
<td>0.46</td>
</tr>
</tbody>
</table>
Five out of fourteen statements which deal with the structure, decision-making and communication relate to the decision making process. The means which were given to the statements are 4 and more indicate that the staff agree and in most cases strongly agree with the statements which claim that the staff take an active part in the decision-making process. Also the standard deviations are low and do not show great disagreement or difference of opinion among the staff.

The staff perception also reflected a high level of satisfaction with current culture and decision making process. In effect, teachers confirm that they are no longer afraid to complain when the need arises and the head underlines:

"I receive complaints and criticism from the teams. I am not afraid of criticism provided it is well grounded and constructive. Everyone is prone to make mistakes and if criticism is factual and relevant I will be glad to receive it.”

(head 1)
SCHOOL ‘2’

School ‘2’ is rather old having existed for over 25 years. The school premises are old fashioned and it is located in Northern Tel Aviv. Some of the management team has been working in it since its establishment and the head has been running it for over fourteen years. In the school year 2000-2001 613 students attend it and 344 out of them are Russian newcomers. There are 77 members in the staff. The documents show that the school has undergone some processes that have changed it with the help of the city municipality. Today this school is leading in the fields of Arts and Sports. ('Tel Aviv newspaper' 9/02/01)

Current style profile

as indicated from the returned questionnaires.

- Teachers completed 89% of the returned questionnaires and the non-teaching staff returned only 11%.
- 11% of the respondents have been working at school ‘2’ up to three years; 22% of the respondents have been working at school up to 11 years and 67% of respondents are senior, working 12 years or more.
- 44% respondents have worked in one school, namely school ‘2’. 56% of respondents have worked in two schools including school ‘2’. None of respondents have worked in 3 schools or more.
- 72% of the returned questionnaires were completed by women and less than third, 28% of the returned questionnaires were completed by men.
- The majority, 78% of the respondents who returned the questionnaires were old-timers and 22% of the respondents were newcomers.
- Most respondents 89% hold permanent posts, 11% of respondents did not hold teaching permanency. As 11% of the respondents belong to the non-teaching staff, it means that all teacher respondents in this school have permanent posts.

In fact, the T.Q.M. approach has been introduced into the school subsequently to several factors:
The school survival crisis, the approach was much talked about and very ‘in’ and there was an efficient organizational consultant that was brought in order to improve the school functioning. She strongly believed in this approach as a way out of the crisis and she endeavoured to integrate it into the school.” (head 2)

The deputy head confirms that:

"There was a strong need to dramatically improve the school performance. Everyone in the management team felt that the popular T.Q.M. approach could help and we should give it a try." (deputy 2)

Today the school ranks among the best in town ('Tel Aviv newspaper' 9/02/01) and has an aura of prestige with a great appeal:

“It is considered as a school which promotes excellent achievements and is uniquely responsive to the needs of the immigrant students.” (deputy 2)

Also the staff agrees with the conclusion that T.Q.M. ‘has greatly improved the former low school image’, (teacher 1) and that ‘it has [also] improved some processes of performance.’ (teacher 2)

Indeed there are some marked changes in school '2' achievements. The number of students has greatly increased in about 30% and the number of students now is 613:

"There is a very low rate of drop-out and the achievements have improved as well.” (deputy 2)

Managing T.Q.M

The following data will try to elucidate the link between the techniques and tools used in school '2' and the improvement which had occurred there.
TECHNIQUES

Table 12 Leadership and Management

<table>
<thead>
<tr>
<th>The headteacher and SMT</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define and specify all key strategies to achieve school goals</td>
<td>4.03</td>
<td>0.54</td>
</tr>
<tr>
<td>Manage systematic results analysis to prevent failure</td>
<td>4.03</td>
<td>0.69</td>
</tr>
<tr>
<td>Use measurement to improve teaching and learning</td>
<td>4.19</td>
<td>0.98</td>
</tr>
<tr>
<td>Build evaluation into class practice</td>
<td>4.06</td>
<td>0.88</td>
</tr>
<tr>
<td>Produce documentation to consist of standards</td>
<td>4.23</td>
<td>0.96</td>
</tr>
<tr>
<td>Require an appropriate external validation of quality assurance strategies</td>
<td>4.03</td>
<td>0.97</td>
</tr>
</tbody>
</table>

The mean that was given to these items is above 4.03 and this indicates that there is a broad agreement among the staff regarding the need to forestall problems. Still the standard deviations in three items is above 0.96 which show that the staff is not of one mind concerning the statement that management avails itself of measurement in order to improve teaching and learning achievements or in the statement 'produce documentation to consist of standards'.

From the interviews the researcher had with the headteacher and the deputy head it seems that T.Q.M. approach provided techniques and work methods to achieve quality:

"As far as I am concerned T.Q.M. approach provided me some tools, an anchor to put order in my thinking, to make it more concrete, closer to the mode of planning, performance and constant review." (head 2)

Or as one teacher put it:
"We have changed, we have new work methods which are inseparable from my team." (teacher 1)

From the documents, it is revealed that the school has now accurate techniques of measurement such as the rate of success in the Bagrut tests, quizzes, tests, the use of computer statistics concerning events of lack of discipline, violence, percentage of absenteeism and lateness. The deputy head adds that:

"we use measurable techniques, but we also use a yearly survey to find out about satisfaction among students and teachers. Although the last tool can not be always truthful for there are a whole set of reasons for the students to play hookey and prefer not to study with some teachers. It is rather hard to measure satisfaction." (deputy 2)

School '2' also welcomes Russian and other newcomers' feedback concerning their social integration in school and in Israel:

"We have a constant process of feedback on various school matters. We also stress feedback via survey concerning our newcomers' feelings and satisfaction in school and in their new country." (head 2)

In order to understand how in practice school '2' has flattened the school pyramid and set up working teams and whether there is a relation between this new structure and the school improvement, the current school structure follows.
The 'flattened' organizational structure of school 'two'
T.Q.M. has operated considerable changes in the school structure:

"In the new set-up the division of functions was clarified, duties holders were appointed, duties and functions were clearly defined and working procedures were elaborated by general consent." (deputy 2)

For example, instead of having a counselor for the same class group it was decided to assign a counselor to the department head and students of each school department. This way:

"the counselor together with the department head will familiarize themselves with the problems of the department students concerning all the student’s disciplines, so they would be able to have an overall picture from every point of view about the performance of the student and his/her progress." (head 2)

The management structure has also been modified and expanded. No more the head and only one deputy head but one general headteacher, several deputies, heads of department, a coordinator for each discipline – all of them operating as a broad management:

"The management structure is rather enlarged today in order to bring in more people who are involved in the educational process at the level of management."
(head 2)

This structure brought about, it is believed by the head, cooperation and a culture of commitment:

"An organizational culture has been created which increased harmony and solidarity among all the people who were concerned. And for that purpose we were helped by the ISO 9000 contract which in my view it serves as an illustration, a tool through which we can react on the spot in a concrete way, not in a holistic one." (head 2)
Although the deputy (2) claims that ISO 9000 induces bureaucracy, it seems that it is very useful to have the ISO 9000 contract:

“today it is much easier to cope with red tape because it is built on uniform criteria which are made plain to everyone.” (deputy 2)

However, it seems that the most obvious shortcoming of implementing T.Q.M. approach, and it seems the same with every other management approach, is the possibility to tailor a method which fits the needs of the individual to the last detail:

“T.Q.M. approach, as other specific approaches, was not intended to suit the special need of the educational system and so still does not provide fully satisfactory solutions to the educational system. This method was after all borrowed from the industrial world and fits better this environment.” (deputy 2)

Moreover, T.Q.M. approach can be seemed to have mainly a quantitative character:

“in the educational process some aspects can be measured quantitatively but some goals must have a spiritual character which can not be measured scientifically. We are dealing with a long-term process whose results can not be appreciated here and now” (head 2)

The feeling that T.Q.M. has principles which fit better the interests of industry prevails also among teachers:

“Education is not like mass production of Coca-Cola.” (teachers 3). Or “It is not a scheme nor a mantra.” (teachers 4) and “I do not believe that an ideal management method can be found anywhere.” (teachers 5)

In both interviews the matter of the multiplicity of clients was brought up and also the difficulty of defining the final pedagogical end product:
"The expectations and needs of the various and multiple clients are not uniform... we must know how to sort out clients according to variables and different interests." (head 2)

Or as put by the deputy head:

"The pedagogical product is a rather complex and difficult process and it is opposed to the business systems where the emphasis is being placed on measurement of the products at the end of the manufacturing process." (deputy 2)

The deputy head used the metaphor of a shop to clarify the difference:

"In a shop whenever the product is defective it can be returned after the sale, it will be replaced and there is also the risk that the customer will not come back. In the field of Education there are no returnable merchandise, the damage is real although in case of dissatisfaction a student can switch schools." (deputy 2)

**Professional working relationship**

The tables 13, 14, 15 represent the staff perceptions about the personal and professional quality of interrelationships among all school members and this may indicate the link between these relationships and the improvement in the school.

**Table 13 Professional working relationship**

<table>
<thead>
<tr>
<th>In the school team you are in:(If you are in several teams, choose one and state which one it is.)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is genuine pride in team membership</td>
<td>4.13</td>
<td>0.71</td>
</tr>
<tr>
<td>Leadership is shared according to the needs</td>
<td>3.88</td>
<td>0.98</td>
</tr>
<tr>
<td>Team members are committed to the team objectives</td>
<td>4.31</td>
<td>0.54</td>
</tr>
<tr>
<td>Team members systematically review the performance</td>
<td>4.19</td>
<td>0.91</td>
</tr>
</tbody>
</table>
There is good team spirit among the members 4.22 0.42
Teachers develop new skills by undertaking management tasks 3.75 0.72
Teachers feel happy and satisfied with their work 4.25 0.95
Teachers feel that senior managers support their work in the classroom 3.56 1.13
Team’s contributions and achievements are given public recognition in staff meetings or similar occasions 3.38 1.26
Team members are encouraged by the head to share their experiences and successes 4.27 0.91
Professional development occurs as an integral part of the job 4.00 0.92
Members support the senior management team 4.03 0.82
Communication is robust, open and honest 4.35 0.95
Team members share collaborative decision-making 4.19 1.12
Everyone knows who does what by when 3.81 0.93
The team abilities are fully utilized, the members are trusted 4.30 1.02

Sixteen statements deal with the perceptions of the staff about the teams’ effectiveness. Eleven out of them have a mean of 4 or more and this shows that there is a general agreement with them among the staff. Only five out of these statements got less than 4, namely 3.38 and more, so here the agreement is lesser. For three statements the standard deviations is above 1.00 which indicates that the score varies and the difference of opinion is broader. The statement ‘team members share collaborative decision making’ is especially noticeable. It received the mean of 4.19 but its standard deviation of 1.12 indicates nevertheless a lack of full agreement among the staff concerning the sharing of responsibility for the results of common decision making. It seems that there are some people in the staff who do not agree with this statement.

Nevertheless the picture that is conveyed from the questionnaire is of a school where overall professional relationships are close and extensive particularly within the teams:
"The spirit within the team is pleasant and supportive", (teacher 1) "We celebrate birthdays and special events together" (teacher 3) or "We have healthy professional relationships that encourage creativity and performance and include affection and even empathy on the personal level." (teacher 2)

However, the cross-departmental work is not often happening, though it seems to be encouraged:

"We endeavour to strengthen inter-departmental links through joint activities. Nevertheless, the perfect solution is yet to be found." (head 2)

The interview with the headteacher who sets great importance for close, open relationships confirms the above:

"I believe that the central idea of having close relationships is that it has the effect of helping to create a positive, stable atmosphere for quality team work. It enables the teams to cooperatively discuss teaching methods as well as the alternative assessment program and to develop effective strategies for the final exams." (head 2)

The deputy head supports the head's opinion:

"The quality work of the teacher is an outcome of professional relationships that focus on integrating exclusive teaching methods and developing suitable assessment techniques." (deputy 2)

Hence, both interviews indicate that there is a wide, considerable professional autonomy in which the team abilities are utilized and the members are trusted:

"As a head, I base my complete trust on the premise that all secondary school teachers have academic education and teaching diplomas from quality universities. I have no doubts in my teachers' abilities and qualifications." (head 2)
Table 14 Professional working relationship

<table>
<thead>
<tr>
<th>In this school teaching and non-teaching staff:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Put a strong emphasis on effective personal relationships</td>
<td>4.31</td>
<td>0.78</td>
</tr>
<tr>
<td>Feel able to express their views openly and honestly</td>
<td>4.16</td>
<td>1.14</td>
</tr>
<tr>
<td>Feel that views are taken seriously by management</td>
<td>3.66</td>
<td>1.10</td>
</tr>
<tr>
<td>Are encouraged to be involved in seeking solutions to problems facing the school</td>
<td>4.22</td>
<td>1.01</td>
</tr>
<tr>
<td>Go out of their way to make new colleagues feel welcome and at ease</td>
<td>4.38</td>
<td>0.94</td>
</tr>
<tr>
<td>Are encouraged by the head and senior staff to cooperate with colleagues on joint activities</td>
<td>4.00</td>
<td>0.98</td>
</tr>
</tbody>
</table>

Five out of six statements received the mean of 4 or more and here the general agreement among most of the staff members is strong. However, the statement that management relates seriously to the staff opinions received only the mean of 3.66. So the staff obviously does not fully agree that management treats the staff opinions with great consideration. For two statements the standard deviations are 0.94 and 0.98 and for three of them the standard deviations are even higher than 1.01. This indicates that the views varied and are quite diffuse among the staff about freedom of speech, openness, the management earnest attitude to the staff opinions and the fact that the staff is encouraged to participate in finding solutions to the school's problems.

However, the questionnaires’ findings show that most teachers felt able to express their views openly and honestly without fear. Thus, the head adds:

“I am quite certain that in case problems come out, I will be told.” (head 2)

Information from the open questions of the questionnaires confirm that the management team can be relied upon to support teachers who have teaching or personal problems, as the following quotations indicate:
"Hebrew is a difficult language to learn and whenever I ask for translation or need help with paperwork, I am helped." (teacher 1). Or "Whenever facing any serious teaching difficulties that need attention and thought, I consult my subject coordinator." (teacher 6)

From observing two meetings with the Hebrew language team, it seems that the team tends to regularly discuss alternative assessment approaches and tailors them to the students' needs. The team also seems to have considerable freedom regarding how to teach the national curriculum. The headteacher clarifies:

"The team is autonomous to a certain degree. The team can share planning of new approaches but the main teaching material is based on the national curriculum requirements as the Ministry of Education dictate." (head 2)

**Table 15 Professional working relationship**

<table>
<thead>
<tr>
<th>In this school teachers:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are committed to working as a team</td>
<td>4.28</td>
<td>0.89</td>
</tr>
<tr>
<td>Regularly discuss teaching methods in detail</td>
<td>4.19</td>
<td>0.74</td>
</tr>
<tr>
<td>Regularly engage in joint planning of new approaches in some detail</td>
<td>3.56</td>
<td>0.95</td>
</tr>
<tr>
<td>Often prepare teaching materials together</td>
<td>4.25</td>
<td>0.98</td>
</tr>
<tr>
<td>Often seek and give each other practical advice about classroom learning</td>
<td>3.63</td>
<td>1.04</td>
</tr>
<tr>
<td>Often observe each other teaching and give constructive feedback</td>
<td>2.69</td>
<td>0.93</td>
</tr>
<tr>
<td>Experiencing difficulties receive support from their colleagues</td>
<td>4.13</td>
<td>0.83</td>
</tr>
<tr>
<td>Are constantly striving to improve teaching and learning</td>
<td>4.22</td>
<td>0.79</td>
</tr>
<tr>
<td>Have developed effective strategies for record-keeping</td>
<td>3.91</td>
<td>0.96</td>
</tr>
</tbody>
</table>

Five out of nine statements which relate to working relationships within the teaching staff received a mean above 4 which shows that a general agreement prevails among
the staff concerning these statements. The four additional ones received a mean below 4 and here there is a lack of agreement about the extent of its being involved in planning a new approach or that teachers offer advice to their colleagues or that teachers develop strategies of recording minutes. The statement 'often observe each other teaching and give constructive feedback' is especially prominent with the particular low mean of 2.69 and this shows that teachers do not agree with the statement about observing each other lessons. However, it seems that although the teams are regularly engaging in joint planning of new approaches, it is rare for them to observe their colleagues while teaching and to give constructive feedback.

For one statement the standard deviation is 1.04 which indicates that the staff is divided on the question of whether teachers offer their advice or ask for some in the process of teaching.

The headteacher concludes that:

"Being an independent and a self-managed team encompasses accepting the multi-facet accountability. The team is accountable for the progress of every individual student who aims to achieve high accomplishments in order to be satisfied." (head 2)

### School ethos, aims and policy

The chapter which presents the most important values highlighted in school '2' may provide an answer to: "what is the perceived link between the values of the staff and improvement?"

The school took up the task of integrating the new wave of Russian immigrants:

"We recruit immigrant students and also immigrant teachers and we make an extra effort to integrate new immigrants and old timers." (deputy 2)

During the interview the headteacher explains that the students come to the school out of their free will and the school seeks to draw new immigrants:
“In order to draw to the school the best students, those capable and ambitious. They must see in the school the opportunities of self-development, caring teachers and a chance to achieve high results.” (head 2)

This trend of bringing in excellent students caused the school to be more diversified. And the head adds:

“It is true that the school aims at drawing excellent students but in the final analysis the school gets a students’ body which is heterogenous. At one end of the spectrum we find students who strive to acquire the Bagrut diploma and on the opposite end we find special students who enjoy a special status because parallel to their studies in the school, they study for a B.A. at the university and the middle is very diversified.” (head 2)

Table 16 School Ethos, Aims and Policy

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most pupils feel a sense of achievement</td>
<td>4.19</td>
<td>0.47</td>
</tr>
<tr>
<td>Academic attainment is high</td>
<td>4.72</td>
<td>0.52</td>
</tr>
<tr>
<td>Teachers give pupils the confidence to learn</td>
<td>4.34</td>
<td>0.75</td>
</tr>
<tr>
<td>Good pastoral support is provided for pupils</td>
<td>4.00</td>
<td>0.62</td>
</tr>
<tr>
<td>Discipline is not a major problem</td>
<td>3.56</td>
<td>1.11</td>
</tr>
<tr>
<td>Vandalism by pupils is not a major cause for concern</td>
<td>3.41</td>
<td>1.07</td>
</tr>
<tr>
<td>The building and grounds are well maintained</td>
<td>3.41</td>
<td>0.98</td>
</tr>
<tr>
<td>Teaching, non-teaching staff and pupils feel safe and secure</td>
<td>4.31</td>
<td>0.97</td>
</tr>
<tr>
<td>There is relaxed but purposeful working atmosphere</td>
<td>4.45</td>
<td>0.72</td>
</tr>
<tr>
<td>Pupils attendance is consistently high</td>
<td>3.75</td>
<td>0.76</td>
</tr>
<tr>
<td>Teachers have high expectations of pupils’ achievement</td>
<td>4.50</td>
<td>0.67</td>
</tr>
<tr>
<td>Teachers have high expectations of pupils’ behaviour</td>
<td>4.23</td>
<td>0.50</td>
</tr>
<tr>
<td>Pupils display an active part in the life of the school</td>
<td>4.00</td>
<td>1.08</td>
</tr>
</tbody>
</table>
Two of the statements which received a specially high mean namely 4.72 and 4.50 show that there is a broad agreement among the staff concerning their high expectation about the students' achievements and also that the achievements are indeed noticeable. Four statements received a mean lower than 4 so here teachers do not fully agree with the statements which claim that teachers should not be overly concerned about discipline and attendance problems. Three statements received standard deviations above 1.00 and these three deal with discipline problems, vandalism and student's involvement in the school. This shows that opinions vary among the staff about these issues.

The head explained that the school focuses on three principles. The first principle is awareness, the second is involvement and the last is endeavour. The staff is aware of the school goals and policy, the staff is involved in elaborating these goals and policy and the staff endeavours to improve constantly the school achievements:

"The staff is definitely aware of the school policy and wants to be part of shaping it... There is a marked drive to improve always. Nothing is all right, there is always room for improvement." (deputy 2)

Furthermore, the interviews carried out with the head and the deputy head and the high score given by the staff to achieving high academic results 4.72 emphasize the supreme importance given to the pedagogic area:

"The school's most significant components are quality teaching and learning. Every student aspires to graduate from school having the measurable results, namely, the final grades in the Bagrut certificate." (head 2)

And one of the teachers confirms:

"Teaching and learning are prominent issues in our school." (teacher 1)
The deputy head attributes the quality teaching and its success to staff development strategies within the school, to teachers' hard work and their academic education:

"We consider the teachers' team as a quality one. Teachers are highly educated and thus acknowledge the importance of quality education. They feel committed to support the students, motivate and guide them towards success." (deputy 2)

The findings show that all teachers hold teaching certificates and BA degree. A high rate of teachers, namely 50% have a master degree and 28% have even a Phd.

The deputy head later reinforces this point by illustrating it:

"Various teams often visit my room asking for more staff development activities. They realize that they must constantly improve their professional and teaching skills and thus present lovely new ideas for future staff development." (deputy 2)

Table 17 School Ethos, Aims and Policy

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>A main aim is to achieve good academic results</td>
<td>4.75</td>
<td>0.44</td>
</tr>
<tr>
<td>A main aim is to meet personal and social needs</td>
<td>3.94</td>
<td>0.56</td>
</tr>
<tr>
<td>A main aim is to promote the acquisition of basic skills</td>
<td>3.87</td>
<td>0.85</td>
</tr>
<tr>
<td>A main aim is to promote the acquisition of moral values</td>
<td>4.53</td>
<td>0.80</td>
</tr>
<tr>
<td>A main aim is to promote a spirit of cooperation</td>
<td>4.22</td>
<td>0.94</td>
</tr>
<tr>
<td>A main aim is to promote the student's satisfaction</td>
<td>4.13</td>
<td>0.43</td>
</tr>
<tr>
<td>A main aim is to help each child to achieve his/her potential</td>
<td>4.31</td>
<td>0.69</td>
</tr>
</tbody>
</table>

In the staff opinion five out of seven statements which deal with the school goals are accepted by the staff and its members agree with them and sometimes strongly agree since the mean is over 4 and as for two statements the mean is even as high as 4.53. This result emphasizes the importance of conveying values to the students and the
mean of 4.75 emphasizes the high achievements. The highest standard deviation 0.94 relates precisely to the endeavours of promoting a spirit of cooperation. Even though the mean is relatively high 4.22 for this item there are teachers who do not agree with this statement and opinions vary.

Another central tenet that was highlighted through the interviews is setting a higher value on civic and moral standards more than on the social values:

"I consider some ethical and civic values more important than the social ones. For example, students, particularly newcomers, should have a deep set bond with the place they live in. This attachment is obtained through seminars, annual trips and additional activities in order to enhance their belonging to Israel." (head 2)

The deputy head supports and identifies with this purpose:

"I truly believe that we, the veteran teachers, must provide teachers and students newcomers with special activities in order to promote their experience and deep feel for the country." (deputy 2)

The next aim that school '2' focuses on is the discipline, behavioral one. The interview with the deputy head has revealed that great efforts are made to gain a well-ordered and a free of violence culture:

"Several surveys of the discipline situation in school show a constant decline in vandalism and violence. Records also show fewer recorded disturbances." (deputy 2)

The deputy testifies to his efforts in facing the behavioural problems and elaborates:

"I often tour school grounds." (deputy 2)

Or later in the interview:
"In order to make the school an appropriate place for learning and teaching, I now act on two levels. First, the social team and me have organized anti-violence and anti-drug workshops and lectures as a preventive program aiming to stop things going wrong in the first place. Second, I seek to put an end to problems such as thefts, threatening and blackmailing, they are taken care of on the spot.” (deputy 2)

The last but not least important principle is promoting students and teachers satisfaction. From the interview with the head it is clear that parents, more than anyone else, have the capacity to bring about improvement in their children’s performance through support and belief in their potential to success. Further:

“The school staff realizes nowadays the importance of cooperation with parents and is willing to act together for the common purpose; the students accomplishments. Thus, teachers are more keen on students’ formal and informal needs and are more aware of their expectations.” (head 2)

Or as one teacher put it:

“Students and their parents seem more satisfied when I cater to their needs.” (teacher 5)

Thus, observing the management team and the Hebrew language team it seems that every student, if capable may take some of the final exams already in the 11th grade. Students have the possibility to write and submit papers instead of taking some tests and most importantly, all students study in various teaching methods such as: group and pair work, that fit their specific needs.

Both, the head and deputy agree that students’ success appears to be, at least partially, the result of their parents’ focused motivation and influence:
"The Russian newcomer parental involvement is a crucial factor in understanding and influencing the unusual student composition of this school. Hence, school’s fundamental necessity is to empower parents and to enhance their satisfaction." (head 2)

The linkage between the school's 'unusual' population and its success come to light in several ways. First, the Russian parents’ motivation projects the importance of science and arts subjects onto their children:

“There is a kind of a halo round the math, physics and arts subjects within the Russian population. This does not seem to appear with Israeli students.” (head 2)

Another difference is the Russian parents’ willingness to place school and education high and to have learning as the first priority for their children even if there is a social toll to pay. In fact:

“Parents are ready to travel great distances in order to enable their children have the appropriate education regardless of the social toll that their children may pay.” (deputy 2)

Further, answers from the questionnaire indicate some positive definitions for the Russian students’ composition:

“I would define the Russian newcomers as showing qualities of diligence and determination.” (teacher 5). Or “Russian students are highly supported and motivated by their parents.” (teacher 7)

Table 18 School Ethos, Aims and Policy

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents are welcomed and integrated</td>
<td>3.50</td>
<td>0.80</td>
</tr>
<tr>
<td>Most parents are proud that their children attend the school</td>
<td>4.13</td>
<td>0.61</td>
</tr>
</tbody>
</table>
Three out of seventeen statements about the school goals deal with students' parents. Two of them have a mean above 4 which indicates that the staff agrees that parents attend parent-teacher meetings and are proud of having their children in this school. However, the mean 3.50 shows not all teachers agree that parents are participants in the school activities and business and are welcomed. The standard deviation of 0.80 indicates the divided opinions concerning parents' role.

Documents show that these features are most prominent in the voluntary lay-out. Although enrichment afternoon lessons are voluntary, Russian students' attendance is high and there is a low rate of drop out. It seems that they give time and serious attention to these lessons as if they were compulsory ones.

The head sums up the various views:

“It is not easy to rank the aims in a scale. The pedagogical area is of great importance, and school can not operate successfully with severe discipline problems, and equally important is the civic and ethical values, particularly when having such a high percentage of newcomers.” (head 2)

**Leadership and management**

The deep understanding of the leadership style and methods which prevail in school '2' may help us to appropriately answer the research question concerning the relation between leadership and improvement.

The personal orientation of the head, thirteen years at the school and the qualities that the head brings to the role constitute influential factors in the development of the school and moving it to effective improvement:

“Since I have a long span of service in the school I can more easily and readily assimilate the processes. I am very meticulous and I make sure that the work
would be done in a very systematic way. We have a process of mapping and spotting failures, of elaborating a plan of dealing with problems and the element of monitoring is constantly improving.” (head 2)
Table 19 Leadership and Management

<table>
<thead>
<tr>
<th>The headteacher and SMT</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define and specify all key strategies to achieve school goals</td>
<td>4.03</td>
<td>0.54</td>
</tr>
<tr>
<td>Manage systematic results analysis to prevent failure</td>
<td>4.03</td>
<td>0.69</td>
</tr>
<tr>
<td>Use measurement to improve teaching and learning</td>
<td>4.19</td>
<td>0.98</td>
</tr>
<tr>
<td>Build evaluation into class practice</td>
<td>4.06</td>
<td>0.88</td>
</tr>
<tr>
<td>Produce documentation to consist of standards</td>
<td>4.23</td>
<td>0.96</td>
</tr>
<tr>
<td>Require an appropriate external validation of quality assurance strategies</td>
<td>4.03</td>
<td>0.97</td>
</tr>
</tbody>
</table>

All the statements in this group have received a mean above 4 and this indicates that there is a broad agreement concerning these statements which deal with forestalling school problems. For three statements the standard deviations were relatively high 0.96, 0.97, 0.98 as opposed to other deviations for the other statements. This testifies to the fact that opinions varied concerning the statements with higher standard deviations.

Further, the interviews with the head and deputy head show that they have a clear vision about the school future. They want the school to be committed to the purpose of providing Israel with its leadership in the areas of computers, sport and arts and this aim finds its expression in the school curriculum. Approximately six hours per week are allocated to computer lessons, four hours to sport and four hours to arts lessons. The headteacher testifies that:

"I have a very clear vision about the school future. I believe that part of our students who complete their studies and get the High school diploma will man high positions in the fields of technology and arts if we are capable of realizing their full potential." (head 2)

The deputy head adds:

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"the vision is a challenge and at the same time a responsibility that we undertake. Of course not everyone is expected to rise to this challenge, still we expect that everyone at least will acquire his/her high school diploma. (deputy 2)

This vision, according to the deputy head, was communicated to the staff on two levels. The first, global diffusion of the message by means of brochures, displays in general teachers’ meetings and also during the preparation session on the eve of the school year opening. The second, on the micro level an effort is made at public relations in order to promote the school vision. There are meetings with various guests from the field of education and politics and of course there are teachers-management meetings. The head explains:

"In these meetings, in my opinion, the school vision is shared by the whole staff and it is the source of pride and group identification. (head 2)

It seems that every individual in the school is a partner and bears collective responsibility for the results. During the interview, the headteacher repeatedly emphasized the fact that the vision will materialize provided that:

"we operate on the basis of mutual respect on every level, within the school teams and between them and management and most important between the staff and the students body." (head 2)

And the deputy adds:

"Everyone should work out of regard for another opinion even if he/she disagrees with it.” (deputy 2)
LEADERSHIP STYLE

The headteacher has presented a clear picture of the school vision and through the head’s preferred style of management he hopes to implement it:

“My eminent style of management is one which sets goals. A good head must know that he/she leads and defines policy through consultation with various teams and their participation in the process of decision making so that everyone is made responsible for the success or the failure of the decisions.” (head 2)

The head is adamant on openness and transparency which can be achieved:

“through major staff consultation that reflects the staff concerns, its anxiety and harnessed enthusiasm so that eventually it leads to consensus” (head 2)

The deputy head expands on this:

“the moment the goals are defined the head injects us with a high spirit and leads the school staff toward commitment to the goals.” (deputy 2)

In order to demonstrate the process on the operative level the deputy chose as an illustration the back up layout as a tool to improve school effectiveness:

“This set up is designed to respond to the needs of students who find it difficult and must minimize learning gaps. We check what curriculum requirements need strengthening and an appropriate teacher is chosen. Students’ progress is monitored, there is review and feedback.” (deputy 2)

School documents show that if students do not attend these lessons the parents are immediately notified.

Moreover, the head believes in setting a personal example:
"My working is very long for I am immersed in many tasks. I believe in serious work, done scrupulously and methodically." (head 2)

The views of staff confirm that:

"The head is a good leader. He knows when and how to listen and he is usually open to the staff opinions." (teacher 1), "Everything he does is well-organized and well-planned." (teacher 7). Or "He is dynamic, hard working and really cares for the students and teachers." (teacher 6)

The deputy adds that the headteacher hard work projects dedication and diligence on the staff and creates staff identification:

"We are aware of the head devotion to school work and it affects us. This year the head has gone one step further. The head not only teaches classes but also took over the responsibility of being a hometeacher so that it is possible to be more attuned to the students needs, to the teaching staff and to the fieldwork." (deputy 2)

Table 20 Leadership and Management

<table>
<thead>
<tr>
<th>The Headteacher</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides a clear sense for the core purpose of the school</td>
<td>4.06</td>
<td>0.95</td>
</tr>
<tr>
<td>Provides known, shared and understood vision</td>
<td>4.00</td>
<td>0.86</td>
</tr>
<tr>
<td>Is regularly seen around the school</td>
<td>4.41</td>
<td>0.98</td>
</tr>
<tr>
<td>Is involved with pupils</td>
<td>3.75</td>
<td>0.92</td>
</tr>
<tr>
<td>Is easily accessible to staff</td>
<td>4.50</td>
<td>0.80</td>
</tr>
<tr>
<td>Is open to other people’s ideas and suggestions</td>
<td>3.84</td>
<td>0.92</td>
</tr>
<tr>
<td>Provides excellent leadership for the school</td>
<td>4.03</td>
<td>1.03</td>
</tr>
<tr>
<td>Regards planning central to management processes</td>
<td>4.13</td>
<td>0.72</td>
</tr>
<tr>
<td>Promotes teaching and non-teaching development activities</td>
<td>3.90</td>
<td>0.94</td>
</tr>
<tr>
<td>Promotes management development activities</td>
<td>3.84</td>
<td>0.69</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Often communicates personally with team members to express appreciation for special effort</td>
<td>3.03</td>
<td>1.03</td>
</tr>
<tr>
<td>Regularly participates in staff development activities</td>
<td>3.74</td>
<td>0.93</td>
</tr>
<tr>
<td>Has a structured dialogue with each member of staff at least once a year</td>
<td>2.81</td>
<td>1.15</td>
</tr>
<tr>
<td>Can be relied upon to support the teachers in a crisis</td>
<td>4.03</td>
<td>1.25</td>
</tr>
<tr>
<td>Often communicates personally with pupils to praise special effort</td>
<td>3.00</td>
<td>0.73</td>
</tr>
</tbody>
</table>

Seven out of fifteen statements received a mean starting with 4 and more. The highest mean 4.41 was given to the presence of the head in the school. These statements show that there is an agreement, sometimes a broad agreement, one concerning the statements in general and particularly concerning the fact that the school head presence is strongly felt. Seven additional statements received a mean starting with three and up to 3.90 and this shows that there is an agreement among the staff however lesser than the other seven. One statement stands out with its low mean 2.81 and its high standard deviation 1.15. This testifies to the fact that the staff do not agree with the statement which claims that the head has a dialogue with each member of the staff at least once a year. There is a difference of opinion among the staff concerning this statement. Another statement which deals with communication between staff and head in order to convey the head appreciation received the score of standard deviation 1.03 and this reinforces the opinion that opinions are divided concerning personal communication between staff and head. Two additional statements which deal with the quality of the head’s leadership and with the notion that the head can be relied upon in time of need received standard deviations of 1.03 and 1.25 and this testifies that even for these statements there is a lack of agreement.

The head’s strong ties with the staff and students can be seen while present in the school field. The head is also available to meet with staff but this must be prearranged:

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“with open and direct channels to the staff and students body everyone who wishes can talk with the head or the deputy provided it is in an orderly fashion.”
(deputy 2)

Structure, decision making and communication

School ‘2’ spreads the organizational structure out flat (see p. 189) in order to enable more staff members take part in school management:

“The way I see it, the burden of managing this school is shared out between the staff… the new structure has empowered many quality teachers and has reached its maximum.” (head 2)

The head, elsewhere in the interview, expanded and specifies the rational for the new structure:

“The school hierarchy into higher and lower ranks was changed as a result of the T.Q.M. implementation. Thus, throughout the new flattened structure and undertakings, the duty holders find it easier to direct the staff qualitatively and fulfil their roles effectively.” (head 2)

Further, the interview with the deputy head has illuminated this act from a different aspect:

“In the past, when only a small group of people undertook responsibility and commitment, it meant multiple duties for each member. In my opinion, the present situation is more efficient than the old one as team leaders are now able to do a more professional and useful work in supplying the services for the students needs.” (deputy 2)

The head concludes that at present there are several positions in school’s spectrum in which leaders have the ability to make choices and judgements since:
“School has numerous needs and it was essential to enlarge the management team to take active part in the decision making process and its implementation.”
(head 2)

Table 21 Leadership and Management

<table>
<thead>
<tr>
<th>Senior Management Team</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work well as a team</td>
<td>4.06</td>
<td>0.95</td>
</tr>
<tr>
<td>Take the key policy decisions</td>
<td>4.31</td>
<td>0.78</td>
</tr>
<tr>
<td>Consult the subject coordinators and department heads before reaching major decisions</td>
<td>4.10</td>
<td>0.94</td>
</tr>
<tr>
<td>Provide good and consistent support for the teaching and non-teaching staff</td>
<td>3.75</td>
<td>1.11</td>
</tr>
<tr>
<td>Promote the school image effectively in the community</td>
<td>3.44</td>
<td>1.08</td>
</tr>
</tbody>
</table>

Three out of five statements received a score above 4 and this testifies that the staff agrees and in the case which deals with management that makes the key decisions it strongly agrees with this statement. Two statements that deal with relationship between the school and community and the staff support by the head received a mean of 3.44 and 3.75. This shows that there is a general agreement concerning these statements nevertheless the standard deviations which are relatively high, 1.08 and 1.11 show the lack of agreement among the staff.

The questionnaires indicate that the management team consults the various team leaders before reaching major decisions. The head confesses to taking the staff advice and views about work-processes at school and thus enabling a feeling of cooperation on a thinking plane:

“Once the staff shares the decision making process, they are attached to school’s core process… I believe in transparency, the situation of bringing the dilemmas to the staff and sharing with them the responsibility for school’s successes and failures.” (head 2)
The deputy head presents the way meetings are run as an illustration of the decision making process:

"Every department head aspires to attract a larger number of school’s students to his/her department. When having a meeting, the department head presents the department’s aims, competitors, compulsory and optional subjects taught in the department, and the possible threats. Yet, the final decision about which student studies in which department is shared and made by consulting all the other department heads." (deputy 2)

Moreover, the interview with the head indicated that the macro view of staff opinions based on expert knowledge carry more weight than the micro management team views that present their little self-contained opinions. Or as the head put it:

"The decision making process in school shows respect, not popularity or approval. It is logic and obvious that only one suggestion out of many will finally be approved." (head 2)

Table 22 Structure, Decision Making and Communication

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers feel that they have a share in major decision making</td>
<td>4.19</td>
<td>0.90</td>
</tr>
<tr>
<td>Teams are ready to accept the responsibility which goes with shared decision making</td>
<td>3.88</td>
<td>0.66</td>
</tr>
<tr>
<td>Decisions are made by expert knowledge</td>
<td>4.34</td>
<td>0.79</td>
</tr>
<tr>
<td>Meetings are usually purposeful</td>
<td>4.06</td>
<td>0.98</td>
</tr>
<tr>
<td>Meetings are usually well chaired</td>
<td>4.13</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Five out of fifteen statements in the group which deals with structure, decision making, and communication focus on decision making process. Four out of the five statements received a mean above 4 and this indicates that there is a general agreement and sometimes a strong agreement. The highest mean 4.34 relates to the statement concerning the fact that decisions are made based on expert knowledge.
One statement received a mean of 3.88 and this testifies to the fact that the staff agrees less to accept accountability for the collective decision making. The highest standard deviation in this group 0.98 relates to the statement which claims that meetings are generally very purposeful and it shows that part of the staff is divided in their opinions and thinks that their meetings are not very purposeful.

Indeed, as a whole, the decision making process seems to be shared. However, the open questions in the questionnaire have revealed one reservation:

“Although consultation takes place in the meetings with my department head, I feel it is more about how to apply what had been already decided within the management team rather than raising doubts about the decision taken.” (teacher 5)

| Table 23 Structure, Decision Making and Communication |
|-----------------|---------|--------|
| In this school: | M     | SD   |
| Teachers generally feel informed | 4.03 | 0.97 |
| Teachers are regularly briefed by the senior management team about day to day issues and news | 4.22 | 0.94 |
| Communication within the teams is an open-relaxed communication | 4.25 | 1.16 |
| Communication between the teams and the rest of the school is an open-relaxed communication | 3.58 | 0.67 |

Four out of fifteen statements refer to communication. Three out of them received a mean of more than 4 and this indicates that there is a broad agreement among the staff concerning the statements about communication in general, within the teams and between teams and management. The additional statement which deals with communication between teams received a mean of 3.58 and this testifies to the fact that the staff less agrees with the statement. The highest standard deviation in this group is 1.16 and refers to the communication within teams. This shows a difference of opinion and also that some of the teachers disagree with this and think that in their team communication is less open and relaxed.
The above findings from the questionnaires confirm that communication within the teams is open and relaxed though communication between teams needs improvement. The headteacher testifies to the fact that communication between staff and management is open, relaxed and frank too. An interesting metaphorical description was used by one of the teachers:

“Communication is a two way street. The information between staff and management usually travels freely and openly.” (teacher 6)

Yet, the departmental links seems to be shaky in their communication though:

“in the last year, communication between departments are showing signs of improvement.” (deputy 2)

Further, the information from the open questions in the questionnaires clearly shows that the higher in rank a teacher is, the better options he/she has for being more active and involved through direct communication:

“Not being a hometeacher, the teacher is alienated from decision making process.” (teacher 5). Or “You should go through the subject coordinators or department heads channels to indirectly communicate your ideas to the head. Together, they are holding the forum in which policy, vision and other matters can be talked over and argued about” (teacher 1)

And the deputy head concludes:

“Overall, the communication channels are working well. Several meetings exist; the subject coordinators/staff team, the department heads/staff team, management team and the management/staff meetings. Teachers should take the opportunity of expressing their ideas and offering their solutions to problems facing the school while at these meetings.” (deputy 2)
SCHOOL '3'

School '3' is an academic school which was established 15 years ago in Herzeliya and belongs to the Ministry of Education. This school has a student population of 217 of which 131 are Russian newcomers. The staff is composed of 41 teachers and non-teaching members who run the school and take care of it. The neighborhood in which the school is located is well kept and has a relaxed environment. The current head arrived in the school in 1996 after being head for five years in another school. From the 1991 meeting minutes it can be learned that the previous head chose the T.Q.M. approach as a result of some problems such as: a lack of clear policy, and problems in creating a cohesive staff. This school was singled out as being 'in danger' because of the high percentage of failures in the Bagrut tests. This situation compelled an urgent change. With the help of an external consultant the leading school team learned thoroughly the T.Q.M. approach and started to implement it gradually in several subjects. At the end of 1993 the whole school adopted the T.Q.M. approach. The change that took place in the school as a result is very noticeable. From being a school of poor achievements and lack of staff cohesion it became one that serves as model so much that it started training new teachers for other schools. ('Zman Hair' newspaper, 2. 9. 2001)

Current staff profile

as indicated from the returned questionnaires.

- Only teachers completed all the returned questionnaires.
- 9% of the respondents have been working at school '3' up to three years; 30% of the respondents have been working at school up to 11 years and 61% of respondents are senior, working 12 years or more.
- 39% respondents have worked in one school, namely school '3'. 61% of respondents have worked in two schools including school '3'. None of respondents have worked in 3 schools or more.
- 74% of the returned questionnaires were completed by women and less than third, 26% of the returned questionnaires were completed by men.
➢ The majority, 74% of the respondents who returned the questionnaires were old-timers and 26% of the respondents were newcomers.

➢ Most respondents 91% hold teaching permanency, 9% of respondents did not hold teaching permanency. As all respondents belong to the teaching staff, it means that 9% of the teacher respondents in this school do not hold a permanent teaching post.

➢ All teachers hold teaching certificates and BA degree. A high rate of teachers, namely 48% have a master degree and 22% have even a Phd degree.

The deputy head confirms that school ‘3’ had implemented the T.Q.M. approach:

“to revive the school by using new approaches, strategies and opening up new horizons.” (deputy 3)

The headteacher adds:

“I came here only when T.Q.M. had started, though I am aware of the quality process the school had undergone and enjoy its ‘fruits’…. As a result of this process, teachers now see every phenomenon from a more general point of view.” (head 3)

Teachers who completed the open questions in the questionnaires confirm the head’s statements:

“As someone who was involved in the T.Q.M. process I can see the general school picture more clearly.” (teacher 1). Or “We have gone a long way towards some qualities of current school performance.” (teacher 2)

Nowadays:

“School ‘3’ blends cultivation for excellent learning and stimulation of creativity in a warm, social and friendly atmosphere.” (‘Zman Hasharon’ newspaper, 2.9. 2001)
Managing T.Q.M.

The following table which shows the extent of school '3' use of techniques and tools may provide an answer to the question about the link between the existing tools and the school improvement.

**TECHNIQUES**

**Table 24 Leadership and Management**

<table>
<thead>
<tr>
<th>The headteacher and SMT</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define and specify all key strategies to achieve school goals</td>
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<td>0.49</td>
</tr>
<tr>
<td>Manage systematic results analysis to prevent failure</td>
<td>4.65</td>
<td>0.49</td>
</tr>
<tr>
<td>Use measurement to improve teaching and learning</td>
<td>4.57</td>
<td>0.51</td>
</tr>
<tr>
<td>Build evaluation into class practice</td>
<td>4.67</td>
<td>0.58</td>
</tr>
<tr>
<td>Produce documentation to consist of standards</td>
<td>4.52</td>
<td>0.51</td>
</tr>
<tr>
<td>Require an appropriate external validation of quality assurance strategies</td>
<td>4.45</td>
<td>0.51</td>
</tr>
</tbody>
</table>

The high mean 4.35 and more given to all the statements in this group shows that the staff strongly agrees with them. Even the standard deviations relating to these statements are not high so it can be said that most teaching and non-teaching staff assume that the school is effective when it deals with identifying difficulties and problems through T.Q.M. tools and also tries to anticipate them. These findings reinforce what was said during the interviews.

In fact, a favourable change took place as a result of the efficient practice of the T.Q.M. tools. School '3' has become a devotee of analyzing evidence statistically. At present, quality is mainly measured by using quantity parameters:
“School welcomes teachers’ surveys and feedback from students regarding the social activities. Statistical analysis of the students’ educational achievements is also constantly used.” (deputy 3)

Or as put by the headteacher:

“Measuring quality is very systematic and constructive. There is an on-going process of feedback on different school elements. First there is evidence collection and analysis and then we draw conclusions. School has deeply assimilated these techniques.” (head 3)

One of the questionnaire’s respondents confirms:

“Guidance, coordination, monitoring and feedback are on a higher level now and have become part of running the school.” (teacher 3)

The deputy head describes the process in details:

“There are three decision making leaders, one for the 10th grades, another for the 11th grades and the last one for the 12th grades. They have a weekly meeting with the hometeachers discussing learning and behavioral issues. The decision making leaders later bring up to date information to their weekly meeting with the management team.” (deputy 3)

Documents of management minutes of meetings have affirmed this process and have revealed that teachers fill in feedback forms on what and how they perform at school.

Another significant change, resulting from T.Q.M. approach is the assimilation of team-based work:
"I presume T.Q.M. has strengthened the team work, allowed to follow closer student’s achievements and to work with students on a more personal level which I believe prevents drop-outs.” (deputy 3)

The importance of team-based work was expressed very clearly in interview carried with the head:

"In the last five years, the emphasis is on more team based work. I also communicate personally with teams to praise their activities and their special efforts.” (head 3)

However, team appraisal seems to be controversial:

"I do not like the fact that both teachers who work very hard and those who do not and even neglect their duties are equally praised and paid.” (teacher 2). Or "I do not like that the school can not get rid of teachers who do not try to contribute and who are obviously a burden.” (teacher 4)
Structure of school 3

The special structure of school '3' may help to closely understand whether this school structure in practice promote teamwork and improvement.
The school structure consists of several circles. In the innermost stands the student and his/her position reflects his/her standing and importance in the school. In the second are duty holders who deal directly with the students and his/her needs whereas in the third and the fourth ones we find the high echelon of duty holders who protect the student and oversee his/her progress although the relationship with the student is less direct and less intensive.

The headteacher in the interview indicates that when he gave his consent to play an important role in the educational system, namely, becoming this school head, he has undertaken responsibility for its quality changes:

"The deputy heads rationalized the T.Q.M. approach so that I could understand it better and could approve the techniques and structure revolution." (head 3)

The deputy head elaborates the change in structure:

"School used to have, prior to the T.Q.M. implementation, a hierarchical structure which consisted of a headteacher, a leading team, a staff, students and parents. Today, the school structure and thoughts center on the student who is encircled by the head, duty holders and different teams as well as parents committee and a student' board." (deputy 3)

The head claims, in the interview, to have strengthened the foundations of the school success by hard work and also by:

"centering on the needs of school unusual population and involving every teacher and worker in being united in common efforts to improve the quality at work." (head 3)

Yet, the head later in the interview remarks:

"Viewing a student as the primary customer is a partial definition. School has a great diversity of customers such as teachers, parents and the Tel-Aviv
municipality and it should cater to everybody's needs and expectations.” (head 3)

School documents confirm that the school is catering to its various customers' needs. There are a few 'Ulpans', Hebrew language classes for the Russian students. Every student is grouped according to his/her level of Hebrew and the length of his/her stay in Israel.

Further, parents are informed about their children:

"Hometeachers make great efforts to strengthen ties with parents and convey all the relevant information.” (head 3)

The headteacher explains that there is a monthly meeting between management team and parents’ committee:

"There is a considerable improvement in parents’ attendance and involvement. I endeavour to harness school parents to improve the school performance though there are language and other objective difficulties when dealing with newcomer parents.” (head 3)

The deputy head adds:

"We have spotted, quality parents who may be real partners and contribute from their experience and richness in areas such as culture and art.” (deputy 3)

However, the open questions in the questionnaire have revealed parental involvement as a controversial issue. Parents are constrained from being more fully involved in decision making process about pedagogical matters because:

"Parents are neither educators nor have they the expert knowledge to make pedagogical decisions.” (subject coordinator 1)
By and large, information from the open questions in the questionnaire showed that the new structure affects the staff:

"The new team-based structure, a more flexible one, had absolutely made communication more simple and made me more receptive to new ideas.” (teacher 3)

The head gives an interesting illustration:

"When preparing last school year plan, I requested teachers to voluntarily help and contribute to the adoption of some new ideas, I received gladly some favourable responses.” (head 3)

Two teachers conclude that the new structure is preferable over the old one:

"The school current structure and ISO 9000 requirements actually meet the school reality. By empowering more duty holders and creating more communication channels the teachers are able to function much better.” (teacher 2). Or "The new structure harnesses teachers to attain a high-standard performance. It is based on consultation and thus enhances commitment and accountability.” (teacher 1)

**Professional working relationship**

The overall picture conveyed from both interviews, with the headteacher and the deputy head, about work relationships is quite positive:

"In our school, the staff works together in perfect collaboration.” (head 3)

Tables 25, 26 present the quality of the relationships in school '3' which may clarify the subsequent link between relationships and school improvement.
### Table 25 Professional Working Relationship

<table>
<thead>
<tr>
<th>In this school teachers:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are committed to working as a team</td>
<td>4.36</td>
<td>0.66</td>
</tr>
<tr>
<td>Regularly discuss teaching methods in detail</td>
<td>4.30</td>
<td>0.70</td>
</tr>
<tr>
<td>Regularly engage in joint planning of new approaches in</td>
<td>4.48</td>
<td>0.73</td>
</tr>
<tr>
<td>some detail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often prepare teaching materials together</td>
<td>4.74</td>
<td>0.45</td>
</tr>
<tr>
<td>Often seek and give each other practical advice about</td>
<td>4.05</td>
<td>0.58</td>
</tr>
<tr>
<td>classroom learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often observe each other teaching and give constructive</td>
<td>2.78</td>
<td>0.80</td>
</tr>
<tr>
<td>feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiencing difficulties receive support from their</td>
<td>4.70</td>
<td>0.47</td>
</tr>
<tr>
<td>colleagues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are constantly striving to improve teaching and learning</td>
<td>4.48</td>
<td>0.51</td>
</tr>
<tr>
<td>Have developed effective strategies for record-keeping</td>
<td>4.18</td>
<td>0.85</td>
</tr>
</tbody>
</table>

Nine statements deal with the team effectiveness and the mode of his performance. Teachers agreed with eight statements which establishes the fact that teams work on a common basis and strive together to find ways and means to improve on the present state. Still there is one area of disagreement and it concerns the observation of lessons. Here the mean stands out as being quite low 2.78 and the standard deviation is quite high, 0.80, in comparison with the others. This probably indicates the lack of consent. In this group another standard deviation, 0.85 regarding developing effective strategies for record keeping, also shows difference of opinion.

Indeed, the professional relationships within the teams seem open and fruitful as the English coordinator testifies to her team:

"I have always thought that the English team is a special one. We always discuss everything openly and friendly. I think we make decisions together, weighing all the pros. and cons." (coordinator 2)
Another teacher supports what it is said about teachers' cooperation:

"We do a lot of team work, cooperating on preparing tests and discussing their results." (teacher 5)

From observing the English team, it seems that the team has also established friendly relations. The first observation of the team was just after celebrating the New Year with a team party. Another observation, with the Bible team, shows the sincere appreciation and gratitude the team has for their subject coordinator. At the end of the first semester, the team brought a cake for the meeting and congratulated the subject coordinator on working so hard and helping everyone.

One teacher has nicely concluded about the relationships within teams:

"I do not think it is normal to devote so much of one's free time to one's work. But still there must be something in the team that attracts and excites teachers so much." (teacher 5)

From the interview which was carried out with the deputy head, the deputy head indicates that the forthcoming, open relationships have a noticeable effect on the educational process:

"What happens within the teams projects itself on the overall work and atmosphere at work. The positive feelings of solidarity and concern among members of the team cause members to work effectively together." (deputy 3)

The deputy head adds that in the last six years the school has become a more pleasant place to work in. A place that does not rest on its laurels but constantly strives for improvement.
Table 26 Professional Working Relationships

<table>
<thead>
<tr>
<th>In the school team you are in: (If you are in several teams, choose one and state which one it is.)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is genuine pride in team membership</td>
<td>4.61</td>
<td>0.50</td>
</tr>
<tr>
<td>Team members are committed to the team objectives</td>
<td>4.43</td>
<td>0.51</td>
</tr>
<tr>
<td>There is good team spirit among the members</td>
<td>4.74</td>
<td>0.45</td>
</tr>
<tr>
<td>Teachers feel happy and satisfied with their work</td>
<td>4.48</td>
<td>0.51</td>
</tr>
</tbody>
</table>

This group includes fifteen statements. Fourteen out of them deal with the staff feelings and they show a high mean starting with 4.43 and this testifies that a strong agreement prevails among the staff. Also the standard deviation does not show a great difference of opinion but indicates that most of staff strongly agree with these statements.

Yet, the professional relationships between the management team and staff focus on support, professionalism and trust:

"I talk formally and informally about professional matters with my colleagues. I would even like sometimes to cut it down." (deputy 3)

The deputy head later in the interview expands:

"I feel socially helpful being useful to the newcomers. The staff is very friendly and cooperative and students are mostly success oriented.... Unfortunately high quality in the educational system is mainly associated with the results of the final exams." (deputy 3)

And the headteacher adds:

"School and teachers are accountable for students' learning based on the attainment of the national curriculum standards which provide a clear and defined framework for teachers' work." (head 3)
Later in the interview, the headteacher explains that:

"The team is self-managed and the members are trusted. Yet, teachers feel that work makes great demands on their time and services. They should meet students and parents requirements and in case of dissatisfaction or failure, they should account for their low achievements." (head 3)

Responses from the open questions in the questionnaire shed light on these relationships:

"I feel that in my class, as a teacher, I have entire autonomy." (teacher 3). Or "I feel that I have the management trust on the pedagogical plane and feel able to express my opinions honestly." (teacher 6)

But other respondents also clarify that:

"I am aware who is in authority here and am willing to accept criticism or additional tasks." (teacher 4). Or "As an educator, I would like more time to work on learning skills and less centering on the final results." (teacher 2)

**School ethos, aims and policy**

The following chapter indicates the current policy and the most significant values in school '3' which may provide an answer to the research question that was raised concerning the link between this issue and school improvement.

The school motto ‘multifarious faces in school means varied opinions and expectations.’ seems to express school ‘3’ policy and aims. School differentiates between its students according to their abilities, talents and needs. This is clearly articulated in the school brochure which is distributed among the staff and students on the first day of the school year:
“School’s main objective focuses on fostering and developing responsible students who take active part in the individual and group learning process. School perfectly understands that there are no two students alike, thereby aiming at developing differential skills and unusual abilities.” (school '3' academic year brochure p. 3)

The deputy head, in the interview, testifies to the implementation of this aim:

“A big achievement is the moving of students to a higher or lower level depending on their success. A lower group often provides reinforcement of the basics to enable them to gradually move forward. I know my students personally because I am in charge of these changes. I watch and guide their achievements.” (deputy 3)

Further, parents are recognized as one of the main forces that may enhance school effectiveness and can assist school in realizing students great potential:

“School regards parental active collaboration as a vital factor in attaining educational aims. School aspires for a true partnership which is based on trust and constant dialogue.” (brochure p. 3)

The headteacher, in the interview, indicates that the school has made great strides to improve parental involvement as illustrated:

“Tel Aviv University and the school have decided to offer parents and staff the opportunity to attend some computer workshops every fortnight. Although this initiative is still a babe, staff reports are positive.” (head 3)

The head adds that the staff is the primary human resource in school and thus the school has focused on staff development:

“The various teams act upon a cooperative learning through meetings and workshops that promote school aims.” (brochure p. 3)
Table 27 School Ethos, Aims and Policy

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The learning is designed on the basis of the needs of the individual student</td>
<td>4.30</td>
<td>0.70</td>
</tr>
<tr>
<td>The school is organized around the needs of individual learner</td>
<td>4.35</td>
<td>0.49</td>
</tr>
<tr>
<td>There is a public commitment continuously to improve the services provided to students</td>
<td>4.30</td>
<td>0.56</td>
</tr>
<tr>
<td>Students satisfaction is regularly surveyed and acted on</td>
<td>4.57</td>
<td>0.51</td>
</tr>
<tr>
<td>The needs of the students' parents are recognized</td>
<td>3.83</td>
<td>0.65</td>
</tr>
<tr>
<td>The needs of the teachers are recognized</td>
<td>3.87</td>
<td>0.34</td>
</tr>
<tr>
<td>'Quality is what the student says it is'</td>
<td>3.17</td>
<td>0.98</td>
</tr>
</tbody>
</table>

There are seven statements in this group and in four of them the staff agrees positively with what it has stated regarding the students' needs, services offered to him/her and follow up since the mean is above four. Nevertheless, there is less agreement concerning the satisfaction of parents and teachers need in two statements. The standard deviation that is the highest in this group of these statements is 0.98 and this testifies that there is a difference of opinion and generally speaking the staff does not agree with the statement that 'quality is what the student says it is'.

The deputy head, in the interview, identifies the link between school policy, school-defined aims and their operative principles:

“At its basis the school consists of students who are basically different from one another. Our school endeavours to meet all needs by providing what is necessary for both Israeli and Russian students. Thus, there are different levels of ‘Ulpan’ classes for the newcomers. Active group-work where differential teaching and learning methods are preferred over frontal and traditional ones is also greatly utilized in classrooms.” (deputy 3)
Table 28 School Ethos, Aims and Policy

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most teaching and non-teaching staff understand the school’s aims and policies</td>
<td>4.30</td>
<td>0.47</td>
</tr>
<tr>
<td>Most teaching and non-teaching staff agree with the aims and policies</td>
<td>4.59</td>
<td>0.50</td>
</tr>
<tr>
<td>Teaching and non-teaching staff are involved in developing the school’s aims and policies</td>
<td>4.17</td>
<td>0.39</td>
</tr>
<tr>
<td>Most teaching and non-teaching staff share a common set of educational values</td>
<td>4.22</td>
<td>0.42</td>
</tr>
<tr>
<td>The school development plan is used to review the extent to which aims have been achieved</td>
<td>4.35</td>
<td>0.49</td>
</tr>
<tr>
<td>There is an explicit equal opportunities policy and this is generally implemented</td>
<td>3.65</td>
<td>0.49</td>
</tr>
<tr>
<td>There is concern to build a learning environment for staff as well as pupils</td>
<td>4.65</td>
<td>0.49</td>
</tr>
</tbody>
</table>

The staff has given a mean above four to six out of seven statements that deal with school policy. The staff strongly agrees that the school policy is very clear and feels involved in the school policy and so supports it. The statement about an explicit equal opportunities policy received a lower score 3.65 although there is no marked difference of opinion and this testifies to the fact that most of the staff does not feel there are equal opportunities for all.

By and large, the findings from the questionnaires indicate that most participants who completed the questionnaires familiarize themselves with school aims. Some of the respondents even claim, in the open questions, to have taken part in articulating them.

The interviews carried out with the headteacher and the deputy head show that senior management team make the key policy decisions but:

“only after the main policy principles have been brought up to the attention of the leaders and subject coordinators for consultation.” (head 3)
The deputy head corroborates:

"staff is offered the opportunity to share policy on the thinking plane. We welcome team leaders to share school future plans... school is well-planned and has drawn up a detailed program at work." (deputy 3)

However, later in the interview, the deputy head affirms:

"Obviously there may be difference of opinion and the deciding vote is of the head." (deputy 3)

Furthermore, the school seems to have a clear oral and written feedback policy:

"The information from the various staff meetings about students' results and policy matters passes orally from team leaders back to the management team, so that changes can be made if necessary." (head 3)

Another way used to gain feedback is via ISO 9000 requirements:

"The decision to apply ISO 9000 requirements was made as we have aspired to commit ourselves to the quality process. Although this process consists of recording all school procedures and activities and some obviously find this a burden, it is vital in every organization." (head 3)

Documents clearly confirm the constant use of ISO 9000 requirements. School has a thick file of ISO 9000 papers to fill in about different school activities such as cultural event forms. The deputy head elaborates:

"The librarian checks the completed ISO 9000 papers, marks the most important findings and shows them on a chart, thus enabling the decision making leaders to discuss these findings and draw the necessary conclusions." (deputy 3)
The head concludes:

"I attribute great importance to the pedagogical area, but the core idea of the school is achieving a positive, organizational culture. One which endeavours to cater differentially to students’ pedagogical and emotional needs in its entirety… I presume it is no coincidence that the school has a great teachers committee that fosters a relaxed and healthy culture" (head 3)

Indeed, observing the management team and the English and Bible teams, it seems that there is a relaxed, quiet atmosphere that projects itself on the teams and their quiet, respectful way of speaking. Or as one teacher put it:

“Atmosphere of support and openness reigns in our meetings and positively affects us.” (teacher 4)

Leadership and management

The following section presents the leadership style and methods by which school '3' is run. The in-depth examination of this subject may provide helpful data about the current leadership and its link to improvement.

From the interviews it seems that the headteacher and the deputy head have a clear vision about how they would like the school to be:

“This school should station itself strategically among the best academic schools in the area. Thus, the school should convert students dreams and hopes into facts and also avail students of their natural gifts, T.Q.M. techniques and every opportunity in order to be prepared for the modern world.” (head 3)

The deputy head adds that:
"School endeavours to raise the banner of realizing the individual potential through students involvement, developing teaching and learning skills and teachers' high expectations to achieve the school goals." (deputy 3)

This vision is conveyed through school's documents and through the various meetings, especially when subject coordinators meet with their teams:

"The school aims at high quality in order to achieve superior accomplishments. Subject coordinators are the actual agents of change that help the school to enhance achievements by approving the school vision and aims and subsequently lead the staff." (head 3)

Comments from the open questions in the questionnaires confirm that:

"Being explained thoroughly, the vision becomes more understandable and sometimes mine" (teacher 6). Or "We learn about the vision in teachers' meetings, different instructions and papers, personal talks, team leaders and organizations explain a lot too." (teacher 7)

**Table 29 Leadership and Management**

<table>
<thead>
<tr>
<th>The Headteacher</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides a clear sense for the core purpose of the school</td>
<td>4.83</td>
<td>0.39</td>
</tr>
<tr>
<td>Provides known, shared and understood vision</td>
<td>4.50</td>
<td>0.51</td>
</tr>
</tbody>
</table>

In the group that deals with the head performance there are two out of fifteen statements that concern the school vision. In these two statements the mean is very high 4.50 and 4.83 and this shows almost a total agreement among the staff, namely that the vision is clear and shared. Also the standard deviations 0.39 and 0.51 show that there is no great difference of opinion among the staff concerning these statements.

The head seems to show qualities of leadership. He testifies to the fact that he is in charge of coordinating various teams efforts and deeds to increase effectiveness:
"I do my best to assist the different teams to perform well. Broad, diversified training helps to improve staff learning and teaching methods and special solving problems courses for team leaders help to qualify them better for their tasks." (head 3)

In addition, the link between representatives of the parents' population and the school constantly comes under review. The deputy head claims that the head seeks ways for both school and parents to coexist peacefully, respectably and understandably. Hence:

"school has continuous, proper relationships with parents. The headteacher makes great efforts to respond positively to parents suggestions." (deputy 3)

**LEADERSHIP STYLE**

The deputy head, in the interview, states that everything teachers do since T.Q.M. implementation, is mainly motivated by the desire to revive and improve the school performance:

"The inner core of the T.Q.M. flame is still fuelled by the head. He pays attention to staff, listens to their opinions and may sometimes change his plans to make them suitable for new needs and conditions and thus harnesses teachers to devote their time and energy for the on-going improvement process." (deputy 3)

**Table 30 Leadership and Management**

<table>
<thead>
<tr>
<th>The Headteacher</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is easily accessible to staff</td>
<td>4.43</td>
<td>0.51</td>
</tr>
<tr>
<td>Is open to other people's ideas and suggestions</td>
<td>4.59</td>
<td>0.50</td>
</tr>
<tr>
<td>Provides excellent leadership for the school</td>
<td>4.30</td>
<td>0.63</td>
</tr>
<tr>
<td>Regards planning central to management processes</td>
<td>4.65</td>
<td>0.49</td>
</tr>
<tr>
<td>Promotes teaching and non-teaching development</td>
<td>4.43</td>
<td>0.51</td>
</tr>
</tbody>
</table>
Six out of fifteen statements in this cluster deal with the attitude of the head to the staff and its needs. All these six statements have received a very high mean starting with 4.22 and this indicates that the staff strongly agrees with the fact that the head in this school is a leader who is open to the staff opinions and is accessible when there is a need. Also the standard deviations are not high and this shows that most of the staff members chose to agree or strongly agree with these statements.

The headteacher, in the interview, repeatedly stresses that support and empowering the staff are vital for the success of the school:

“Although I am in a position to dictate my demands, I believe teams should have complete autonomy. Teams have the ability to decide, plan and act accordingly.” (head 3)

The deputy head elaborates:

“Any initiative, any personal approach based on professional skills and experience is encouraged. I am sure the teams will be backed up by the headteacher in many solutions they have offered personally.” (deputy 3)

A response from the open questions in the questionnaires confirms that:

“Teachers work hard and are willing to work harder.” (teacher 4)

Another teacher provides a possible explanation:

“The staff manifests care and efforts maybe because we, the Russian teachers, who consider this school our only shelter and employer.” (teacher 6)
These findings reveal that the headteacher is perceived as a 'leader' who directs the staff. Yet, the headteacher seems reluctant to accept this definition and prefers the 'educational guide' definition.

The staff and deputy head show their appreciation to the headteacher by:

“being cooperative and accessible, staff shares the management burden and thus enhances the overall effectiveness... teams are highly qualified and motivated to work harder, sometimes without financial stimulus.” (deputy 3)

The responses from the open questions in the questionnaires indicate that staff also perceives the headteacher as a ‘workaholic’ (teacher 7), ‘he always thinks ahead’ (teacher 6), and as ‘someone to follow in his footsteps’. (teacher 4). Or as put by another teacher:

“The head’s thoughtful and generous manner and his hard work filled us with enthusiasm and motivation.” (teacher 8)

The deputy head expands:

“The headteacher can serve as a perfect example for us. Being serious at work, open and supportive of his staff, he is worthy to be followed.” (deputy 3)

Observations of the English and Bible teams show systematic planning of the meeting’s aims and targets. The atmosphere seems calm and friendly and yet teachers can raise unfavourable criticism:

“Anybody can come up with his/her criticism or initiative and it will be considered.” (head 3)
Structure, decision making and communication

The school structure was reconsidered and changed as a result of the T.Q.M. implementation (see p. 220) and has become a student centered and a team-based one:

"This structure characterizes the method in the way teams do their duties. It has enhanced cooperation and communication and has assisted teams in assimilating a set of techniques and actions performed intentionally in order to reach better achievements." (head 3)

The deputy head elaborates:

"The new structure represents different sections of the school. It seems that the head has approved the team based structure in order to erase the pyramidal structure, has improved participation and has empowered the members to plan, perform and improve the work towards the school goals." (deputy 3)

And the heateacher, later in the interview, adds:

"I certainly hope that this structure offers our staff the vehicle in which they can meet, discuss problems and share with colleagues insights relating to the national curriculum and teaching methods, thereby enriching their methodological experiences." (head 3)

Table 31 Structure, Decision Making and Communication

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The structure and processes are team based</td>
<td>4.48</td>
<td>0.67</td>
</tr>
<tr>
<td>The proportion of women in the staff is reflected in the number of managerial positions held at school</td>
<td>4.65</td>
<td>0.49</td>
</tr>
<tr>
<td>The proportion of newcomer teachers is reflected in the number of managerial positions that they hold</td>
<td>3.09</td>
<td>1.00</td>
</tr>
</tbody>
</table>

256
Out of three statements in this group of statements that relate to the school structure, there are two that relate to the processes built on team-work and to the number of women in the senior management staff. These statements received the following high means 4.48 and 4.46 and so there is a high general agreement with the statements. Also the lower standard deviations show that most of staff agree or strongly agree with the statements. Nevertheless, the statement that relates to the number of newcomers in the management team received a mean of 3.09 and this shows that the staff does not fully agree that newcomers have the same weight as the old-timers in the management team. Also the standard deviation for this statement 1.00 indicates that teachers don’t agree with each other.

Some teachers’ responses from the questionnaires show that the staff is pleased with the current structure:

"The team-based structure works well for me. I work collaboratively with colleagues and feel a lot of support and feedback.” (teacher 4). Or “As a result of the new structure, I feel more empowered and encouraged to experiment and try things out.” (teacher 8)

Another English teacher praised his/her team saying:

"I belong to several teams. Regarding other meetings, the English team meetings are well organized and to the point.” (teacher 6)

Yet, one teacher had some reservation about the different meetings:

"There is often a repetition of the same issues which are already discussed in general meetings and in our meetings with the subject coordinators.” (teacher 9)

Table 32 Structure, Decision Making and Communication

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers feel that they have a share in major decision making</td>
<td>4.48</td>
<td>0.59</td>
</tr>
</tbody>
</table>
Teams are ready to accept the responsibility which goes with shared decision making

Decisions are made by expert knowledge
Meetings are usually purposeful
Meetings are usually well chaired

Five out fifteen statements which are included in this group deal with the decision-making process. The high mean score for these five statements is above 4 and indicates that the staff agrees or strongly agrees with these statements. Also the standard deviation does not show any great difference of opinion.

The findings from the questionnaires reveal that the staff takes an active part in the decision making process:

"By and large, everybody has contributed towards the school success. Teachers particularly have a prominent share in decision making process." (deputy head)

The final decisions, the deputy head explains, are made in the weekly meetings between the head and his deputy heads. However, when subject-coordinators report that the staff have voiced strong objection relating to the school's core issues, the pedagogical deputy head arranges a general meeting where the controversial points are brought forward for a deeper review:

"We endeavour to feel the staff pulse through their meetings with subject-coordinators. When the need for clarification of curriculum and policy matters arise the teachers' committee is asked to appoint an evening for a general meeting where issues can be reconsidered." (deputy 3)

Table 33 Structure, Decision Making and Communication

<table>
<thead>
<tr>
<th>In this school:</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers generally feel informed</td>
<td>4.60</td>
<td>0.50</td>
</tr>
<tr>
<td>Teachers are regularly briefed by the senior management team about day to day issues and news</td>
<td>4.30</td>
<td>0.47</td>
</tr>
</tbody>
</table>
Communication within the teams is an open-relaxed communication 4.74 0.45
Communication between the teams and the rest of the school is an open-relaxed communication 3.83 0.65

Four out of the fifteen statements in this group deal with direct and indirect communication. Three out of these statements received a mean above 4 and this indicates that there is a great agreement among the staff. The statement that relates to the communication between teams received a lower mean 3.83 and this testifies to the fact that communication between teams according to the leaders’ opinion is not as open and relaxed as within the team. The standard deviations of these statements are not very high and this show that most of the staff members gave similar answers with no great diffusion.

Overall, communication is robust, open and honest within the teams and between the teams. The teams communicate mainly through various meetings; staff general meeting, subject coordinator/staff, subject coordinator/deputy heads, hometeachers/decision making leaders and deputy heads/headteacher:

“Quality meetings are the way of improving communication and the means of enhancing effectiveness.” (head 3)

Responses from the open questions reveal that:

“Any teacher can communicate with a student, a corresponding hometeacher, his/her team mates, his/her subject coordinator, decision making leaders, deputy heads and a headteacher.” (teacher 7)

Another teacher pointed out that:

“All the channels are always available and well organized, how efficient the communication is depends on the teacher and the other party.” (teacher 8)
The headteacher, in the interview, provides the researcher with a better understanding of the communication means at school:

"We endeavour to balance between communication through papers and memos and communication through meetings and talks." (head 3)

Thus, the headteacher elaborates that the school uses additional means as well as meetings. Before making decisions about key issues, the minutes of the last meeting are distributed to the staff for deeper review and consideration. Likewise, important notices and updated information are posted on the teachers' bulletin board and on the students' notice board when relevant. In addition, at the beginning of every month hometeachers distribute 'the month paper' to their students. There, the student is notified about future social activities and special events and is asked to convey this information to his/her parents. Nevertheless, the headteacher is not always pleased:

"I feel that the school should enhance communication between students, parents and teachers. Students are to be more involved and active in the school... I aspire to increase mutual respect between students and teachers." (head 3)

**SUMMARY OF THE MAIN FINDINGS**

The changes which occurred in the three schools under study relate to four aspects of management: school leadership, school culture, the partial success of the T.Q.M. techniques implementation, the values which the schools focused on. An additional factor that was identified in the process of the study was that of the Russian newcomer students.

The main changes have occurred on the organization-pedagogical level. Here the schools aims were well defined and understood, hence the curriculum was adapted to the aims. Likewise these schools have succeeded in empowering the team leaders who were given many decision-making powers and thus they have flattened the organizational structure. This was done in order to encourage cooperation and meaningful creativity among the staff.
An additional finding is tied with the deep change which took place in the school culture in these three schools. Consequently to the transition from the culture of fear and lack of motivation to one which is relaxed, open and supportive the schools' performance was greatly improved. As a result, the schools' standing and reputation were also changed. These once failed schools which were on the verge of closure and had to struggle daily in order to survive suddenly were transformed through the introduction of the T.Q.M. into prestigious schools which attract many students even from far away.

Even the parents' active involvement was revealed as a supportive mechanism to gain a better school culture which promotes the optimal student performance. Sometimes though parents have overdone it according to the view of part of the staff.

The implementation of T.Q.M. approach has also considerably influenced the working techniques by which schools operate. The three schools have focused to various extents on team-work, statistical measurement of achievements, on frequent feedback in order to forestall problems, and especially on the individual needs of the learner.

However, the implementation of T.Q.M. has raised some reservations and difficulties such as defining the customer, the product and the appropriate ways of operating in the educational setting. Later on it was found that the T.Q.M. approach was very effective in improving the problematic situation in which the schools were placed and responded well to the integration of the Russian newcomers. Still, today it is quite clear that schools have selected from this industrial approach only the appropriate elements for the educational system. It seems that schools found it difficult to continue the use of the old way of implementation, namely the adoption of Deming's (1986) fourteen principles as a whole.

The overall picture will not be complete without emphasizing the role of the Russian immigrants. The success of the schools was tied to a great extent to the unique
composition of the schools' body and to the students and their parents’ values: high expectation, perseverance, diligence and performance.

The next section - Data Analysis will delve in the findings while attempting to explore the possible link between these inner schools’ processes and the T.Q.M. approach. In addition, it is the researcher attention to explore the links between the data, which has been outlined in the theoretical perspectives outlines in the literature review section of the thesis, in great detail.
Chapter 7 - DATA ANALYSIS AND DISCUSSION

INTRODUCTION

This chapter analyses the research findings from several angles. First, it examines whether the three schools are run effectively regarding issues such as leadership and culture. Secondly, it examines whether the T.Q.M. approach is the means towards these schools' improvement and all the while it tries to explain these findings. Unlike the previous chapter where the findings were presented according to the questionnaire subject order, in this chapter the data analysis is presented by the key elements of T.Q.M. The researcher has depicted three schools that are run according to the T.Q.M. approach and has concentrated her attention in several major management and leadership themes. The key elements of T.Q.M.: Leadership, Culture of drive out fear, Team-Based work, Problem Prevention, Student-Centered approach, Working Relationship and Aims and Values are investigated. The predominance of Russian students does not belong neither to T.Q.M. nor to Effectiveness or Improvement but is added after emerging as a vital variable in the pilot study.

The first section deals with leadership. In a school run according to the T.Q.M. approach, it is expected that there will be a leadership style that emphasizes the head's ability to delegate powers with the intention of having as many staff members sharing the management burden and participating in the decision-making process as possible (Leithwood et al, 1999). This empowerment conveys a new spirit of self-belief in staff ability, and belief in the school aims and the changes taking place in it (Barth, 1990). A school which is run effectively embraces the collegial leadership. The SMT has especially emerged as 'a crucial additional element in providing a clear direction for the school' (Duncan, 1999 p. 31). This chapter examines the extent to which this leadership style has indeed taken root an improved these schools and what is its relation to the T.Q.M.
The following section deals with analyzing the findings related to the school culture. Special attention is given to the element of 'driving out fear' which has been revealed as a dominant one. Also the teams' behaviour and their working relations with the different echelons in the hierarchy and the staff members' feelings are scrutinized. Work norms which were developed in the three schools and are valid today are identified through characteristics such as collegiality, cooperation and consultation which emphasize the management culture. Thus, the transition from the traditional way to the more team-based work and the degree of acceptance seems important, namely whether the teams structure is based on the T.Q.M. principles and 'puts everyone in the company to work to accomplish transformation' (Sallis, 1996 p. 42). It was examined whether partnership, collegiality, and effective communication help to enhance a quality culture, attain the school aims and to increase the school quality. If a school is run effectively, a quality culture should prevail there. Finally, the issue of flexible and collegial leadership in an open atmosphere which adjusts itself effectively to changes according to the T.Q.M. approach is also examined regarding its effect on improving the three schools.

The third section analyses three main areas which are directly connected to T.Q.M. principles and can enhance school quality. In the first place the chapter examines the attitude in the school towards the primary customer, namely the student. The research examines whether the student-centered approach has been established in the three schools and also to what degree. In addition, the role a student-centered approach plays in fostering the academic accomplishments is examined. In next section work techniques which are applied to the schools are examined. There is an attempt to try to understand the link between the use of these tools and problem-prevention which constitutes one of the main features of the T.Q.M. The final section analyses the general and the working relationships in these schools as being part of the atmosphere which can either hinder or advance the school progress.

Section four of the data analysis examines the tendency of the three schools to give priority to the aims which leads to school improvement and effectiveness as well as the tendency to adjust the school curriculum and teaching methods, especially on the
practical level, to the school aims. In addition, the school steadfastness to their aims, as they were articulated by management and staff, is examined.

The last section of data analysis relates to one of the most important variables which is shared by the three schools, namely, the high percentage of Russian students. This chapter examines whether there is a link between the massive presence of these students who have joined these schools in the last decade, their outstanding characteristics and the intellectual atmosphere which was created in these schools. Perceptions of the strength of this link are examined as well as to what extent the atmosphere created thanks to this population has helped to increase the school quality and effectiveness.

**Leadership and management**

This section focuses on different aspects which have been raised in this research concerning the prevailing leadership style in the three schools under study and the influences of this style on the schools inner processes. The views of the staff and how the deputy heads perceive the headteachers is considered. The researcher also elaborates, from the heads viewpoint, their contribution to managing and leading the staff, enhancing school effectiveness and improvement.

**THE HEADTEACHER AS A LEADER**

Sergiovanni (1995) claims that headteachers in effective schools have the capacity to 'make the difference' through their abilities to 'transform' values to other colleagues. The effective heads are presented as:

"leaders [who] are responsible for establishing and ensuring high standards of teaching and learning in their subject. They play a key role in monitoring, supporting and motivating other teachers of the subject and in setting targets for professional development and improvement. They are critical to school improvement, playing a major role by contributing to policy development at
subject and school level and by evaluating impact on teaching and learning.”

(Teaching Training Agency, 1996 p. 6)

This research as well as previous ones (Bush et al, 1994; Leithwood et al, 1992, 1999; Pasternak et al, 1994) underlines the findings which indicate that strong but supportive leadership has a vital influence on school improvement and on the possibility of introducing changes. The leadership in the three schools was found to be mainly transformational although at times situational. Usually the head is the dominant figure which brings changes about. However, he/she will be helpless to effect these changes unless he/she gets support and assistance from the school staff:

“a genuine belief that their staff members as a group could develop better solutions than the principal could alone.” (Leithwood, 1992 p. 11)

The qualitative findings in these schools have revealed that, in order to successfully apply the T.Q.M. approach, some necessary steps have been taken by the heads. An effort has been made to expand the circle of decision-makers by adding qualified teachers to it. It was necessary also to provide them with adequate tools through staff development in order to lead the various teams:

“The immediate aim is to improve the performance of those with teaching and management responsibilities.” (O’Neill, 1994 p. 9)

On the operational level, the heads have reduced the clumsy and complex school organizations into small autonomous units, namely the school teams. Subject and class coordinators, and department heads were placed at the top of those teams. As a result, the management has become an enlarged one in which decision-making powers are delegated to the teams heads which therefore share the management burden. Or as one coordinator from school 'l' put it:

“As a subject coordinator, I enjoy a certain amount of leeway and can work autonomously.”
Also evidence from school '3' confirms that:

"I think we make decisions together, weighing all the pros. and cons." (English coordinator)

Indeed, evidence from the open questions and the team data reveal that mainly pedagogical decisions are taken together, namely, by the staff and its coordinator. Beare et al (1992) endorse collaborative decision-making where leaders:

"give staffs more authority over curricular decisions and allocation of building resources." (p. 358)

From the literature (Bolender, 1997; Sergiovanni, 1992) it is clear that the flattening and the expanding of the organizational school pyramid and thereby the delegation of powers can illuminate from different angles the performance of the head. The documents and interviews show that a profound change has occurred subsequently to T.Q.M. implementation in the way the heads perceive the management role. It is clear that the heads to a larger or lesser extent work to lead more than to manage the schools. For example, the heads of the three schools maintain ties and interaction between the various factors in the school, they reinforce and gratify the staff and they also set a personal example. The next table shows the responses of the questionnaires in the three schools concerning the way heads lead and manage the school.

<table>
<thead>
<tr>
<th>Table 34 - Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LEADERSHIP AND MANAGEMENT</strong></td>
</tr>
<tr>
<td>The Headteacher</td>
</tr>
<tr>
<td>Provides a clear sense for the core purpose of the school</td>
</tr>
<tr>
<td>Provides known, shared and understood vision</td>
</tr>
<tr>
<td>Is regularly seen around the school</td>
</tr>
<tr>
<td>Provides excellent leadership for the school</td>
</tr>
</tbody>
</table>
Regards planning central to management processes

Has a structured dialogue with each member of staff at least once a year

Can be relied upon to support the teachers in a crisis

Often communicates personally with pupils to praise special effort

<table>
<thead>
<tr>
<th></th>
<th>4.28</th>
<th>0.57</th>
<th>4.13</th>
<th>0.72</th>
<th>4.65</th>
<th>0.49</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>3.44</td>
<td>0.86</td>
<td>2.81</td>
<td>1.15</td>
<td>3.00</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>4.00</td>
<td>0.49</td>
<td>4.03</td>
<td>1.25</td>
<td>4.09</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td>3.39</td>
<td>0.50</td>
<td>3.00</td>
<td>0.73</td>
<td>3.68</td>
<td>0.48</td>
</tr>
</tbody>
</table>

The three heads received a mean higher than 3.60 in relation to twelve out of fifteen statements about leadership. This reveals that the staff has given a high score to the heads and the staff agrees or strongly agrees with these statements. However, there are three exceptions concerning the interaction between teams and heads, staff and heads or between them and students. One possible hypotheses is that heads in these schools have empowered the different coordinators and department heads in order to manage the teams. The delegation of decision-making powers entails commitment and accountability. It is quite possible that heads expect that the decision-making leaders assume responsibility also in regard to personal communication with team members as well as with students whom they are in charge. This hypothesis may also explain the high means 3.61, 4.03 and 4.30 which the statement about the head providing excellent leadership has received. On the face of it there is a contradiction between the way the staff perceive the head as an excellent leader and the perceived lack of good communication between them. However, in such a large school the institution can properly function only through an enlarged management and teams without having to maintain a direct personal communication with each member of the team.

 Nonetheless, there are some differences. It is clear that in school '3' the head is undoubtedly perceived as a leader with exceptional qualities. This can be inferred from the fact that thirteen out of fifteen statements relating to him received a high mean of 4 or more. In school '2' only eight out of fifteen statements received a mean of 4 or more and in school '1' even less than the previous ones. Here only seven out of fifteen statements receive a mean of 4 or more. One possible explanation for this
difference may be the school size. School '3' is relatively small and has a small staff as opposed to the other schools. A smaller staff enables a better communication between the various factors on the school and allows its members to have closer ties with their head. Zavida (2000) explains that:

"Class size and school size allow personal relations between teachers and students." (p. 6)

The findings also show that the presence of the head is strongly felt in the school and that the school has a clear, understood vision which is shared by staff and management alike. This backs up the T.Q.M. approach which calls for:

"significance and responsibility of every employee to be recognized in an organization's pursuit of its mission." (West - Burnham, 1997 p. 122)

Additionally two statements indicate that 'the planning processes by the head' and 'the staff can rely on the head in time of crises' are central in schools '1' and '3'. However, the standard deviation 1.25 in school '2' which stands out indicates that in this school there is a difference of opinion among the staff concerning this statement.

The interviews with heads and deputy heads provided a deep overall picture of the school leadership and it is possible to triangulate between the findings of the questionnaires and those of the interviews. The deputy heads testified that the heads lead the staff and also run the school in cooperation with a large group of people. They add that although the head makes the final decisions it is done only after consultation with the teams' leaders who bring along the views from their teams. School '3' stands out especially in using consultation since when there is a sharp disagreement about the school core issues the school organizes a special meeting between the teams and head in order to clarify the points and to read an acceptable decision. Hopkins (1994) concurs with this strategy:

"The school's current priorities should reflect its main purposes and its vision, and be generated through consultation." (p. 79-80)
In effect, correction of errors contradict the T.Q.M idea of interpreting quality as 'zero defects' but rather accept Nightingale et al (1994) idea that 'mistakes are O.K.' The head of school 'I' agrees with the latter idea:

"Everyone is prone to make mistakes and if criticism is factual and relevant I will be glad to receive it."

In general, documents support the fact that the leadership style in these schools tends to be transformational. It seems also that heads tend to articulate clearly and accurately the school vision and policy. Usually they also enable the teams to offer their remarks and reservations. The heads, when interviewed specified that they do not impose top-down instructions but strive to reach a consensus and cooperation in order to achieve commitment and to encourage every teacher to contribute from his/her abilities and talents to the schoolwork.

However, since three different schools are concerned it is obvious that the style and the ways of operating by which the schools are run differ from one head to another. For example, head 'I' has switched under the influence of T.Q.M. from centralized leadership style to a decentralized one. As a result, there is a team which runs the school together with him and therefore he can find more time to invest in the staff and to participate regularly in staff development activities. However, he finds himself at times operating as an authoritarian head:

"I still strive to be a leader who shapes and gratifies. In my opinion, the leadership style must be related to the real situation of the school. At times it has an air of authoritarianism. I am not consistent in this respect." (head 1)

Coleman (1994) supports the idea that:

"appropriate and successful leadership style and behaviour will vary in different situations." (p. 59)
The head of school '2' by contrast chose to work hard and set a personal example by being himself a teacher and also a hometeacher:

"My working day is very long for I am immersed in many tasks. I believe in serious work, done scrupulously and methodically." (head 2)

Tzuk (1995) explains that the development of the notions of transformational leadership point toward a leader who is away from the autocratic or the 'laissez-faire' style of leadership but rather as one of whom much is demanded.

Similarly, the third head chooses to work hard and long hours and also sets an example to be followed by the staff:

"The headteacher can serve as a perfect example for us. Being serious at work, open and supportive of his staff, he is worthy to be followed." (deputy head 3)

From a T.Q.M. point of view, creating a management structure and culture that will drive Deming's 13 points, seems a primarily factor to reach a quality management.

Moreover, the head's character affects their leadership style and obviously the dominant head traits affect the teams. Or as Murgatroyd and Gray (1984) put it:

"Leadership is not about skills, rules or procedures but about the person and the quality of their relationship with others." (p. 47)

The responses for the open questions in the questionnaires support what has been said above and they provide a detailed picture concerning the head's character and this elaborates and confirms what has been learned in the interviews. In school 'I' the findings show that the head is a considerate and warm person, he is a man who can listen and consult with people and if necessary he explains things and convinces people:
'he is a warm person, very cordial and sensitive, who believes in a quiet atmosphere in order to achieve results' and 'there is almost no friction which can not be resolved in the positive atmosphere that he generates'. (two teachers)

Harris et al (2001) support such relationships:

"one of the most important aspects of interpersonal relationships is the quality of trust and respect between leaders and their colleagues." (p. 5)

Or as one subject coordinator from school 'I' put it:

"As a subject coordinator... at times my worked is checked and if mistakes were made, he will go to lengths to explain to me where I went wrong."

This latter finding rejects Crosby's (1979) idea that quality means 'right the first time' but again agrees with Nightingale et al (1994) definition that:

"Mistakes must be a source of a new learning experience and of progress." (p. 165)

But, when it comes to work patterns the head is perceived and he perceived himself as person who is decisive and very earnest in his work:

"He is rather a tolerant person, open minded and also very meticulous. Everything is well - planned with him before he brings it to the forum. He has a well organized staff work." (deputy 1)

These findings corroborate the head's words that he lacks a unified leadership style but generally speaking he favours the decentralized leadership style.

The T.Q.M. approach supports such a decentralized leadership that eventually leads to 'break down barriers' between everyone working in the organization.
In school '2' the findings show that the head is dynamic, caring and when problems arise he acts on behalf of the staff welfare. This head is also perceived as a well-organized person and a good planner:

"Everything he does is well-organized and well-planned." Or "He is dynamic, hard working and really cares for the students and teachers." (two teachers school '2')

These findings reinforce the opinion of the deputy that the head strives to inculcate to the staff work norms of planning, organization and assumption of responsibility through caring and healthy relationships. It seems that these two heads show concern for their relationship with people. This correlates with the T.Q.M. tenet that:

"above everything else, it [T.Q.M.] is about the quality of personal relationships." (West - Burnham, 1997 p. 9)

In school '3' the findings show that the head is perceived by the staff as being a strong, leading figure. He is:

'a workaholic', 'he always thinks ahead', and 'someone to follow in his footsteps'. (three teachers school '3')

But also as a person who can listen to the staff opinion and he is enough open-minded to make changes in prepared plans when and if the need arises:

"The inner core of the T.Q.M. flame is still fuelled by the head. He pays attention to staff, listens to their opinions and may sometimes change his plans to make them suitable for new needs and conditions." (deputy head 3)

In effect, this head also:

"might have behaved situationally as a manager, facilitator, counselor or change agent depending on circumstances" (Stoll and Fink, 1996 p.192)
These findings reinforce the opinion of the deputy that the head indeed leads the school although the head himself does not see himself as a leader and he chose to define himself as an educational guide.

It seems that all the three heads 'work through people' and have adopted a new style conception of leadership which highlight the humanistic side of education. This style is a combination of the transactional and transformational leadership, or as Duncan (1999) put it:

"a more rounded and flexible professional who could be both leader and manager." (p. 40)

The research findings emphasize the role of the leadership and tie it to a large extent to the personality of the head. From a T.Q.M. point of view, there is a dispersed leadership among the staff and an attempt to regard everyone as a leader. The image of the heads in these schools indeed was revealed as being a dominant and decisive one in assimilating the change and in the school performance. The heads' qualities, that were mainly highlighted in the open questions by their staff, were perceived as being open and flexible, being warm and sensitive to the needs of the teachers, and being able to motivate others.

It seems from the interviews and open questions that the headteacher is not overly concerned with formality, nor with the issue of his own status. For example, the head exhibits a willingness to listen and support the staff. The head also tends to adapt regulations to changing conditions and situations, a style which is supported by the literature (Bush et al, 2000). Even when there is a lack of consensus among the staff, the heads in schools '1' and '3' permit remarks and observations on condition that criticism is constructive and valid. This behaviour of the heads probably creates closeness and understanding and facilitates the managing of the staff as opposed to the style of imposing top-down instruction and underestimating the opinion of the staff. The quality approach also refuses to accept the 'top-down' structure. Lewin
(1999) identifies 'a balance between top-down managerialism and collegiality' (p. 1) as potentially important in creating effectiveness.

Another important trait, caring and understanding the teachers, namely the internal customers, is perceived by the staff as a positive one in the behaviour of all three heads. It seems that the heads relate to the staff in a friendly manner and try to solve even personal problems in order to support the teachers and to help them to carry their duties. The heads are perceived as people who go beyond measure to take into account the teachers needs. This view corroborates Deming's philosophical approach that:

"Quality should be aimed at the needs of the consumer, present and future."

(Deming, 1986 p. 42)

For example, staff development activities are organized for the benefit of teachers in order to improve their teaching performance and this contributes to enhancing work satisfaction. Or, the head sees to it that the welfare of the teachers is taken care of through the school active teachers' committee which looks after the social needs of the staff and families. Liston (1999) relates to such management as the quality management which emphasizes:

"the collective plans, activities and events established to ensure that a product, process or service will satisfy given needs." (p. 159)

Another dominant quality that the staff considers, is the head's behaviour pattern, his personal example and his working devotion as a means which promotes motivation to improve the school performance and to generate greater dynamism and involvement. Ross (1994) explains that:

"at the heart of T.Q.M. is the concept of intrinsic motivation – involvement in decision making." (p. 121)
The heads are perceived as leaders who do their utmost even at the expense of their private lives. The heads involvement in various school aspects and their responses to issues communicate to the staff a high degree of enthusiasm and faith that it is always possible to continually improve the school performance.

It seems that the three heads follow Sergiovanni's (1992) and Tzuk (1995) goals of transformational leader:

- to commit to core values that are agreed to and acted upon by all staff,
- to practice the ethic of caring, (p. 3)
- to establish a clear vision and sense of direction with the staff,
- to encourage more collective style decision-making.

They hold that working relationship should be collegiate since it was revealed as a crucial factor in assimilating the T.Q.M. approach in the school. Through the cooperative planning of the vision and school policy the head has achieved a general agreement and motivation on the part of the teams members on the various levels of the flattened hierarchy. It also achieved a high degree of coordination between the various teams in the school. Sergiovanni's (1992) calls it the transformational leadership which endeavors to empower staff, shares leadership functions and develops teachers' own qualities and the relationship between them.

Sammons et al (1995) concludes that schools that are effective and have the capacity to improve are led by headteachers who make a significant and measurable contribution to the effectiveness of the staff.

VISION AND LEADERSHIP

Coleman (1994) emphasizes the need for a headteacher to have a vision before qualitative changes are implemented:
“It is essential that the leader of a school has a vision or mission for the institution and that the leader can transmit their own commitment into one that can be shared by others.” (p. 64)

The three heads were asked in their interviews whether they share a vision and how they communicate it to the staff. They indeed harbor a clear and well-articulated vision which is communicated to the staff in two ways. A direct one by the means of leaders and meetings with the head and an indirect one, through the school brochure and notes in the staff boxes. In order to materialize the vision and the school policy the findings indicate that in all three schools great efforts and considerable resources are devoted to increasing the number of students who are entitled to sit for the 'Matriculation' exams and in order to raise the exams average results. High achievements are considered as a main aim by the staff as well as by the management. However, some teachers in the open questions testified that there are high expectations on the part of the management which create a certain amount of pressure which translate into follow-up of accomplishing the given task. Thus, Duncan (1999) claims that:

"embedded in this aphorism is the notion that change for the better is complex and problematic, seldom occurring without struggles or tensions." (p. 35)

The following table presents the way the staff perceives the school vision.

<table>
<thead>
<tr>
<th>SCHOOL ETHOS, AIMS AND POLICY</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this school:</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Most teaching and non-teaching staff understand the school's aims and policies</td>
<td>4.11</td>
<td>0.32</td>
<td>4.09</td>
</tr>
<tr>
<td>Most teaching and non-teaching staff agree with the aims and policies</td>
<td>4.06</td>
<td>0.24</td>
<td>4.34</td>
</tr>
</tbody>
</table>

277
Teaching and non-teaching staff are involved in developing the school’s aims and policies

Most teaching and non-teaching staff share a common set of educational values

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Mean</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching and non-teaching staff are involved in developing the school’s aims and policies</td>
<td>4.00</td>
<td>0.34</td>
<td>4.00</td>
<td>1.16</td>
<td>4.17</td>
<td>0.39</td>
</tr>
<tr>
<td>Most teaching and non-teaching staff share a common set of educational values</td>
<td>4.06</td>
<td>0.24</td>
<td>4.22</td>
<td>0.94</td>
<td>4.22</td>
<td>0.42</td>
</tr>
</tbody>
</table>

Four statements deal with the way the staff perceives the school vision. All these four statements received a mean of 4 and more. This indicates that the school’s vision is clear, understood, and accepted by the staff.

In general, the standard deviations are low but in school ‘2’ two statements which deal with staff involvement in developing the school’s aims and staff cooperation in achieving the educational values received standard deviations of 0.94, and 1.16. These results are relatively higher than those in the other schools, and they testify that there is a difference of opinion among the staff in school ‘2’ concerning these statements. This difference is more prominent according to the information which was obtained in the responses to the open questions in school ‘3’. In this school part of the staff has testified that it has also participated in building this vision and felt obliged to promote it. Probably this fact can partly be attributed to the smaller size of school ‘3’ in which the staff was seen very involved and close to each other. Or, in school ‘2’ it maybe attributed to the position of each teacher and his/her degree of involvement in the educational process.

From the interviews and the answers to the open questions, it is quite clear that subsequently to the introduction of the T.Q.M. approach, the school’s vision, policy, and aims were revised in order to restructure the school. The cooperation of the staff and its involvement in the change process generated a greater commitment to the school aims and the ways of their materialization. This led to a modified and broader outlook on the school which has probably increased the school’s effectiveness and improvement.
Study of documents revealed that in these schools there is a school brochure which details the school aims. These aims were similar in the three schools and fitted the general aims of Israeli education. A stress was put on the development of achievement and on the differential potential of each student, on the instillation of values, fostering ties with parents and students and in school '2' an additional aim was added, namely the integration of newcomers into the body of old-timers. It seems that the schools follow these generalizations:

- Vision must be communicated in a way which secures commitment among members of the organizations
- Communication of vision requires communication of meaning.
- Attention should be given to institutionalizing vision if leadership of the transforming kind is to be successful. (Beare et al, 1993 p.147)

The findings show that in these schools efforts were made to operate in a dynamic manner according to the aims although the implementation of these aims and their priority order was fitted to the unique school curriculum of each school; in the areas of science, arts and sports. For example, concerning the aim of maximization of the student potential, students learned in the streaming groups and according to a variety of teaching methods. However, the staff was given additional teaching hours in disciplines which were determined by the school preference. This way of operating contradicts the T.Q.M. approach which highlights management for conformity. It could be argued that, contrary to T.Q.M., schools prepare the students, taken into account their individual differences, to succeed and progress in various directions.

**The possible link between the Leadership in the schools and the school's success.**

Leithwood (1992) argues that there is a need for transformational school leaders in order to support successful implementations of change, to maintain collaborative cultures, and to empower teachers through shared decision-making and collective problem solving. The purpose is to 'enroll everyone in the system' (Kaufmann, 1993 p. 49).
The research findings support what was said above. The three heads were perceived generally as being positive leaders who integrated the personal and professional qualities as reflected in their leadership style. They were assisted by coordinators and department heads in order to effectively run the school. The flattening of the school structure has enabled cooperation and involvement of the staff in implementation of the school vision and in defining the school policy and the aims which it intends to materialize. The abolition of the traditional organizational pyramid and the empowering of the teams and their leaders as a result of the introduction of the T.Q.M. approach have also led to the process of collective decision-making. This organizational change has contributed a lot to improve the feeling of partnership among the staff. It has enabled the various teams to operate as autonomous units and especially to reach pedagogical autonomous decisions. Observing team work in school 'I' (management meetings, English and History teams) it is noticed in the weekly management meeting that major points which have been discussed in the teams are brought forward for a deeper review and to reach final decisions. The pedagogical decisions were left for the subject coordinator and the team. Or as one teacher from school '3' put it:

"I feel that I have the management trust on the pedagogical plane and feel able to express my opinions honestly."

The teams became more involved in the school matters and their opinions were welcomed by the heads. Simultaneously, this involvement called for greater commitment and also created some pressure to become partners for either the success of the aims or their failure. However, some teams felt that the heads have emphasized "traditional management concerns with outcomes" (Sallis, 1996) which led to a certain amount of supervision. This norm stands as opposed to the T.Q.M. approach which stresses process improvement in order to achieve the final result through monitoring and not through supervision.

The findings show that the introduction of the T.Q.M. and its attendant consequences contributed to the turning point which took place in the school culture and the staff behaviour. The heads gave the staff the feeling that each one can contribute his/her
share which will be welcomed. As a result many teams started to show a greater
degree of initiative, were willing to participate in staff development activities and
strove to constantly improve on their performance. The heads acted as 'orchestra
conductors' and saw to it that the teachers would grasp the overall picture and they
tried to coordinate the teams' efforts in order to make the pieces fall in place. The
heads also reduced some of the deputies' powers and delegated them to the teams'
leaders. This has led to the deputies better feelings and performance of their duties
being less overloaded but still remaining full partners in the decision-making process.

The management style which prevails in the three schools is in various measures
open, collegial and decentralized and this allows a healthy measure of close
interactions between heads and staff. This supports Lambert (1998) new perspective
on leadership as one which involves a decentralized, devolved and shared approach to
leadership within the school. Wendt (1994) also emphasizes that a headteacher should
have a:

"strong visionary leadership, school wide-involvement in systematic and
incremental improvements, high-performance targets and measuring results;
focus on the needs of customers; participate in teams; and empowerment of both
workers and teachers." (p. 11)

The findings from the questionnaires show that the heads are accessible whenever
there is a need, their presence is felt in the school and teachers can rely on them in
time of crisis. However, the management style was adapted to the circumstances and
the needs that arose. The three heads said that they were decisive, set the proper tone
and became authoritative although to various degrees. The leadership was marked by
contrasting traits, on the one hand, openness and on the other hand an authoritative
style. Actually a balance was seen between them since the leading policy was to
respond according to needs and circumstances. This style of leadership contributed
greatly to the relationships particularly within the teams.

Effective leadership is measured by its ability to set a vision which was formulated by
the head and staff in order to constantly improve the performance. The leader, then,
becomes a guide rather than a gatekeeper in the business of teaching and learning by
directing and supporting a collective school vision (Fullan, 1992a). In the present
research it was revealed that the three heads share a clear vision which is
communicated to the staff at different occasions and through various means. The
school aims were found fitting those of the national education but also emphasized the
unique aspect of each school.

The findings from the questionnaires show that the majority of the staff in these
schools feels that they took part in formulating the vision, the aims and that they are
partners and involved. It is possible to assume that the teams participation in
articulating the aims in various degrees of involvement in the schools and the broad
agreement with these aims have intensified the staff motivation and its contribution
towards school performance. It led to collegiality that:

"facilitates and encourages conversation and contemplation toward change
rather than planning or directing it." (Bolender, 1997 p. 7)

In conclusion, it is possible to establish that the three heads who participated in this
study have passed from autocratic management to inspiring leadership on the
pedagogical level as well as the organizational level, subsequently to the assimilation
of the T.Q.M. approach. Some dimensions which were not prominent before the
T.Q.M. implementation have grown more in importance. For example, the
organizational structure. Whereas before the T.Q.M. approach the school was run
through the pyramid structure, after its introduction the structure has changed and was
flattened.

The overall conception of managing the school has also changed. Whereas before the
T.Q.M. approach only the head and his deputies decided the fate of the school, after
the T.Q.M. it was made possible to all the teams to become involved and share the
improvement process. The structure which led to the decentralization brought about
accountability and motivation once a general agreement was achieved about the
vision and the aims of the school among the staff. The staff felt connected with the
school ideas and acted considerably to improve on performance. It seems that these
schools operate according to T.Q.M. in three areas. Everyone is committed to the school vision and aims; the school is based on teams to which powers were delegated and the heads' behaviour is characterized by the following factors, listening, enthusiasm, accessibility, strict planning and consistency. All this brought about a management-led change which implies that the above features have indeed penetrated the schools' organization to various degrees.

Culture

This section aims to analyze the nature of the atmosphere within the schools and the relationships among the staff. The attempt is to understand the complexity of culture of 'drive-out fear' as it appears in the three schools. Indeed, one of the key issues that leaders and management should aim for is represented by Murgatroyd and Morgan's (1993) as the idealised school:

"culture that values innovation, where status is secondary to performance and where empowerment and continued development provide self-motivation." (p. 65)

Culture finds its expression in some visible ways and some are more subtle in the three schools. In this research the culture was described on the school level and not at the class level according to the heads and deputies interviews and questionnaires. As a whole it is possible to learn about the positive feelings of the heads and their deputies concerning the situation in the school. The staff feelings correspond to those of the senior management and complement the overall picture. The additional aspects about what is happening in the schools are described through the pattern norms of teamwork within the teams and through the team perception of work relationship with other teams and with management. Today as a whole, these schools are perceived as offering a supportive atmosphere for teamwork. Management appears to have full trust in them and encourages them in their work. Thus, the teachers feel happy and satisfied with their work. This may indicate a quality culture or as Sallis (1996) put it:
"T.Q.M. is about creating a quality culture where the aim of every member of staff is to delight their customers, and where the structure of their organization allows them to do so." (p. 19)

The findings from the open questionnaires show that a complete and positive change in atmosphere has been achieved. Teachers said that before the introduction of T.Q.M. a mood of despair and fear for their jobs permeated the school. Teachers felt restricted to openly express their thoughts. They were indifferent to initiative and creativity because they did not want to take risk and lose their position or job. As a result of the murky atmosphere teachers exhibited a tendency to minimize their efforts. T.Q.M. offered the opportunity and the techniques to operate the change from 'driving out fear' to a healthy creative atmosphere. The findings today, as presented in the next table, point out to the considerable improvement in the staff perception of the relationship between the various factors in the school which affect the climate in the school.
### Table 36 - Data Analysis

<table>
<thead>
<tr>
<th>PROFESSIONAL WORKING RELATIONSHIP</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this school teaching and non-teaching staff:</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Put a strong emphasis on effective personal relationships</td>
<td>4.44</td>
<td>0.51</td>
<td>4.31</td>
</tr>
<tr>
<td>Feel able to express their views openly and honestly</td>
<td>3.83</td>
<td>0.71</td>
<td>4.16</td>
</tr>
<tr>
<td>Feel that views are taken seriously by management</td>
<td>3.78</td>
<td>0.73</td>
<td>3.66</td>
</tr>
<tr>
<td>Are encouraged to be involved in seeking solutions to problems facing the school</td>
<td>4.11</td>
<td>0.32</td>
<td>4.22</td>
</tr>
<tr>
<td>Go out of their way to make new colleagues feel welcome and at ease</td>
<td>4.33</td>
<td>0.49</td>
<td>4.38</td>
</tr>
<tr>
<td>Are encouraged by the head and senior staff to cooperate with colleagues on joint activities</td>
<td>4.44</td>
<td>0.51</td>
<td>4.00</td>
</tr>
</tbody>
</table>

Four out of six statements received a mean of 4 or more in the three schools. This testifies to the fact that the staff agrees or strongly agrees that there is a very effective relationship on the personal level. The staff endeavours to ease the integration of newcomers, welcomes them, encourages them to actively participate in social events and be partners in solving school problems. In schools '1' and '3' the standard deviations were low and that indicates that there is a general agreement among the staff. However, in school '2' the standard deviations were higher. It can be assumed that some teachers are not satisfied with the current situation. The open questions in the questionnaire from school '2' have revealed this reservation:

“Although consultation takes place in the meetings with my department head, I feel it is more about how to apply what had been already decided within the
management team rather than raising doubts about the decision taken.” (a teacher 2)

This picture problematizes Deming’s (1986) idea of ‘removing barriers’ and empowering the workers though it is logical that in a big school it is more difficult to fulfill everyone’s wishes.

Two of the statements which deal with free expression and with attitudes towards management reveal that there were variations between the three schools. In school ‘3’ also these statements received a mean higher than 4 and low standard deviations. Here the staff is undoubtedly in agreement with the statements. The head testifies that ‘the team is self-managed and the members are trusted’ and his deputy head corroborates:

“staff is offered the opportunity to share policy on the thinking plane. We welcome team leaders to share school future plans… school is well-planned and has drawn up a detailed program at work.”

In school ‘2’ the mean which was given to freedom of speech is above 4 but the standard deviation is 1.14 so it can be said that some staff differ in their opinions. The additional statement which deals with the attitude of management towards the staff opinions received the mean of only 3.66. This indicates that the staff feel that they wish that management would take their views into more serious consideration. However, even the standard deviation for this statement is high 1.10. Obviously the teachers are not of one mind.

School ‘1’ stands out because in these two statements there is a mean of 3.83 and 3.78. This indicates that the staff feel that there is still room for improving the school climate for freedom of speech and it is wished that management would take staff opinions more into consideration. Also the standard deviations were found to be high in school ‘1’ 0.71 and 0.73. This shows that the staff does not unanimously agree with each other. This broad difference of opinion may explain the apparent contradiction between the low means score and its standard deviation in school ‘1’ as opposed to the positive responses which were obtained from the open questions. For example,
T.Q.M. has transformed the school and eliminated the low spirit which had prevailed in the past, or 'many problems of violence, discipline were commonplace and teachers were afraid for their livelihood and their future, they were quite distressed, withdrawn and were afraid to voice their feelings in an open way for fear of suffer of it' (two teachers school '1'). Now, subsequent to the introduction of T.Q.M. Most teachers are able to voice openly their opinions without fear and their opinions receive now due attention.

From the findings it is clear that, in these schools, there is a culture of sharing within the different teams, one which values cooperation, where:

"every teacher must be concerned about the health of the school as an organization." (Fullan and Hargreaves, 1991 p. 78)

This has a great influence on the staff spirit. It leads to a common set of values and contributes positively to the attainment of the aims. This confirms what has been said in the literature about collaboration that promotes effective school culture because it helps break down teacher isolation:

"school cultures that participate in shared problem-solving and decision-making place value on interdependence and support among staff members." (Bolender, 1997 p.6)

The research findings from the teams' observation reveal that there is a teamwork and mutual assistance in solving problems among the teams' members. Teachers inspire each other with teaching methods, practical advice, and also in the preparation of teaching materials. This mode of operation also facilitates the acceptance of each other shortcomings and creates a synergy of shared efforts to achieve the aims as recommended by Reynolds (1994):

"A well organized team can perform much better than a collection of individuals. This phenomenon is known as synergy - the whole is greater than the sum of the parts." (p. 42)
This cooperation and seminal work especially when it is accompanied by positive results have infected the staff with enthusiasm for work and a great eagerness to obtain improved achievements. It can be assumed that the culture of sharing in general also contributed to reduce the feeling of loneliness and helped the teachers to cope better with problems since they were now able to benefit from the team assistance. This assumption can explain the teachers' request, in the open questions, to increase team meetings with subject coordinators and to have them on a weekly basis instead of a monthly one. Anyway, teachers still preserve their class autonomy and since there is a lack of colleagues class observation, they can still feel lonely and incapable of solving their class problems. This class autonomy compels teachers to stay isolated. Sharan (1976) claims that the autonomy in teaching which is expressed through the exclusive control that every teacher has in the classroom, has become a sacred value. From a T.Q.M. point of view, this autonomy has built a partition between teachers and their colleagues, especially in school '2', which limits cooperation among teachers, especially in the planning, teaching and assessment's domains. This limitation may have an effect on teacher's professional progress, may serve as a barrier to teachers' involvement and to educational progress and may consequently lead to indifference and ineffectiveness.

In the three schools, according to the questionnaire data, open questions and observation, a great degree of cohesion and intimacy was found within the teams. One expression of it could be found in the social and personal get together. Some teams celebrated together special events such as birthdays, New Year or the ending of the semester. This atmosphere strengthened motivation and generated a greater desire to work towards the fulfillment of duties and tasks. Nevertheless, it can not be said that this atmosphere has been achieved in every team to the same degree. The next table shows the relationship within and between the teams.

<table>
<thead>
<tr>
<th>Table 37 - Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STRUCTURE, DECISION MAKING &amp; COMMUNICATION</strong></td>
</tr>
<tr>
<td>In this school:</td>
</tr>
</tbody>
</table>
Communication within the teams is an open-relaxed communication

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std Dev</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Mean</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication within the teams is an open-relaxed communication</td>
<td>4.83</td>
<td>0.38</td>
<td>4.25</td>
<td>1.16</td>
<td>4.74</td>
<td>0.45</td>
</tr>
<tr>
<td>Communication between the teams and the rest of the school is an open-relaxed communication</td>
<td>3.72</td>
<td>0.83</td>
<td>3.58</td>
<td>0.67</td>
<td>3.83</td>
<td>0.65</td>
</tr>
</tbody>
</table>

The statement that deals with relationship within the team received a high mean starting of 4.25 and more. This indicates that the staff agrees or strongly agrees with the statement. However, the standard deviation in school '2' is higher 1.16 and this indicates that there is a great difference of opinion concerning the character and the communication level within the team in which they operate. One possible explanation for this is that various departments operate in different ways (Gray 1998 p. 2). So it is possible that some of the teachers belong to teams in which communication and atmosphere are less satisfactory. This finding contradicts the total quality way of developing close and long-term relationships at all levels of the hierarchy.

In the current research, it is clear that the interaction between teams is less effective than within them and this also affects the school culture. The statement about communication between teams received a mean less than 4 and this reinforces what was stated above. The standard deviations for this statement 0.65, 0.67, and 0.83 indicate that there is a difference of opinion but not a broad one. It stands to reason that very naturally it can be expected that there will be more of cohesion, intimacy and cooperation within the team than between teams since members of teams regularly meet together and share many experiences.

The findings show that indeed in general there is a relaxed but purposeful working atmosphere in the schools. The heads are aware of the need to foster an open and relaxed atmosphere which can affect school development and so they strive to promote this factor. For example, the heads harnessed the school leaders committees in order to organize social activities for the benefit of the teachers and families. These types of activities can raise the morale of the teachers.
However, it was also revealed that a great effort has been undertaken to build an atmosphere of discipline, mutual respect and school safety which focuses on:

"Clear-cut rules that are firmly, fairly and consistently applied" (Zavida, 2000 p. 6)

It can be assumed that 'driving-out fear', namely when the environment is not rowdy and threatening the learning and teaching process goes on smoothly and effectively and progresses towards the achievement of the desirable results.

Also the open and collegial style of leadership which was considered in the previous chapter was found to be an important factor to enhance a supportive culture in which everyone feels a sense of belonging and contributes his/her share.

The possible link between the Culture in the schools and their progress.

Effective work which leads to raising the school achievement was found to be linked with the prevailing atmosphere in the school (Sallis, 1996). The three heads strive today to obtain a greater motivation and involvement of the staff in school matters. They have delegated powers to teams and their leaders and have enabled teams to participate in the decision-making process in order to reach a consensus to a greater extent. An opportunity to voice opinion was given to the staff and also the staff was encouraged to offer criticism without fear. The heads were even willing to expose themselves to criticism. The teams encouraged a high degree of group autonomy on the pedagogical level and operated according to it. The fostering of the culture of 'drive-out fear', cooperation and collegiality created in these schools effective work norms especially within the teams have positively influenced the effort to achieve the school aims. Moreover, the development of this culture was made possible only after the introduction of T.Q.M. approach and as consequence of the division of the organization into small closely knit teams. The relatively small size of the new teams has enabled a close, intimate and informal relationship among the team members. When a problem arises the team seeks together ways of solving it and this way of operating gave them a sense of support. Teachers felt that everyone in these joined
meetings is free to express his/her view even if it is opposed to the views of the others. Obviously, it is clear that in small groups it is easier to let everyone voice his/her opinion or to tolerate a difference of opinion.

It seems that management encourages the work of the teams although to various degrees and takes care that collegial atmosphere is constantly improved with the help of the various coordinators. These findings corroborate what Coleman and Bush (1994) claim about the effective leader who:

"harnesses the talents of all team members"…and "encourages the participation of teachers in decision-making, leading to a sense of ownership and an enhanced prospect of successful innovation." (p. 260)

However, some objective difficulties were found concerning the coordination of time and resources. Teachers work simultaneously so it is not practical to release a teacher in order to allow him/her to observe a colleague's lesson or to get a substitute teacher. This fact leads to a situation in which the teacher feels quite alone in the class. This can be considered as a possible objection to the T.Q.M. in the education service:

"Teaching is often perceived of as an essentially solitary activity which therefore creates a high degree of individual control. Such an approach is clearly alien to the co-operative ethos of T.Q.M." (West - Burnham, 1994 p. 56)

Lack of lessons' observation offers hardly any opportunities to correct teachers' pedagogic mistakes. Mistakes can be repeated as there is no feedback which can contribute to the improvement of teaching techniques. From a T.Q.M. point of view:

"What costs money are all the unquality things – all the actions that involve not doing jobs right the first time." (Crosby 1979 p. 1)

Nevertheless, it seems that since the introduction of the T.Q.M. a real change from a culture of fear and work paralysis to the one of openness, creativity and cooperation has taken place. Possible reasons for resisting change:
fear of loss of employment;
fear of loss of confidence;
fear of loss of status;
demands energy; and
demands time.” (Bilton, 1996 p. 1)

were tackled by ensuring that teachers have the opportunity to influence these changes. In the three schools today, Deming's view - 'drive out fear' is implemented. A good team spirit by which most of the staff contribute to promote the school in the fields of teaching prevails and the staff also feel that this experience has enriched them.

This atmosphere and the fruitful relationship were found as being influential although in various degrees in improving achievements and attaining aims. Everyone works together, junior teachers work together with senior ones and old-timers teachers work together with newcomers. When problems arise teachers deal with them together and not individually. This fact has led to the pattern of support, cooperation and a spirit to move forward in order to achieve quality and development.

Managing T.Q.M.

The influence of the T.Q.M. implementation in the three schools also found its expression in several changes which occurred in these schools. These changes focused on several T.Q.M. characteristics and they included: student-centered approach, problem prevention and focus on a work norm relationship. This section studies to what extent these characteristics have become a fixed feature in the schools and if they indeed help to improve the school performance.

STUDENT-CENTERED APPROACH

The T.Q.M. approach emphasizes that organizations should seek to meet the constantly changing needs of their customers:
"Quality is defined by the customer not the supplier, e.g. lessons should be 'fit for purpose.'" (West-Burnham, 1995 p. 28)

Findings revealed that these schools adopted the 'fitness for purpose' policy. They, in their brochure, emphasize the vision and the aims which arose from it. These aims focused mainly on the student who is generally perceived as a primary customer served directly by the staff. The aims in these schools were similar and emphasize the self-development of the student in the social and academic area and the full fulfillment of his/her potential. The student always stands in the centre. For example, school '1' conducted student satisfaction surveys which deal with moral values and social activities, and school '2' obtained feedback from newcomer students about their social integration. This way, through feedback, evaluation and monitoring, schools can:

“improve the quality of classroom practice and of the wider organizational structures of schooling.” (Nixson, 1995 p. 20)

It was found that these schools made an effort to tie aims and principal activities together. Therefore, weak students received help from mechanism facilities whereas the excellent achievers were offered challenges such as learning in the university. Nevertheless, some of the aims such as 'the student is the customer who determines the educational quality' were revealed as hard to implement. It was found difficult to accept Greedwood and Gaunt's (1994) definition that customer expectations should be placed at the centre and the quality of the product or service should meet the customers’ demands and:

“above all else it must do what the customers wants it to do.” (p. 26)

Therefore, some changes have been made to fit the needs which arose from the field. The findings show that contrary to public organizations where the customer identity is clear, in these schools difficulties arise on the part of management and staff to define the sole customer and his/her rights. A situation was created in which the school had
to find simultaneously a proper response to several kinds of customers: students, parents, the city Municipality and the Ministry of Education. This problem may explain the various answers that were given to the question of defining the customer. Part of the staff saw in the student the main customer or even the product of education who directly receives the quality service and his/her parents as a secondary customer. Management and another segment of the staff attributed more weight to the students' parents and some even saw in the parents the primary customer in the educational process. These differences of opinion support Capper and Jamison's (1993) criticism that:

"T.Q.M. advocates blithely assume, without question, that all 'customers' have equal access to resources and services, and ignore power differences that would enable and constrain customer decisions." (p. 28)

The findings also indicate simultaneously that a strong emphasis was put on the final product. Students are evaluated also by quizzes, semester exams and equalizing tests to enable comparison and follow-up through statistical tools. One of the possible explanations for the fusing of these two approaches: one in the process and the other in the final product, lies in the growing pressure from politicians, Municipality and the Ministry of Education to obtain visible and uniformed results. If this is the case, researchers (Elliott, 1996; White, 1997) point out that such closeness between influential researchers and government is fundamentally flawed and can raise questions such as 'effective research or schools, for whose benefit?'

In practice, heads are required to show final 'products'. At the end of the year every school is evaluated according to the number of students who are entitled to obtain the 'Bagrut' diploma and heads must explain in case of low achievements. Chapman (1991) objects to the idea that effective schools inevitably concentrate on restricted 'cognitive' outcomes of schooling and ignore the many other aspects which are important. For him:
"An effective school is one that promotes the progress of its students in a broad range of intellectual, social and emotional outcomes, taking into account socio-economic status, family background and prior learning." (p. 1)

This latter criticism is supported by School Improvement research. Bashi (1989) and Fox (1995) add that the grades reflect only one way of measuring success. The main focus should also be on changes and on school processes.

The three heads by stimulating teachers, and putting the emphasis on achievements as the first priority, make their utmost effort in order to increase the number of successful students. From a T.Q.M. point of view, quality is not to be measured only by the output of the process. Juran's (1989) definition that 'quality is fitness for use' (p. 15) can fit while Crosby's idea that quality means 'zero defects' seems not achievable. The following table shows the staff perceptions concerning the student-centered approach.

<table>
<thead>
<tr>
<th>SCHOOL ETHOS, AIMS AND POLICY</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this school:</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>The learning is designed on the basis of the needs of the individual student</td>
<td>4.56</td>
<td>0.51</td>
<td>4.50</td>
</tr>
<tr>
<td>The school is organized around the needs of individual learner</td>
<td>4.50</td>
<td>0.62</td>
<td>4.06</td>
</tr>
<tr>
<td>There is a public commitment continuously to improve the services provided to students</td>
<td>4.00</td>
<td>0.77</td>
<td>4.10</td>
</tr>
<tr>
<td>Students satisfaction is regularly surveyed and acted on</td>
<td>4.00</td>
<td>0.49</td>
<td>4.28</td>
</tr>
<tr>
<td>'Quality is what the student says it is'</td>
<td>3.61</td>
<td>0.85</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Five out of seven statements in this group examine whether the schools advocate the policy of 'student-centered approach'. Four out of the five statements received a mean
of 4 or more and this testified to the fact that the school responds to the different needs of its students and also examines itself by student satisfaction survey.

Nevertheless, the standard deviations in school '2' are 0.89 and 1.18 and therefore are higher than in the other schools. So it seems that there is a difference of opinion among some of the staff concerning these two statements. In general it seems that the emphasis put on the individual student and his/her needs is well-established and corresponds to the T.Q.M. approach in these schools and therefore the relatively low mean score of the last statement on the table is quite surprising. The findings clearly show that quality is not decided by the student and the means 3.00, 3.17 and 3.61 stand out as low in this group. This testifies to the fact that the staff does not agree with the statement that the student has any say in determining pedagogical matters, and therefore, problematizes the 'customer' concept as presented in the industrial context. Also the standard deviations show that a difference of opinion prevails among the staff concerning this statement. West-Burnham (1995) explains why schools find the concept of the customer problematic:

"The integrity of the relationship between a supplier and external customer is often formalized in terms of contractual responsibility or in terms of accountability. Such structures are often not available (or appropriate) for the relationship between suppliers and the internal customer." (p. 21)

The low mean score of the last statement in this group supports the findings which were obtained from the open questions. For example, in school '1':

"The student is not one hundred percent the centre of all the educational process, only a part of the customer scale." (teacher 4)

It seems that the staff disagrees over Deming's view that the student is the exclusive customer who determines the product quality, here, teachers testify, it is education.

The findings raise again one of the main issues in the T.Q.M., namely who is the customer in education. The T.Q.M. approach started in industry where the identity of the customer was more or less clear, whereas in education this approach did not come
up with a clear answer to this issue. Moreover, the findings show that the three schools have adapted the conditions, means and the special services to the needs of the student in order to increase the quality of education. The next table presents the staff opinion about the 'service' they 'supply' their students with.
Table 39 - Data Analysis

<table>
<thead>
<tr>
<th>SCHOOL ETHOS, AIMS AND POLICY</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this school:</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Most pupils feel a sense of achievement</td>
<td>4.50</td>
<td>0.51</td>
<td>4.19</td>
</tr>
<tr>
<td>Academic attainment is high</td>
<td>4.61</td>
<td>0.50</td>
<td>4.72</td>
</tr>
<tr>
<td>Teachers give pupils the confidence to learn</td>
<td>4.33</td>
<td>0.49</td>
<td>4.34</td>
</tr>
<tr>
<td>Good pastoral support is provided for pupils</td>
<td>4.39</td>
<td>0.61</td>
<td>4.00</td>
</tr>
<tr>
<td>Teaching, non-teaching staff and pupils feel safe and secure</td>
<td>4.11</td>
<td>0.58</td>
<td>4.31</td>
</tr>
<tr>
<td>Teachers have high expectations of pupils' achievement</td>
<td>4.50</td>
<td>0.51</td>
<td>4.50</td>
</tr>
<tr>
<td>Teachers have high expectations of pupils' behaviour</td>
<td>4.28</td>
<td>0.46</td>
<td>4.23</td>
</tr>
</tbody>
</table>

Seven out of seventeen statements relate to the service and its results. The seven statements received a mean starting with 4 or more. This shows that in these schools there is an atmosphere of safety, achievement, support from the school, high expectation on the part of the teacher concerning behaviour, achievement and that the academic results are high. Also the standard deviations were found to be low and this shows that there is no great difference of opinion among the staff. The statement that deals with safety shows relatively a higher standard deviation, 0.58 in school '1' and 0.97 in school '2'. A possible explanation can be found in the circular that the Ministry of Education sends to schools and in which there is a warning about terrorism activities and the dangerous situation concerning safety. This undermines the sense of security in the schools.

As a whole, the findings about high expectations corroborate what it has been found in the literature:
"Teacher expectations and student achievement...is sometimes referred to as a "self-fulfilling prophecy" - what you expect from a student is what the student gives you." (Indiana University, 1996 p. 1)

It seems that there is here a self-fulfilling prophecy. The schools focus on the student and provide him/her with a safe environment, a sense of achievement and a need to respond to the teachers high expectations. These expectations communicate to the students the feeling that they are capable of achieving high results and improve themselves, the students get more self-confidence and feel more motivated to improve their performance. It seems that there is a connection between the high standard that the school establishes and the conditions which it provides and the improvement of students' achievements based on Reynolds et al (1995; 1998) and the findings. Moreover, the high means for these statements may imply that there is certain relation between the fact that these schools shifted to focusing on the student needs and the improvement of achievements.

**Prevention techniques**

The T.Q.M. approach advances the idea of 'right the first time'. The stress is put on raising problems and removing repressed feelings and a constant search for solutions in order to improve performance. The T.Q.M. also strives to set aims and use statistical measurement in order to constantly improve the organization:

"...Basic methods of data collection and analysis are relied upon to identify, understand and reduce special and common causes of variation in the production process. The ultimate aim is to use data, ... to eliminate product variation, and to render production processes in a state of regulated, statistical control." (Capper and Jamison, 1993 p. 25)

The findings, from the interviews, open questions and documents, show that the three schools have at various degree shifted from the way of dealing with current and pressing problems to the system of anticipating the process and to plan accordingly in order to lead to the aims that the school has set. For this purpose, the schools have
focused on three areas. The first is to a preplanned support system for teachers, students and sometimes, in school '3', for parents. The second is process monitoring and data-base and the last is examining every activity according to ISO 9000 requirements and reviewing the results. Nonetheless, whenever mistakes occurred, they were perceived as part of the 'trial and error' process. The 'zero defect' approach was perceived as unrealistic in education.

The findings show that in these schools a dramatic change has occurred subsequently to the introduction of the T.Q.M. This has also required the definition of the roles of the staff according to the actual needs. For example, the role of the school consultant was modified and instead of being a case consultant she was turned into a consultant with an overview of the student needs in the department and the requirements of the Ministry of Education. Also the school-working pattern became as a result more flexible. The schools have opted to constantly rethink the school issues through frequent consultations. These consultations are carried out with teachers and at some levels also with students and parents. The aim was clearly to identify difficulties and to prevent them. A second form of flexibility was achieved by introducing modifications in the school curriculum and adapting these changes to the school aims. Similarly, modifications were introduced to the social activities according to the Ministry of Education and the Municipality aims. For example, an anti-violence and anti-drug campaigns were conducted through workshops and lectures. The findings show that this whole procedure was well-preplanned and not accomplished in the course of school year as a means of coping with current and pressing problems.

Another area on which the schools have focused was process monitoring and database. In these schools the pedagogical aims were translated into statistically measured ones. The schools, therefore, have created a tool of monitoring the school product in order to continually evaluate the student progress, of diagnosing the discrepancy between the student achievements and what was expected in order to fill the gap. This mode of operation was intended to improve the teacher and student performance because dealing with problems in an early stage prevents the need to cope with serious ones. So it is crucial to find out areas of problems at the start and to localize
them. The next table shows the staff attitude towards the problem prevention in their schools.
Table 40 - Data Analysis

<table>
<thead>
<tr>
<th>LEADERSHIP AND MANAGEMENT</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>The headteacher and SMT</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Define and specify all key strategies to achieve school goals</td>
<td>4.22</td>
<td>0.55</td>
<td>4.03</td>
</tr>
<tr>
<td>Manage systematic results analysis to prevent failure</td>
<td>4.28</td>
<td>0.46</td>
<td>4.03</td>
</tr>
<tr>
<td>Use measurement to improve teaching and learning</td>
<td>4.50</td>
<td>0.51</td>
<td>4.19</td>
</tr>
<tr>
<td>Build evaluation into class practice</td>
<td>4.06</td>
<td>0.80</td>
<td>4.06</td>
</tr>
<tr>
<td>Produce documentation to consist of standards</td>
<td>4.28</td>
<td>0.46</td>
<td>4.23</td>
</tr>
<tr>
<td>Require an appropriate external validation of quality assurance strategies</td>
<td>3.41</td>
<td>0.51</td>
<td>4.03</td>
</tr>
</tbody>
</table>

There are six statements in this group which deal with identifying difficulties and problems and with the ways of anticipating them. In school '2' and '3' all these statements received a mean starting with 4.03 or more and this shows that the staff in both schools agree with the above mentioned statements. In school '1' five out of six statements received a mean starting with 4.06. The last statement received a mean of 3.41. It seems that the upper echelon in school '1' is perceived as not making an effective use of the quality assurance system. From a T.Q.M. point of view, they do not always endeavor to prevent mistakes before they actually happen. In school '2' the standard deviations were relatively high in comparison with the other two schools.

It seems that the heads and SMT in various degrees indeed operate through measurement and monitoring techniques in order to prevent problems and to improve the current situations. The high means and the low standard deviations in school '3' indicate that the use and method of monitoring and statistical measurement techniques became well-established in the school and that the staff is familiar with them. Also in school '1', but to a lesser degree, there is an internalization of the measurement techniques. In school '2' on the other hand, the standard deviations show that not all the staff agrees that the prevention of problems became the norm.

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The next area was the introducing of ISO 9000 as result of the need for a uniform and consistent feedback and also as a helping and qualitative tool to manage the school. This is an additional tool that these schools use in order to ensure monitoring and quality of the school performance through the setting of clear standards which help to evaluate the school performance. The ISO 9000 is connected with the school as a stage of modifying the school culture. It is perceived by management as a profound change in the school accountability and the work quality. The common denominator of T.Q.M. and ISO is the accountability of management and staff in their effort to achieve work quality. Quality assurance rejects the notion that mistakes are inevitable and highlights that it:

"is a means of producing defect and fault - free producers... Quality assurance is made the responsibility of the workforce... rather the inspector." (Sallis, 1996 p. 19-20)

The findings from the interviews show that the three schools are aware of the importance of feedback and have learned to use ISO 9000 sensibly although in varying degrees. It was revealed that the feedback findings serve as a tool to draw practical lessons in order to improve future performance. The questionnaires' findings also support what has been said in the interviews and in the open questions.

**Table 41 - Data Analysis**

<table>
<thead>
<tr>
<th>MANAGING T.Q.M.</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>The school is making effective use of the following:</td>
<td>M</td>
<td>M SD</td>
<td>M SD</td>
</tr>
<tr>
<td>ISO 9000 assessment</td>
<td>3.89 0.58</td>
<td>4.10 1.06</td>
<td>4.59 0.50</td>
</tr>
</tbody>
</table>

One out of the seven statements in this group dealt with ISO 9000 effectiveness. The findings show ISO 9000 has been well-established in these schools, however in varying degrees. In school '3' the very high mean 4.59 indicates that the staff is virtually unanimous about this issue. Also the low standard deviation 0.50 indicates that the ISO 9000 is an integral part of the running of this school. The mean 4.10 in
school '2' also shows that agreement prevails among the staff. However, the high standard deviation 1.06 indicates that part of the team does not think that the school makes an adequate use of the ISO requirements. The lowest mean was found in school '1' 3.89. This fairly low mean corresponds to the relatively low mean of 3.41 that the school has received concerning the statement that the head and SMT 'required an appropriate external validation of quality assurance strategies'. In these two statements the standard deviations were especially low 0.58 and 0.51. This indicates that the majority of the staff has offered its opinion without difference. One possible explanation for these low means is that the assimilation of the ISO 9000 requirements in school '1' is achieved more on the extended management level and not at the grassroots one. Therefore, many members of the staff testify that there is no effective use of ISO 9000. This explanation can suggest the difference of opinion between the staff as presented in the questionnaires and the management opinion in the interviews which has emphasized that ISO is used on a wide scale.

**Professional working relationship**

This chapter analyses the type of personal and professional working relationship within and between the various schools' members. In fact, one of the dramatic changes that have occurred in the schools according to the interviews and open questions relates to these relationships. The interviews show that in these schools heads strive to communicate openness, to associate staff with the educational process in a genuine, open and fair way. It seems also from observing the teams that positive climate of the school which was generated after the T.Q.M. implementation has rubbed off on the general feeling in the school. The findings support what has been said in the literature about leaders and management that implement T.Q.M.. They should aim at:

"Communication which must be free and effective between all levels and areas of the organization." (Murgatroyd and Morgan's, 1993 p. 65)
These positive feelings have influenced the working relationship and contributed to make work more fruitful and beneficial. Also the questionnaires' findings corroborate what it has been said above.

**Table 42 - Data Analysis**

<table>
<thead>
<tr>
<th>PROFESSIONAL WORKING RELATIONSHIP</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this school teachers:</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Are committed to working as a team</td>
<td>4.39</td>
<td>0.61</td>
<td>4.28</td>
</tr>
<tr>
<td>Regularly discuss teaching methods in detail</td>
<td>4.39</td>
<td>0.70</td>
<td>4.19</td>
</tr>
<tr>
<td>Regularly engage in joint planning of new approaches in some detail</td>
<td>3.89</td>
<td>0.76</td>
<td>3.56</td>
</tr>
<tr>
<td>Often prepare teaching materials together</td>
<td>4.44</td>
<td>0.70</td>
<td>4.25</td>
</tr>
<tr>
<td>Often seek and give each other practical advice about classroom learning</td>
<td>4.39</td>
<td>0.70</td>
<td>3.63</td>
</tr>
<tr>
<td>Often observe each other teaching and give constructive feedback</td>
<td>2.94</td>
<td>1.00</td>
<td>2.69</td>
</tr>
<tr>
<td>Experiencing difficulties receive support from their colleagues</td>
<td>4.17</td>
<td>0.51</td>
<td>4.13</td>
</tr>
<tr>
<td>Are constantly striving to improve teaching and learning</td>
<td>4.50</td>
<td>0.62</td>
<td>4.22</td>
</tr>
<tr>
<td>Have developed effective strategies for record-keeping</td>
<td>4.00</td>
<td>0.77</td>
<td>3.91</td>
</tr>
</tbody>
</table>

This group includes nine statements which reflect a general picture of the formal working relationship among the teachers. Five out of nine statements received a mean starting with 4.13 and more. Thus, the overall picture which emerges is very positive. It shows that indeed the working relationship among teachers is very close and based on team work, joint preparations of learning materials, supporting newcomers and old-timers as well and also on the staff drive to constantly improve teaching and learning as being the central aim of the team. This is what expected from a T.Q.M. school.
“which is applying T.Q.M. principles undergoes incremental improvement in the organizational structure as well as in the learning and teaching processes.”
(Bostingle, 1992 p. 6)

In three statements which deal with planning new teaching materials in details, giving and receiving advice about class teaching and developing strategies for record keeping, a difference between the schools was noticed. The statement that deals with planning new materials received a very high mean 4.48 in school '3'. In this small school it seems easier to have stronger ties among the staff. Thus, the staff plans and initiates new teaching approaches. On the other hand, in school '1' and '2' which are larger, the means were lower 3.56 and 3.89 and this indicates that there is still a need among the staff for joint planning of new teaching materials. In two out of the above three statements which deal with giving and receiving advice about class teaching and developing strategies for record keeping, school '1' and '3' received high means starting with 4 and more. This testifies to the fact that there is an agreement and even a noticeable one among the staff concerning this statement. In school '2' the means are lower 3.63 and 3.91 and this shows that there is less of agreement in this school.

There is one out of the nine statements which deals with colleagues class teaching observation and this has received relatively very low means in all three schools, 2.69, 2.78 and 2.94. It can be assumed that the staff of these secondary schools are unanimous about the impracticality of implementing colleagues class observation. However, even in this statement school '2' has received the lowest mean 2.69. One of the possible explanations is that colleague class observation may be perceived as being threatening to the teacher and very likely there are teachers who are reluctant to accept criticism even if it is of a constructive nature. In Israel, the practice that teachers must approve the participation of observers in their classroom of the observers are not authorized by regulations. However, the standard deviation of 1.00 for class observation is the highest in school '1'. One possible hypothesis is that part of the staff like team leaders who by power of their office are entitled to observe a teacher's class and presumably do so constantly, however a teacher without specific management role rarely if at all observes any of his/her colleagues class.
Except for the class observation statement, the other eight statements in school '2' received the higher standard deviations as compared with the other two schools. This shows that part of the teachers in school '2' think that working relationship needs to be improved on and part of it is quite satisfied with the current situation.

In general, the findings support the fact that relationships are positive, there is collaboration of give and take and assistance in case of coping with problems. However, in eight out of nine statements, school '3' stands out in the high means which it has received and in the relatively low standard deviations as well. One possible explanation can be the relatively small size of school '3' compared to the other schools. It is quite logical that in a small-sized school it is easier to develop close relationship on the social level and the professional as well.

One additional aspect that emerges from the findings according to the open questions and interviews is the fact that the various teams act like autonomous units with well-established work patterns and close-knit relationship within the teams and less so between teams. Heads and deputy heads said that they trust the team expert member ability, therefore they have empowered them to make pedagogical decisions concerning the mandatory national curriculum and the optional one. The team members were given the privilege to vent their views even about school organizational issues. The pedagogical decisions reached by the teams are considered to be binding as if they were taken by management itself. The heads have stressed that the autonomy within the teams created collegial work patterns, although there is still room for improvement and ties should be encouraged between the teams. According to the heads autonomy derives from shared authority and attribution of powers. This kind of autonomy is the key reading to profound change in the team perception of their accountability.

Nevertheless, it has been emphasized that autonomy is always relative and never complete in school matters. The team is committed to operate according to the principles of the Ministry of Education, namely according to the national curriculum which is:
“a cultural product of societies that assumed that the future will probably be similar to the past, and thus the curriculum is taught as an ‘educational food’ in a society where change is the rule and not exception to the rule.” (Cohen, 1983, p.14)

The T.Q.M. approach strongly oppose the top–down educational philosophy because it can minimize any acts of the teachers’ own creative initiative, can depress student’s creative potential and, thus, ignores the student’s psychological needs and intellectual talents whereas the T.Q.M. aims for qualitative changes, for collective responsibility and for common interests.

However, the team is free to choose the ways and means to implement them. In addition, the deputy heads have clarified that the head has the final say when no agreement has been reached since he is the one who assumes the burden of responsibility towards the Ministry of Education and the Municipality.

The findings from the interviews and documents show that autonomy given to teams indeed has increased both, the teachers' accountability and their satisfaction with teamwork. During the weekly meetings with subject coordinators or department heads matters of curriculum, student grouping, student performance and achievement, existing problems and possible solutions are being discussed. Indeed, there is a mechanism of monitoring the process by the leaders in order to bridge the gap and to progress towards the attainment of the school aims. In fact, this way of working led to each member's accountability concerning the performance of every student in school. It seems that the collective work has stimulated team members to share ideas, advice and teaching techniques and has increased encouragement and support at work. All this generated a greater sense of work satisfaction. Fridler (1993) explains that any organization applying T.Q.M., which cannot satisfy its workers, will not be able to satisfy its customers. Thus, it is suggested that schools should satisfy all its workers.

The answers to the open questions emphasize the fact that general work atmosphere within the teams has greatly improved and the staff morale became stronger and as a
result the school performance and achievements rose. One of the possible explanations to these positive work relations and to the fact that teachers feel generally happy and satisfied today with their work lies in the delegation of powers to team leaders and especially to team members. This has increased self-confidence and has rubbed off on the teachers. It is also possible that team work has developed teachers expertise and has awakened initiatives which were beneficial to teachers and the whole organization. For example, in school '1' the fact of gathering together for teaching improvement brought about the need for more staff development. It seems that the heads follow Deming's (1986) principle number 13, namely to 'encourage education and self-development.'

It seems that today, in contrast to the situation before implementing the T.Q.M. approach, teachers feel that they enjoy in various degrees a higher level of autonomy and satisfaction from working relations which were developed as a result of the T.Q.M. approach. One teacher sums it up nicely saying that teachers work hard and intensively but the atmosphere is pleasant and results show that there is a noticeable improvement (school '1'). It seems that these schools have:

"Coherence and integration among the school members which can be expressed through an open climate and a creative, supportive atmosphere." (Friedman et al, 1988 p. 30)

The possible link between implementing TQ.M. characteristics and school success.

The three sections in this chapter which deal with focusing on the student, problem prevention and working relations patterns indicate that a real change has occurred. These schools have shifted from working methods such as oral reporting, ad hoc tackling of problems, poor communication or random managing ways to the use of new and more effective management tools. It seems that management and also staff have developed through these techniques a new way of thinking concerning the educational process. Now they are more aware of the specific school needs and the manner of fulfilling them. In spite of the difficulty in implementing some of the
techniques, and the great effort needed to assimilate them, they are not ready to go back to the old ways which were used before T.Q.M. The impression given is that the school success is uppermost in the management and the staff minds and this success is tied with the effective use of team-work, problem prevention and positive atmosphere. A part of the schools success should be attributed to the introduction of the T.Q.M. since because of its influence the awareness of the students' needs increased and the work culture became more crystallized. The use of the statistical tools also increased and so there was a noticeable improvement in working relations. Nevertheless, the use of T.Q.M. has undergone some changes in order to adapt it to the school and its needs.

From the findings it is clear that T.Q.M. has influenced the outlook on the position of the student, his/her environment and needs. The teaching methods were adapted to the student needs and his/her level. His/her feeling and measure of satisfaction were taken into account as a constant basis for improvement subsequently a monitoring process took place concerning the student situation, his/her progress and the school achievement of aims. Contrary to the industrial application of the T.Q.M. approach in these three schools the student is perceived as an important customer however not as an exclusive one. In the school the student is a customer with a right to have the best education which eventually prepares him/her for the future. However, the student has no capacity to become either a full partner in the decision making process or in the pedagogical process. In some answers of the staff some definitions for the student as a customer or a product were offered. It became evident that implementation of the T.Q.M. approach in its original form which clearly defines the customer and the final product met with some resistance among the staff. Some of the staff members due to the special character and vocation of education are unwilling to accept the influence of the student in a resolute manner since this kind of integration may counteract the task of the teacher as it is perceived by them.

Team-work was found to be prevalent in all the three schools. It is necessary to recall that there had been a sharp transition from the individual method of working to a team approach. The participation of the staff in the pedagogical process and in decision-making became an integral part of the school work culture. The findings show that consultations and discussions with teachers as well as their personal development and
the support they have received, led to a great contribution towards the school improvement. However, not all the teachers were participants to the same degree and the patterns of team-work was not assimilated in all teams. Nevertheless, the whole picture was in general very positive. Post factum it is clear that there is a relation between splitting the organization into small autonomous teams with new techniques under the influence of the T.Q.M. and the general improvement that took place in the school. Teachers were taken by the idea of team-work and through this way of operating they express their needs and opinions and became partners unlike the old method of imposing top-down decisions. So the general impression is that focusing on the team approach was perceived by the staff as necessary for continual school improvement.

Also, the approach of anticipating problems was seen as well-established and in general there is feedback-based process. In this respect there is no real difference between the three schools. Preventing problems on the student level of learning and achievement is done through tests and school work, there is a process of locating the problems, mapping it and dealing with it. In addition, there is a follow-up through data base on the student progress and the whole procedure is repeated. Also on the social, ethical level there is a follow-up through satisfaction questionnaires and their analysis.

On the level of teaching methods it was revealed that there exists some adjustment to the student needs, based on the recognition that students needs vary so a supporting mechanism was set-up to further the educational process. On the level of class teaching it was revealed that it is difficult to obtain oral or written feedback because it is seldom that teachers observe their colleagues' lessons. Nevertheless, on the school level the impression is that there is a consistent use of ISO 9000 requirements. For example, in school '3' the mapping process, discussions and drawing conclusions on the basis of ISO 9000 information were emphasized to show the use of this approach.

Post factum it can be said that the assimilation of these methods led to a change in the thinking processes in these schools. Today management tries hard to prevent difficult problems rather than having as a policy of ad hoc solution. This process impacts on
the educational process and improves it. Still, the situation is far from the T.Q.M. requirement for 'zero - defects'.

In addition, the success of the school was tied up to a great extent with the close relationship of the team members and also between the teams and the SMT. The contribution of decentralized management and staff autonomy is apparent vis a vis the development of formal and informal relationship among the staff. Since the introduction of the T.Q.M. and subsequently the transition to collegial, open and genuine management, there is a noticeably positive atmosphere among the staff albeit to a varying extent in the different teams. This atmosphere leads to fruitful working relationships. An impression is given that teachers feel as partners and accountable to the educational process. This feeling increases the sense of satisfaction and supports the view that:

"Total quality is a philosophy... aimed at achieving a culture of continuous improvement by all the employees of an organization in order to satisfy and delight customers." (West Burnham, 1995 p. 13)

Nowadays more than ever teachers were revealed as the initiators of social and educational programs in order to improve the school performance. Nevertheless, the relationship between departments remained quite loose. Contrary to T.Q.M. which calls for close relationship between all the different departments in order to achieve a quality product, these schools were revealed as effective and do progress towards improvement in spite of the lack of success to develop close relationship between the various departments. The heads stated that there is a need to further improvement in the communication between various departments in order to enhance the general social fabric in school which contributes to an effective school culture.

All in all, the research reports about extensive use of three characteristics of the T.Q.M. approach and all these features are connected also with the effective running of the school. In the three schools these characteristics were perceived as being part of the deep change of the perception of school accountability and helped to improve the school and its success. It can be said that the school became devolved the staff.
obtained autonomy empowerment and tools such as ISO and team-work. The change of techniques as well as the change in the thinking led to a greater measure of independence in comparison with the past and also to more accountability and to a greater sense of satisfaction in the working relationship and working in general.

School values and aims

It is necessary to understand the meaning of the priorities of the values and aims and the way that they are communicated if they are to be scrutinized:

“All members of a school community should actively build and share a common vision of its main purposes.” (Hopkins, 1994 p.79-80)

In the schools under study, there is an attempt to perform according to what has been cited above. The introduction of the T.Q.M. approach led to a redefinition of the school credo, aims and vision. In fact, these are well-known to the teachers and were passed on to the students and parents. The next section deals with the principle school aims and values as they were revealed in the research. It seems that priorities vary in these schools. However, all the three schools have emphasized the importance attached to the development of pedagogical achievements and the differential potential of each student. Emphasis was also placed on discipline and moral values teaching and fostering ties with parents as a way to achieve better accomplishments. Or in the words of one researcher in the field:

“the quality of teaching has both the most consistently demonstrated impact on student learning and is within the power of teachers to do something about.” (Wyatt, 1996 p. 3)

In the interviews the heads have stressed their endeavor to further the school pedagogical achievements through efforts to adjust the teaching curriculum and teaching methods to the school credo and aims. For example, in order to cope with the uniform standards of the national curriculum and simultaneously with the diverse student population a special aid supporting mechanism was devised. This is an
attempt to adapt the curriculum and the disciplines level to the varying student needs as they have emerged from feedback. The most qualified teachers were chosen to teach in different methods the national curriculum in order to offer even a weak student the opportunity to achieve the pedagogical aims. Also in the area of optional disciplines the schools sought to choose the most desirable projects. Management allowed students through alternative assessment to focus on the projects according to their wish and to focus on learning process according to their abilities. Doing so the student could develop his/her intellectual abilities and achievements. In addition, unique 'Ulpan' (Hebrew language) classes were set up for the benefit of the newcomers. For the sake of raising school achievements the staff was given additional teaching hours in various disciplines. The rationale is that:

“Opportunity-to-learn is clearly related to such factors as the length of the school day and year and to the hours of reading experience taught.” (Reynolds, 1998b)

The message which is communicated to the student points out that each one is able to achieve high academic results and the school aims to provide the necessary conditions for it. This solution indicates criticism as 'quality costs a lot of money whereas T.Q.M. aims for eliminating waste' (Tzuk 1995, p. 7). The impression is that heads who operate in a sensible and effective way have seen to render the national curriculum more flexible. They have also changed the teaching methods and in addition have channeled the emphasis on subjects such as art and science into practical school regulations. As a result, school effectiveness grew since several ways were combined in order to increase the school achievements. It seems that today the implementation of the aims which was done with the consent of teachers, joint planning and coordination indeed influences the student performance as it was expected. Also the open questions which deal with the way teachers perceive the school main aims, have increased the impression that in these schools one of the most important aims is the raising of academic achievements. The next table presents the staff perception about the most important school values and aims.

Table 43 - Data Analysis

314
SCHOOL ETHOS, AIMS AND POLICY

<table>
<thead>
<tr>
<th>In this school:</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A main aim is to achieve good academic results</td>
<td>4.83</td>
<td>4.75</td>
<td>4.87</td>
</tr>
<tr>
<td>SD</td>
<td>0.38</td>
<td>0.44</td>
<td>0.34</td>
</tr>
<tr>
<td>A main aim is to meet personal and social needs</td>
<td>4.44</td>
<td>3.94</td>
<td>4.48</td>
</tr>
<tr>
<td>SD</td>
<td>0.62</td>
<td>0.56</td>
<td>0.51</td>
</tr>
<tr>
<td>A main aim is to promote the acquisition of basic skills</td>
<td>4.39</td>
<td>3.87</td>
<td>4.35</td>
</tr>
<tr>
<td>SD</td>
<td>0.50</td>
<td>0.85</td>
<td>0.49</td>
</tr>
<tr>
<td>A main aim is to promote the acquisition of moral values</td>
<td>4.39</td>
<td>4.53</td>
<td>4.13</td>
</tr>
<tr>
<td>SD</td>
<td>0.50</td>
<td>0.80</td>
<td>0.69</td>
</tr>
<tr>
<td>A main aim is to promote a spirit of cooperation</td>
<td>4.56</td>
<td>4.22</td>
<td>4.65</td>
</tr>
<tr>
<td>SD</td>
<td>0.98</td>
<td>0.94</td>
<td>0.49</td>
</tr>
<tr>
<td>A main aim is to promote the student’s satisfaction</td>
<td>4.56</td>
<td>4.13</td>
<td>4.43</td>
</tr>
<tr>
<td>SD</td>
<td>0.51</td>
<td>0.43</td>
<td>0.51</td>
</tr>
<tr>
<td>A main aim is to help each child to achieve his/her potential</td>
<td>4.33</td>
<td>4.31</td>
<td>4.48</td>
</tr>
<tr>
<td>SD</td>
<td>0.69</td>
<td>0.69</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Seven statements are found in this group, which examine the main aims of these three schools. The statement 'A main aim is to achieve good academic results' received the highest mean in all these schools; 4.83 in school '1', 4.75 in school '2' and 4.87 in school '3'. This proves that there is a broad consensus among the staff, possibly since the secondary schools' main aim is to achieve high academic results. Also the low standard deviations in this statement testify to the fact that there is little difference of opinion. This finding also confirms what the heads said during the interviews, namely that the school is the 'house of knowledge' and its main function is to raise the student to high academic achievements. One explanation for perceiving achievement as the foremost aim by teachers as well as by management is probably the pressure put on them by several sectors to show success and final quantitative results as an indicator of school effectiveness. The Ministry of Education pressures the Municipality, the latter pressures the school head and he in turn put pressure on coordinators and department heads who pass on to the teachers the message of the achievements importance.
Also in the other statements except for two in school '2', the means were revealed as being high starting with 4.13 and more. This shows that the staff in these schools strongly agrees that the most important school aims are also to help each student to realize his/her self potential, to promote the acquisition of basic skills and to further ethical values. The last statement stands out especially in school '2'. These aims are attained through an atmosphere of cooperation and satisfying the student's wishes. Also the standard deviations for most of these statements were not relatively high. This indicates that the difference of opinion for these statements is quite narrow among the staff. However, in school '2' two statements stood out with a mean of less than 4. Although the means 3.94 and 3.87 are not far from 4 and show general agreement, the staff in school '2' agrees less about the main school aim is to take into consideration the social and personal needs or to promote the acquisition of basic skills. The first finding is quite surprising since the answers to the open questions on school '2' show that teachers have expressed their satisfaction about the open and free school atmosphere and the social and personal meetings. It is quite possible that some of the staff understood this statement as being related to the teacher so in their team it is their feelings. And it is quite possible that another part of the staff understood it to relate the students, so this indicates that there is a need for improvement. One possible explanation for the statement about the acquisition of basic skills maybe connected with the fact that it is about secondary school not elementary or junior high. It is quite possible that teachers think that the acquisition of the basic skills should be made already in elementary or junior high when the student is younger and not during the years of secondary school.

The interviews reveal also the importance that heads and deputies attribute to the aspects of order and discipline and confirm what has been said in the literature:

"Discipline should be used to communicate to the students the seriousness and the purposefulness which the school attached to the carrying-out of its duties but not as a means to use the stick again." (Purkey and Smith, 1985 p. 350)
The heads in close cooperation with deputies and hometeachers acted to create an atmosphere of order, discipline and mutual respect between themselves and between them and the students. The impression is that order and discipline were perceived as being a tool through which the school chooses to convey to the students the seriousness of achieving the aims. It as well conveys the student responsibility to maintain an orderly educational process in a relaxed environment that does not distract attention from learning and teaching. As a whole, the T.Q.M. approach has contributed in various degrees the tools so the school will not cope with discipline problems only when they arise but anticipate them in order to systematically prevent problems such as violence, drugs and alcohol. T.Q.M. has reduced discipline problems, however there are still problems such as vandalism and absenteeism especially in school '2' although in general there is a great improvement even there.

An additional finding that arises from the interviews is the importance of the tie between school and parents. Bolender (1997) claims that:

"building partnership with parents is an expedient task of an effective school. Communicating information with parents and providing a welcoming climate are the first steps, but the school must go beyond these. Parents must be engaged as valuable and necessary partners with the school in the pursuit of educational excellence for their children." (p. 17)

The three schools support the idea of parents' involvement and school '3' even sees it as one of the most basic aims of the school towards improvement. Heads have emphasized that they strive to develop among parents the feeling of belonging to the school in order to achieve real partnership. Thus:

"every effort might be made to accommodate parental wishes." (Macbeth, 1993 p. 195).

The three schools seek to increase parents' involvement. Management acknowledges parents as a very important factor which can lend emotional support and advance the student towards the school aims. The research rationale behind parents' involvement
shows that since parents are the closest to the students and well aware of their emotions, their virtues and shortcomings, parents are able to serve as an impetus to further the children's achievements. However, in the interviews with management and from the open questions it became clear that in practice parents involvement takes many forms. At times it may be impossible to have parents involved in some areas. For example, the head in school '2' has emphasized that due to the student's right to privacy, there are some areas which must remain strictly confidential even to the student's parents. The staff also presented a new problematic angle claiming that as far as pedagogical decision-making is concerned only the professional teacher is competent to tackle and no parents should be involved. The internal customers, the teachers' impression, nevertheless, is that the school endeavours to minimize the feeling of alienation on the part of parents towards the school activities. Actually in school '3' a special joint computer training course was devised so parents and teachers can study together and interact. Management of the schools says that today parents cooperate more than ever and contribute to improve their children learning efforts. This process leads to enhancing student performance and even to better the student attitudes towards his/her school. Still there is a long way to go in this area of school-parents relationship. The following table presents a summary of the staff opinions about these three most important aims: achievement, discipline and ties with parents.

Table 44 - Data Analysis

<table>
<thead>
<tr>
<th>SCHOOL ETHOS, AIMS AND POLICY</th>
<th>School 1</th>
<th>School 2</th>
<th>School 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this school:</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Most pupils feel a sense of achievement</td>
<td>4.50</td>
<td>0.51</td>
<td>4.19</td>
</tr>
<tr>
<td>Academic attainment is high</td>
<td>4.61</td>
<td>0.50</td>
<td>4.72</td>
</tr>
<tr>
<td>Discipline is not a major problem</td>
<td>4.12</td>
<td>0.49</td>
<td>3.56</td>
</tr>
<tr>
<td>Vandalism by pupils is not a major cause of concern</td>
<td>4.00</td>
<td>0.34</td>
<td>3.41</td>
</tr>
<tr>
<td>The building and grounds are well maintained</td>
<td>3.94</td>
<td>0.73</td>
<td>3.41</td>
</tr>
<tr>
<td>Pupils attendance is consistently high</td>
<td>3.61</td>
<td>0.70</td>
<td>3.75</td>
</tr>
<tr>
<td>Parents are welcomed and integrated</td>
<td>3.72</td>
<td>0.57</td>
<td>3.50</td>
</tr>
</tbody>
</table>
In this group there are seventeen statements. Nine out of them examine the staff opinion concerning the effectiveness of school's achievement, its discipline and its ties with parents. The two first statements are about the achievements. The staff gave means starting with 4.19 or more to these statements and the low standard deviations show that teachers are virtually unanimous. Indeed, a strong sense of achievement prevails in the three schools and the actual results confirm it. The second statement obtained the highest means in this group: 4.61, 4.70 and 4.72. This reinforces the idea that achievement is considered to be a high priority for these schools and the staff approves this fact.

Four out of nine statements deal with the disciplinary aspect in the school but here the results indicate clear differences between the schools. In school '3' all the four statements received a mean starting with 4.13 or more and also the standard deviations were low. This shows that in this school the staff has uniformity of opinion concerning the statements 'Discipline is not a major problem', 'Vandalism by pupils is not a major cause for concern', 'The building and grounds are well maintained', and 'Pupils attendance is consistently high'. The situation is not the same in school '1'. Two out of the above four statements received means of 4.00 and 4.12. This indicates that the staff agrees that discipline is not a major concern and also the students' acts of vandalism do not alarm. Also the standard deviations relating to these statements show some uniformity of opinion. However, two statements that deal with maintaining the school premises and students' absenteeism received lower means 3.61 and 3.91 which indicates less agreement among teachers. Also the standard deviations for these two statements 0.70, 0.73 are relatively higher than the previous two statements which indicates that there is a difference of opinion. The disciplinary problem was found to be more acute in school '2'. All the four statements that deal with discipline received means between 3.41 and 3.75. This shows that this area needs improvement. Also the standard deviations were high and vary between 0.76 concerning students' absenteeism and higher standard deviations 0.98, 1.07 and 1.11
for discipline and premises maintenance. This undoubtedly shows a great difference of opinion among the staff. One possible explanation for these differences between the schools in the areas of building maintenance and students' absenteeism is that school '3' is the smallest and newest one. Therefore, it is easier to monitor the student's attendance when the size is small as it is easier to maintain a new school. Schools '1' and '2', in contrast, are older. Therefore, the effort to maintain them is greater and also greater resources are needed. Also schools '1' and '2' are longer and so there are many hierarchy rings between the phase of reporting about problems and the phase of solving them. It is possible that teachers think that the management duty is to assure the school maintenance and students' attendance whereas management thinks that since powers were delegated to teachers, it is incumbent upon the teacher to deal with the disciplinary problem and attendance.

Also concerning the aim of ties with parents there is some difference of opinion between the three schools. Three out of four statements deal with this tie. In schools '2' and '3' two out of three statements received means starting with 4.06 or more. This indicates that the staff agrees that parent-teachers meetings are well attended and also parents are proud of having their children in these schools. Also the staff in school '1' agree with the last statement and the mean 4.22 shows it. Nevertheless, in school '1' the statement that deals with the attendance of parents in parent-teachers meetings received a somewhat lower mean than in the other two schools, namely 3.94 whereas the other two schools received 4.06 and 4.09. This shows that there is less agreement with this statement without being really opposed to it. One explanation for the received means in these schools is that since students have enrolled from their free will with parents' encouragement, in secondary schools that have a good reputation acceptance poses some problems, it is quite logical to see parents being proud of having their children attending the school. Also the high parents' attendance in parents-teachers meetings is logical since most parents in these schools, namely, the Russian parents are involved and interested in finding out about their child's performance. These schools received lower means, 3.50, 3.72 and 3.91 concerning the statement 'parents are welcomed and integrated'. This indicates that the staff relatively disagree with this statement. Indeed also in the interviews and from the open questions it was revealed that this issue was controversial. One possible
explanation was that the transition from centralized management to a decentralized one in the three schools indeed has provided the parents the opportunity to have a greater involvement in the educational process, however its nature is not accepted by everyone. The impression is that there is still a lack of willingness on the part of the staff which clings to his prerogatives and on the part of parents, some of whom are still struggling with language difficulties, to become true partners. This staff resistance contradicts the type of relationship required by the T.Q.M. approach where the staff which is the service provider should act according to the wishes of the customers, in this case it is the parent. It does not seem that there was a conceptual change concerning the role of the professional teacher although this change was required by the T.Q.M. implementation. The findings indeed show that there is no parents' cooperation in all the discussions concerning the decision-making and some decisions are not brought to their attention. The impression is that these schools have not yet succeeded in building a true partnership between school and parents and this maybe due to the special character of the Israeli educational process where:

"the teachers main power is not in accepting innovations...the class is the teacher’s fortress." (Eden, 1978 p. 25)

The possible link between the aims priorities in the three schools and the school quality.

Managing according to the T.Q.M. approach was mainly understood in the three schools as a change of school aims priorities, and adapting these aims to the school credo. From the interviews with heads and their deputies and also from the questionnaire data a picture emerged concerning the curriculum and teaching methods. It is evident that a real effort was made to adapt these changes to the school aims. Nowadays, there is focus in these schools, although in various degrees, on areas which can increase school improvement and effectiveness. The schools emphasize the areas of achievement, discipline, ethical values and ties with parents as being the most important ones in order to achieve quality. Indeed these schools were revealed as successful and effective regarding a quality output, namely the student's achievement. The questionnaires indeed confirm that the students' achievements are really high in
these schools and also a sense of academic success prevails. This creates an atmosphere that helps the school to move forward in constant achievement improvement.

Also in the area of ethical values these schools were found as being effective and working towards assimilating the values which are appropriate for the school learning environment. The impression that managing according to the T.Q.M. approach has kindled in these schools the will to rethink the aims which would most influence the school performance. However, in the areas of discipline and the ties with parents there was a noticeable difference between the schools.

In schools '1' and '3' it seems that there is a positive discipline atmosphere which promotes the school aims and creates a general healthy climate. In fact, the change of atmosphere arose from the need to create a supportive and relaxed learning environment. For this reason the school shifted to beforehand problem prevention. The school parents-staff ties have also improved in schools '1' and '3', and it was found to further the school aims. Nevertheless, there is still room for improvement because parents are not totally involved in the decision-making process. So this issue should be reconsidered and reexamined.

In school '2' the two areas of discipline and parents-staff ties required rethinking and maybe it is advisable to revise the school aims priority. It seems that school '2' lacks an appropriate learning environment which is likely to positively affect the school performance. The staff in this school are still concerned over the level of vandalism and absenteeism. This is a situation which requires the concentration of efforts to consistently implement effective techniques for improving the current situation. Undoubtedly, part of the monitoring process especially of absenteeism and student achievement can be done with the help of parents. Through fostering healthy staff-parents ties the school could further its aims, the parents would assist their children and the student would profit by it and would reach high achievements which should brighten his/her future. Through true partnership between all parties concerned a positive supportive and enhancing environment can be created in school as well as at home. Thus, there will be less chance to have violence in school and this will also reinforce ties with persons who are well-placed to know the students, namely the
parents. In sum, all this should lead to fruitful changes which may help to increase school improvement.

**Russian newcomer students**

This chapter examines the marked characteristics of the high percentage of Russian newcomers in the three schools, as they were perceived by the research participants. From the interviews and the open questions it is quite clear that this is an important component which contributes to enhance the school climate and consequently this has influenced the school culture and has ensured its success. The Russian immigration wave brought hundreds of these students to the three schools. Today, there are 467 Russian students in school '1', 344 in school '2' and 131 in school '3'.

Cohen (1993) raised some interesting aspects about this unique population. His survey indicates that:

"Most Russian youngsters study in academic schools rather than vocational ones; A high percentage of these students' parents are concerned with academic or scientific professions and 81 percent of the Russian students aspire to take after their parents especially in the educational way." (p. 15-20)

Answers from the questionnaire also indicate some positive definitions for the Russian students' composition:

"I would define the Russian newcomers as showing qualities of diligence and determination." Or "Russian students are highly supported and motivated by their parents." (two teachers, school '1')

Or,

"The students are mostly success oriented." (deputy head, school '3')
From the research it can be seen that these students have created an intellectual atmosphere dedicated to achieving high standards and this atmosphere finds its expression in great interest in science and art disciplines. This atmosphere is also related to the increase of effectiveness and learning quality. Sammons et al (1997) claim that a positive school culture could play a key role in fostering the academic effectiveness of secondary schools. The above findings support their combination of three features as the best chance of fostering progress:

♦ A culture which promotes a strongly student-focused approach;
♦ An academic focus;
♦ An orderly school climate where students' academic outcomes are perceived as the highest priority in classes, subject departments and at the school level.

In the research, this atmosphere is described by several characteristics typical of these students which are: motivation, determination in achieving aims and diligence.

MOTIVATION

Indirectly and also in a very direct way parents' fingerprints are very noticeable in the increased motivation of these students. The Russian parents were mentioned in the research as people who are very supportive and involved in their children's studies although at various degrees in the three schools. For example, they are willing to transport their children to school very early in the morning since the school day starts already at 7.30 or 7.45. These parents have high expectations and believe in their children's capability. Pena (1995) supports this behaviour. For him when pupils are motivated they achieve desired results along with the responsibility for their accomplishments.

The parents have projected the importance of performance and created an aura of priority about science and art subjects in spite of the social price the students have sometimes paid for learning far from their surrounding. All this has affected the students and probably contributed to increase their motivation to aspire after success especially in the fields of science and art.
The head of school 'I' confirms that the Russian students thanks to their high motivation are able to score a percentage of success in their studies and adds that the students attach great importance to their success as a vital means of making it in Israeli society. The impression is that parents have a great influence upon their children and they are helpful to the learning atmosphere. In sum, it seems that this atmosphere motivates the students and subsequently they are challenged to perform better and as a consequence the school effectiveness continues to improve.
DETERMINATION

The Russian students as seen from the research were revealed as very concerned about their intellectual performance. The students strive to complete school assignments successfully and to achieve aims in the academic field. Their determination creates an atmosphere which emphasizes their aspiration to reach their aims. For example, in the interviews it became evident that the supportive mechanism operates in the afternoon and provides additional learning opportunities to improve achievements. In this selective program the attendance of the Russian students is consistent with almost no dropouts. In addition, their attitude to these lessons is very earnest and finds its expression in fulfilling class duties.

Also from the answers to the open questions it is clear that this population shows determination and investment of all efforts in order to achieve personal aims in spite of the objective difficulty of language and the long school day. The great effort to maintain the schedule, to overcome language and absorption difficulties and also to keep up with academic high standards, all this is derived from dogged determination to increase output and educational performance.

In sum, the impression is that the determination factor is the element which has increased the student effort and contributed to the realization of the personal student aims and indirectly to further the school shared educational aims as they were defined by management and staff.

DILIGENCE

Remarks which were made in the answers to the open questions such as, 'Russian students are mostly success-oriented' or 'the Russian students show consistency and diligence' reinforce the impression that the motivation is high and their determination as well as their diligence place the Russian students in a position which marks them as high quality and welcomed students in all three schools.

The Russian students who are probably aware of their being appreciated by the school and of their parents great efforts made for their success endeavours to live up to
standard. On the operational level, this finds its expression in diligence and their hard
work which are believed to lead the students to the expected high achievements. For
example, the Russian students deploy great efforts to belong to the best streaming
groups or to maintain their position in them. Another example, in spite of difficulties
many Russian students combine university level courses with their regular high
school studies and so they move simultaneously two tracks, one leading to
matriculation and the other to a B.A diploma. The head of school '1' in his interviews
saw an intimate link between the characteristics of these special students and high
quality level of the school.

The possible link between having a high percentage of Russian newcomers and
the school performance

The impression in general is that the Russian population includes high quality
students who are aware of their abilities and talents and of what is expected from
them. They are also aware of the way by which they will achieve their aims. It can be
assumed that there is a link between the high percentage of Russian students in the
three schools, their determined and ambitious nature driven by parents, and the
achievements and the academic atmosphere which permeates the school and leads to
its success. In addition, all these three factors indicate the tendency of these students
to highlight positive features which may help them to reach high results and
subsequently to raise the school success level.

The following table summarizes the similarities and differences of the factors that are
part of the three traditions presented in the literature review and the current research
findings.

Table 45 - Data Analysis

<table>
<thead>
<tr>
<th>T.Q.M., School Effectiveness and Improvement factors</th>
<th>The current research findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Long-term, shared vision and goals.</td>
<td>1. The school's vision is clear, well-articulated and communicated to the staff. Mainly the team leaders share</td>
</tr>
</tbody>
</table>
2. Problem - prevention, either monitoring performance through quality assurance or inspecting through quality control.

3. Leadership and management are to lead the improvement process, with a collegial approach.

4. Training or staff development is vital in order to achieve quality improvement.

2. In principle these schools are prepared to anticipate problems especially through the use of statistics techniques as well as team-based approach. Still problems do arise during the educational process but the solutions are given ad hoc. Contrary to the T.Q.M. system, where the measurement is 'zero defects' thanks to the quality assurance system, in the schools it's quite natural to err. The educational process is perceived as being one of trial and error and here there is a combination of mainly quality assurance and inspection when needed.

3. The heads appeared to mainly use transformational leadership. The prevailing style is collegiate and decentralized but when circumstances require it can be authoritative and imperious managerial. Liethwood (1992) supports the combination of transformational and transactional leadership.

4. Professional development courses were devised for the teams leaders especially in the area of team management. The other team members were given pertinent development courses in the area of their relevant expertise and also in
5. Culture of 'drive out fear' or blame in order to support and enhance changes.

5. The element of 'drive-out fear' was revealed to be a dominant factor in the research. In the past, there was an atmosphere of despair, fear and criticism quelling in the schools, however at present an atmosphere of openness and progress and if it is needed there is also room of leveling criticism.

6. Focus is on the change processes and the output of it.

6. The focus is on the students' achievement, namely the increase of all students who are eligible to take the 'Bagrut' test and also the average score of the results. In addition, there is a constant effort to improve the educational process and the techniques to achieve the school aims.

7. Customer-centered approach

7. Student centered approach is partially implemented. Teachers have high expectations, the students' needs are at the centre. Yet, multiplicity of customers exist and the nature of their involvement is problematic.

The final section offers concluding remarks and an analysis of the issue relating to the research questions.
Chapter 8 - SUMMARY COMMENTS AND CONCLUSIONS

Three secondary schools in the district of Tel - Aviv in which there are a high percentage of Russian immigrants and have introduced the T.Q.M. approach took part in this research which attempts to examine in depth the way these schools operate, and to elaborate their distinctive features. An attempt was made to explore the possible links between school success and the implementation of T.Q.M. focusing on particular aspects. Therefore, the main research question was:

Do the headteachers, teaching and non-teaching staff in the three schools in Tel Aviv area perceive that the introduction of a T.Q.M. initiative has contributed to school improvement?

A number of sub – questions were investigated relating to aspects of the T.Q.M. The sub – questions were:

Is T.Q.M. perceived to have been successfully implemented in the schools?
Specifically:
1. Is progress related to a student-centered approach?
2. To what extent does the school work towards prevention of failure during work processes?
3. To what extent are the school structure and processes team-based?
4. What is the quality of personal relationships among the members of the school?
5. Is there a perceived link between the style of leadership and improvement of the school?
6. What is the perceived link between a culture of 'drive-out fear' and improvement?
7. What is the perceived link between the values of the staff and improvement?
A further aspect of research which emerged through the pilot was examined, namely the importance of having so many Russian youngsters in school in relation to improvement in the school.

From the data analysis, two main findings emerged in this research. The first is that the T.Q.M. approach succeeded only partially in assimilating its principles in the three schools. Thus, it was not perceived as the key to success. The second finding is unique in this research. It is the special influence on the school improvement of the extraordinary characteristics of the Russian newcomers who constitute a very high percentage of the schools' population. Attempting to answer the research questions, this chapter will present the outline of the main findings, will comment on them and will suggest some possible conclusions.

**Inferences from the data about the student - centered approach**

Some key elements of the T.Q.M. approach were examined in the current research and were revealed as difficult or at times impossible to fully implement. First, the schools find the concept of the customer problematic. T.Q.M. sees the customer, in this case the student who is the primary customer, as the one who determines quality since he/she has the best knowledge concerning his/her needs and requirements. But, in all the three schools it was revealed by the heads and their deputies that there are other customers in the school, namely the staff and parents. Or as one deputy head put it:

"The main school customer is obviously the student but the student family and the Ministry of Education are also our customers although secondary ones."

(school '1')

Indeed, within education there is sometimes uncertainty and disagreement about the identity of the customer or customers:
"Thus the child is the customer in the classroom, the parent is the customer for reporting procedures, the LEA, DES, and HMI are equally customer in context." (West-Burnham, 1992 p. 57)

For total quality, there is no confusion about the status of the customer. In fact, the kind of relationship between a supplier and the external customer in the industrial world is often based on contracts, which seems inappropriate in education where the relationship is between educators and students (West-Burnham, 1995). The concept of the T.Q.M. customer is irrelevant and is perceived differently in the three schools:

"the student is very important but we do not cater to all his/her whims." (teacher 5, school '1'). Or "in the field of Education there are no returnable merchandise, the damage is real although in case of dissatisfaction a student can switch schools." (deputy school '2'). Or "viewing a student as the primary customer is a partial definition." (head school '3')

Moreover, the respondents conveyed the message that the schools' teachers, and not the students, lay claim on knowledge. The idea is not that they have knowledge in general but that they have the real knowledge which is relevant to the educational process and its outcomes. The student's ability, potential and aspirations are taken into account but the old-fashioned status of students remains. This corroborates Alboim-Dror's (1987) view which highlights the basic relationship in school between the teachers who have the knowledge and expertise, and the student who lacks this knowledge. The focus is on the top-down compulsion directed at students which stresses the role of teachers as experts. The quality approach would not accept this narrow view. Deming (1986) strongly opposed experts who claim they own knowledge. This difficulty backs up the idea that the 'customer-based' approach is perceived differently in the educational world.

An additional aspect which was raised in this study is that teachers, the internal customers, must teach the government's curriculum which is slow to be renewed and thus turns the student into an "old science walking encyclopedia" (Postman and Weingartner, 1969 p.11). A basis of T.Q.M. is that it is inimical to the top-down
educational philosophy, administration and the top-down curriculum because it shuts its eyes to the surroundings and is, therefore, not affected by its needs (Goodman, 1971 p. 14). T.Q.M. intends that:

"The organization should seek to meet the constantly changing needs of their customers." (Sallis, 1996 p. 41)

A logical conclusion from the above findings in the schools is that there is a lack of conceptual change concerning the role of the professional teacher although this change was actually required as part of the T.Q.M. implementation. For example:

"Parents are neither educators nor have they the expert knowledge to make pedagogical decisions." (subject coordinator 1, school '3')

Therefore, this indicates that the change was deficient in implementing a truly overall transformation probably due to the basic inadequacy of the industrial system in application an educational context.

The answer to the first research question 'Is the progress related to a student-centered approach?' is therefore not a clear-cut one. We could claim that the T.Q.M. contributed as a means towards 'student-centered' improvement. The three schools indeed focus on the student's ability, and his/her potential and wishes. They consult parents and their views are taken into account when appropriate. Also, through students' surveys, the schools learn about the students' preferences and feedback. Nevertheless, the student-centered approach level of acceptance shows that the T.Q.M. ideal was at best only partially realized. The focus is not on the fact that in the final analysis the student has a legitimate right to determine his/her needs as it is applied for the customer in the T.Q.M. approach. One possible reason is that:

"in education, the requirements of the customer are not defined in an undimensional relationship. Quality looked at through the eyes of parents, students, government, local communities and business has different characteristics." (Goddard and Leask's, 1992 p. 5)
Inferences from the data about the problem prevention approach

The second element which can be problematised is the orientation towards perfection in obtaining the ideal product through zero defects and breakdowns. This feature cannot be totally achieved in the three schools, as it is perceived by the industrial T.Q.M. approach, namely:

"...conformance to requirements" and focuses on "...the Zero Defects concept...the thought that everyone should do things right the first time." (Crosby, 1979 p. 9-10)

It was found in the research that although management and staff, whether as individuals or as an organization, dedicate themselves to constantly improve and anticipate problems, it was unrealistic to obtain 'zero defects' educational products. Mistakes were realized as a trial and error process. Or as one head put it:

"Everyone is prone to make mistakes and if criticism is factual and relevant I will be glad to receive it." (school '1')

These schools:

"reject the idea that quality means 'setting it right first time' or 'zero defects.'" (Nightingale et al, 1994 p. 165)

In practice, the various teams in the schools regularly examine the norms, the habits and the current performance in the school using mainly the quality assurance system, the ISO 9000 standards, in order to advance the school aims. Yet, since there is a multiplicity of customers and differences between them and also due to the particular nature of the educational process, there are obviously different needs, aims and 'final products'. As a result, we are talking about a different nature of products with various characteristics since part of them cannot be measured, part of them cannot be modified and part of them are designed for long term even after the school has ceased
to play a role. For example, both the ethical and moral values which tend to be long-
term goals and the social values which seem to belong to a humanizing process, are
difficult to measure.

Thus, the answer to the question; 'To what extent does the school work towards
prevention of failure during work processes?' is not so simple. It is true that all the
three schools have frequently and appropriately used statistical techniques and ISO
9000 standards to reduce violence, discipline problems, vandalism, and also to
prevent crises. Preventing problems contributed to the improved performance and to
the improvement of the school climate. This tool was integrated but the education
products are not 'right the first time' and this tool is revealed as sometimes hard or
impossible to implement effectively. T.Q.M. philosophy points out that:

"Organizations can no longer compete if they continue to live with the
commonly accepted levels of delay, mistakes, defective materials and faulty
products." (Sallis, 1996 p. 41)

These features are considered as harmful for a successful implementation of changes
in an organization whereas in the educational process mistakes are perceived as part
of a trial and error process. In effect, the way problems were solved through rational
processes which have at their base educational considerations is quite different from
the industrial process and therefore is not always free of zero defects. For example:

"The idea of the learning groups was to enable each student to learn according
to his/her ability and personal preferences and thus to offer individual response
to the needs of every student in the system." (head 1)

These differences may indicate the conclusion that on the one hand, there are links,
although they are at times indirect, between the implementation of T.Q.M. principles
in the three schools and the success that has crowned the school endeavours. On the
other hand, one cannot ignore the difficulties which, in the researcher's opinion,
derive from the fact that the basic school assumptions and the nature of the school
relationships are different from those which are at the root of the T.Q.M. approach.
Therefore, there is a lack of accord which prevents the perfect integration of the change.

**Inferences from the data about the T.Q.M. technique, namely teamwork**

The third element revealed is that there is a need also to emphasize the usefulness of another basic techniques of the T.Q.M. approach, namely teamwork. The research shows distinct evidence that in all three schools great importance is attached to teamwork and also to staff development. Or as one teacher put it:

"We have changed, we have new work methods which are inseparable from my team." (teacher 1, school '2')

Teamwork is the tool which is used effectively in these schools to advance the pedagogical school aims. The staff is empowered and takes part in the decision-making process and this enables the members of the teams to:

"assume control according to the needs of the situation." (West-Burnham, 1992a p. 122)

This technique is also perceived by the heads as a prerequisite to create a partnerships which is based on trust and open communication within and between teams. They advocate this technique because:

"... teams are more flexible ... teams are more productive than groups ... teams and performance are an unbeatable combinations." (Katzenbach et al, 1993 p. 15)

In effect, it was confirmed that the transition to this T.Q.M. technique is neither an empty word nor just a superficial change. The schools actually adopted a structure of autonomous units, namely the teams. This style of management:
“requires a whole new structure from foundation upwards” (Deming, 1982, p. ix).

and is successfully applied. In practice, in most of the teams, there is a hard, serious and consistent work done according to the principles of collaboration, reciprocity and individual accountability for deeds and results. Indeed the findings show that the work technique of teams became a well-established work pattern which has helped to overcome educational process problems and led to excellent work relationship. Beare et al (1992) endorse this technique as a means which can prompt success while explaining why collaborative decision-making is an essential component for a successful change:

“The staff of each school is given a considerable amount of responsibility and authority in determining the exact means by which they address the problem of increasing academic performance. This includes giving staff more authority over curricular decisions and allocation of building resources.” (p. 358)

Thus, it seems that the answer to the question; 'To what extent are the school structure and processes team-based?' would be that in fact to a large extent the schools were found to work according to these principles. This T.Q.M. feature can be considered as a means towards school improvement. There is a real transition from individual work method to collegial work in teams. In fact, although this shift was a painful process on the level of the organizational change and on the level of adjusting to sharing responsibilities including what is entailed in teamwork, the management processes aimed at T.Q.M. focused on:

“Teamwork, having long-term teams and short-term teams in order to face specific assignments.” (Tribus, 1991 p. 18)

This approach corroborates Deming's (1986) view to 'remove the barriers'. Sallis (1996) explains that:
"Deming has taken a strong position against appraisal systems which he believes put staff in competition with each other and act against teamwork." (p. 41)

Nonetheless, some authors (Sashkin and Kiser, 1992) place emphasis on the idea that the above mentioned tools: student-centered approach, problem prevention and teamwork, are the most accepted means of identifying and creatively solving problems, but they are not T.Q.M. in themselves:

"Not even training every employee how to use these tools and techniques will effectively implement T.Q.M. T.Q.M. only operates when the value of quality for customers is an important part of the organizational culture." (p. 40)

A possible conclusion is that only techniques which are relevant to the educational process can be completely implemented whereas those techniques which are purely business oriented such as manufacturing the perfect product cannot fit fully the educational process.

**Inferences from the data about the staff relationships in their schools**

The next element of a team-based work, namely cooperation between members within the teams and the healthy relationship between the members indeed were found to be very conducive to creating a positive climate in the school. On the one hand, teamwork is the factor that has promoted deeper and fruitful personal relationship and worth of appreciation. On the other hand, the quality of the personal relationship among the team members was found to be the reason for the cooperative and fruitful nature of work patterns such as joint solving of teachers' problems which provided the motivation to strive for improvement. The high level of team cooperation seems, to a large extent, to lead to close and warm personal relationships which prevail in these three schools. Both elements are regarded as a key feature of quality management in schools:
"Quality has to pervade human-relationships in the work place, teams are the most powerful agent for managing quality." (West-Burnham, 1995 p. 26)

Thanks to these high degrees of relationship the school indirectly benefited by it in achieving its success. Tzuk (1995) explains this linkage. Teamwork means a high degree of everyone's involvement which leads to special relationships in schools and has a great effect on achieving quality and on the educational objectives; learning, teaching, motivation, overall atmosphere and student's achievements. Tzuk’s explanation corroborates what was found in the current research. According to everybody involved in the educational process, the success of the school was found to be linked to a great extent to the good general and personal relationship between school and various duty holders and between the latter and the staff. The following statements confirm the positive relationships in the three schools:

“Everybody works in harmony while cooperating with his/her colleagues.”
(head 1)

“We have healthy professional relationships that encourage creativity and performance and include affection and even empathy on the personal level.”
(teacher 2, school '2')

“In our school, the staff works together in perfect collaboration.” (head 3)

The answer to; 'What is the quality of personal relationships among the members of the school?' is thus a derivation of the positive teamwork. These schools have open working relationships and a strong cooperation between staff members and management. This picture accords with Friedman's (1988) view that a school that is successfully receptive to changes tends to exhibit closeness between staff members and students. This picture also accords with Deming's philosophy on the need to 'break down barriers' (Principle no. 9) in order to be able to work together as a team. The total quality way is to develop a close, warm, personal and long-term relationship in order to “constantly improve the system of teaching and learning” (Kaufmann and Zahn 1993, p.49).
Inferences from the data about the quality of the leadership in the three schools

An additional element, namely leadership indicates a shift away from the centralized traditional management towards a more decentralized leadership which encourages the progress of processes. What best marks the move towards decentralization was the transition to the structure and team based processes which as previously mentioned which were found to be positively contributing to the school performance and it also led to the right work division and accountability. The impression is that this change from the pyramidal structure and from the centralized style of leadership was well received in the three schools. This picture supports Hopkin's (1994) claim that:

"leadership should empower people to achieve their own and the school’s purposes." (p. 79)

The findings reveal that the staff are very involved, the heads efforts are fruitful and their leadership ability, mainly decentralized, however at times authoritative, is fully expressed. The enlarged management and the staff feel full partners in assuming the management role due to the power delegation. These positive feelings of the staff derive also from the head's character and his ability to activate the staff and to promote its accountability. This way everyone works as a team driven to achieve the shared aims. Fullan and Hargreaves (1991) have already highlighted the idea that improvement efforts must begin within the school and that a staff united in purpose could direct positive change in a school. It is apparent that the introduction of T.Q.M. in the three schools led to a collective accountability and to shared interest on the part of management and staff in the educational process. Similarly to the T.Q.M. approach and the school effectiveness research, leadership in these schools is noted as essential to nurturing and directing a staff in their pursuit of a shared purpose. Or as Becher and Kogan (1980) put it:

"the most appropriate way to improve and change processes is to encourage the participation of teachers in decision-making leading to a sense of ownership" (p. 67)
This cooperation affected very positively the general relationship between staff and management, and thus, the head has increased the general staff satisfaction. Fridler (1993) highlights the worker’s importance. Any organization applying T.Q.M., which cannot satisfy its workers, namely the internal customers, will not be able to satisfy its customers, namely the external ones. Thus, it is suggested that schools should satisfy and delight the workers; the teachers and the working staff in order to build an excellent educational system for the benefit of the primary customer: the students.

It seems that the school leadership style, head and also team heads, is a central and prominent factor in increasing these schools effectiveness. For example:

“In the beginning I was a very centralist type of manager, however today I tend to decentralize my authority and devote more time to the team development.”
(head 1)

Or:

“My eminent style of management is one which sets goals. A good head must know that he/she leads and defines policy through consultation with various teams and their participation in the process of decision making so that everyone is made responsible for the success or the failure of the decisions.” (head 2)

Or:

“The head pays attention to staff, listens to their opinions and may sometimes change his plans to make them suitable for new needs and conditions and thus harnesses teachers to devote their time and energy for the on-going improvement process.” (deputy school '3')

This prevailing leadership in the three schools became a motivating force in the educational process and also as a means to generate a very positive climate. Leadership is a vital component in T.Q.M., the headteacher has a key role in starting a
change in climate and eventually leading it to a qualitatively different culture (Dillon and Brown, 1983).

These features; support, empowerment and shared decision making which were repeatedly mentioned as the key factors for improvement in the literature, (Barth, 1990; Beare et al, 1992; Leithwood, 1992) provide a positive answer to the question which has examined whether there is a link between the style of leadership and the school improvement. The findings corroborate what is said in the literature about a school which is run according to the T.Q.M. approach. Such a school focuses the attention on the school's leadership and emphasizes the need to have a head who concentrates on the educational process through making the staff partners, associating it to the decision-making process and stimulating it to be committed to changes (Sallis, 1996). The conclusion is therefore that ‘the job of management [in these schools] is not supervision, but leadership’ (Deming, 1986). A real positive change has occurred in the school performance subsequent to the current leadership style and to the character of the leader at the organization apex, the head who is a main pillar in introducing changes and assimilating them. It seems that these heads work further towards constant improvement. They keep on focusing on motivating the staff and associating them to the process and also keep allocating the duties among the most qualified people and using their authority when it is needed. Thus, these findings imply a strong link between the current leadership style and the improvement which took place in the three schools.

Inferences from the data about the quality of the schools' culture

The next additional finding relates to the culture which has developed and contributed to the improvement. This finding is somewhat linked to the previous one but there is an important additional dimension. Indeed the power delegation and the collective style are crucial but it is not enough. There must be also a prevailing open and supportive climate which helps all the staff in eliminating fear and reducing tension. There is no longer the situation where:
"many problems of violence, discipline were commonplace and teachers were afraid for their livelihood and their future, they were quite distressed, withdrawn and were afraid to voice their feelings in an open way for fear of suffer of it" (teacher 2, school '1').

According to these findings the T.Q.M. approach contributed greatly to remove fear and bring in transparency and openness in the nature of the work in the three schools. This effectively expressed itself in the mutual support of head and S.M.T. as well as in that of the S.M.T. and staff. It is quite clear that this and team work which inspires and 'fertilizes' colleagues are the factors which transformed the schools into places where it is pleasant to work. There is also no doubt that the concept of 'drive out fear' is very dominant in the three schools and has been applied especially because of the introduction of T.Q.M..

It is conventional to think according to literature that the creation of an open and relaxed climate is the head's sphere of responsibility and he/she must foster and nurture it by supporting and encouraging the staff (Fullan, 1991). In effect, it was found that in the three schools the substantial change in the organizational culture came about when the head has attached importance to several factors. These factors were; the increased awareness to the social and professional needs of the staff, creating commitment on the part of everyone to the educational process, the creation of an environment of partnership and openness even when criticism is called for and the increased involvement in finding solutions to discipline and learning problems. Staff satisfaction was also monitored. In practice several examples were offered to the importance the heads accord to these factors. School teachers' committees were activated and took upon them to see to the teacher's welfare in the social and personal areas. Another example is when there are differences of opinion between staff and management in school '3' an additional meeting with the head is called upon to settle the matter. There are also lectures and seminars as a part of the problem prevention technique to reduce vandalism, violence and discipline problems. This whole approach created the positive culture which prevails today in the three schools and which is perceived by management and staff as being a crucial component of school improvement. Bolender (1997) also touches on the importance of 'school climate' or
the atmosphere variables as a means to achieve the school common goals (p. 2).
Nevertheless, school '3' stood out in the close relationships among the members of the
school and in its cohesion. The items of support, cooperation and openeness scored
high and they seem to be a norm which is well established in this smallest school.

The above picture answers positively the research question; 'What is the perceived
link between culture of ‘drive-out fear’ and improvement?' Observing the teams, it
seems that they were able to freely voice their opinions. They were not afraid of
presenting opposing views and did not refrain from debate. One possible conclusion is
that indeed a climate of openness and relaxation per se does not increase effectiveness
directly, however, it helps to implement the appropriate means needed to achieve the
aims. Or as Hargreaves (1997) put it:

“No school or teacher culture can be shown to have a direct impact on student
learning and achievement... But the effects of culture can be conceptualized as
trickling down, so to speak, through the architecture-political and micro-
political, maintenance and development and service – until they eventually
make some impact on what goes on in classrooms.” (p. 249)

In these three schools it was revealed that there is an influence albeit indirectly of the
new culture on school improvement. It is possible to attribute a considerable part of
the improvement of climate to the transition from one of fear, lack of confidence and
violence to a learning relaxed, quiet and safe climate, which was created subsequent
to the T.Q.M. introduction. Deming (1986) indeed suggests that the school should
drive out fear from students as well as from the school staff relationship. This way,
everyone may work effectively:

“Security is the basis on which staff motivation depends. Deming believes that
people genuinely want to do a good job providing they work in an environment
which encourages them.” (Sallis, 1996 p.42)

Inferences from the data about the aims and values in the schools under study

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The last element relates to the values and aims that the staff is committed to. In this respect most of the aims that the staff were willing to accept were pursued and led to school improvement. This shows the relatively high weight which was given in the three schools to selected and preferred values and aims subsequently to shared and renewed thinking after the introduction of the T.Q.M. The heads and staff were responsible for implementing the specific educational policy so that it aimed at high results. In practice, the participation of the staff increased their commitment to the aims which they perceived sometimes as helping and sometimes as directly causing improvement and effectiveness. Or as Hen et al (1984) put it:

“school headteacher and teaching members as a whole can determine success in their work if they are set on having a clear educational policy and be directive and supportive in the organizational and educational efforts to achieve their goals.” (p. 91)

There is a noticeable success in achieving the school aims in the three schools although each school has emphasized its particular means in order to attain the same aims and so each school has given encouragement and recognition to the concept of differentiation which exists among the students. For example:

“At one end of the spectrum we find students who strive to acquire the Bagrut diploma and on the opposite end we find special students who enjoy a special status because parallel to their studies in the school, they study for a B.A. at the university and the middle is very diversified.” (head 2)

This approach again problematises the issue of the 'product' in the industrial approach as compared to the educational setting because:

“The objectives of educational institutions are much more difficult to define than the purposes of commercial organizations. There are no clear-cut educational equivalents to such major private sector objectives as profit maximization, output maximization or product diversification. Schools and colleges are expected to develop the personal capacity of individuals, to
inculcate the accepted values and beliefs, to look after children and young people for set periods of each day and to prepare pupils and students for the next stage of education.” (Bush, 1986 p. 5)

In practice, all the following values and aims: the development of pedagogical achievements; the differential student potential; ethical and moral values; discipline and the promotion of parent-teacher ties, were placed at the apex of priorities and the staff have strenuously worked to achieve them. It seems that most of the aims were achieved and led the schools towards improvement. Academic achievements rose (see table 1). In effect, the climate of achievements was especially outstanding in the three schools and this greatly influenced the overall school climate. The moral and ethical aspect got better and school discipline improved but not quite satisfactorily in all the three schools. For example the questionnaire’s results indicate that the staff of school '3' has uniformity of opinion about 'discipline is not a major problem in the school'. Similarly, in school '1', the staff agrees with the latter statement but the issue of student's absenteeism seems not to be of major concern in school '3' whereas it is a major concern in school '1'. The disciplinary problems seem more acute in school '2' where the staff perception indicate the need for improvement.

However, one striking aim, namely the tie between school and parents was revealed as being controversial. Although the basic tenet of T.Q.M. is that quality is defined by the customer (West-Burnham, 1997 p. 122), the parents being looked at as customers or full partners seems to be problematic in the educational sector. This corroborates Willis (1993) objection to using industrial vocabulary and approaches in education. He explains that students are not ‘products’, parents are not ‘suppliers’ and teachers are not ‘transitional means’. Moreover, students and parents are not even ‘satisfied customers’ they should be looked at by the schools as:

“customers who are well-served by schools - ethically, socially and environmentally.” (Hirumi and Kaufman, 1992 p. 33)

Therefore, the answer to the question; 'What is the perceived link between the values of the staff and improvement?' can be that the staff, to a very high degree, feel
committed to the school aims. That is, they feel committed to achieving the specific
targets that they normally believe in and take part in their decision-making process.
Sharan's (1986) study also reveals that the educator's perception of their main role
tends to be achieving goals that are connected to transferring knowledge to students;
developing cognitive skills, values and behavior. These goals belong to the wider
context of education and do not focus on outputs or financial profit. It is true that the
right to rethink the school new priorities of aims which leads to participation,
accountability and improvement should be attributed to the introduction of the T.Q.M.
Nonetheless, the success of the three schools was found to be linked to a great extent
to the importance attached to the wider educational aims and their implementations.

These findings lead to the answer to the comprehensive question; 'Is T.Q.M.
perceived to have been successfully implemented in the schools?'. Of course the
introduction of the T.Q.M has produced changes that have positively and dramatically
influenced the three schools performance. Some of the principles such as the
emphasis on decentralized leadership, open climate of 'drive out fear' and team-work
were indeed successfully implemented, however at the same time, there are principles
such as 'right the first time', no faulty product and the customer approach which could
not fit the school educational conception.

The second main research finding reveals the importance of having so many Russian
youngsters in school and its strong link to the improvement in the school. This finding
is not related to T.Q.M., but it stands on its own and was dealt with in the research
due to the fact that it is impossible to ignore the high percentage of Russian
population in the three schools and references to them on the part of staff. The overall
picture which the research presents is quite positive and fits previous researches
(Cohen, 1993). In the literature there is a profile of the Russian newcomer student as
being a special one who is conscious of his/her talents, abilities and high expectations
which he/she is required to fulfill. These students therefore strive to move up, are
driven to improve and overcome obstacles on the way in order to attain the shared
aims with the school. The findings of this research corroborate this profile. Or as
some teacher put it:
"I would define the Russian newcomers as showing qualities of diligence and determination." (teacher 5, school '2'). Or "Russian students are highly supported and motivated by their parents." (teacher 7, school '2')

The Russian student who is perceived as being a primary customer in all the three schools stood out by his/her unique features. The staff view the Russian student as being diligent, does not spurn hard work and is quite determined to achieve his/her aim. It can be understood that this student's resolute aspirations, his/her unrelented efforts and the high expectations from his/her parents who help along the way towards success, all this motivates him/her to cling to his/her drive to achieve his/her aims. It is logical also to infer that the emphasis on these features contributed to the atmosphere of achievement which prevails in the schools. There is a healthy learning atmosphere which communicates the idea that one must learn in order to succeed and that discipline problems must be prevented. It seems that these schools embrace Purkey and Smith's (1985) view that:

"Discipline should be used to communicate to the students the seriousness and the purposefulness which the school attached to the carrying-out of its duties." (p. 350)

Therefore, there is room to assume that there is a link between the atmosphere that was created thanks to the character and quality of these students and the general climate of the school which was found as a factor that contributes a lot. The climate brought about a complete change in the three schools, contributed to better school improvement and to increase student achievements. It is logical to assume that in the three schools under study the perceived link between having so many Russian youngsters in school and improvement in the school assumes a positive character. This is probably due to the atmosphere prevailing in the schools which was found to positively influence the performance of all the parties involved. This finding fits Deyhle's (1995) definition about immigrants:
"who are doing well ... and who moved more or less voluntarily to a new country because they believed that this move would lead to more economic well-being, better overall opportunities, or greater political freedom." (p. 187)

In conclusion, several points can be inferred from the current research findings. First, the concept of differentiation is an important component in these schools and in education. This answers to the needs of the educational complex and changing environment but it contrasts with T.Q.M. principles. For example, the school does not see a clear correlation between the student performance in history and his/her achievements in science (table 1). On the contrary, the concept of 'contents expertise' in one area gives legitimacy to the student to be either academic scientific-minded or liberal humanistic-minded. This example illustrates the basic assumption of knowledge differentiation which contradicts the T.Q.M. concept since the T.Q.M. approach sees the products as being a result of a unified process whose components and parts depend on each other in a manner that each one has a direct link to the final output. This basic assumption of unified influence finds its expression in the holistic nature of the approach, namely the improvement and the drive towards quality must be undertaken altogether and must use each of the output process component. In the T.Q.M. approach, there is no need for a partial improvement since the production and transformation processes are interlinked and together influence the quality of the product.

Second, T.Q.M. requires removing barriers and the existence of a system of open and intensive communication between the separate parts of the organization and between the organization and its external environment (Sallis, 1996 p. 42). Indeed, in all the three schools there was cooperation especially within the teams but still teaching is carried out independently and in isolation in the classrooms. This fact strengthens the conclusion that the character of the teacher role has not been really transformed as would be expected according to the T.Q.M. In addition, the cooperation between the various departments is still lacking and sometimes even non-existent so it can be said that the barriers are still there. Therefore, it can be inferred that the T.Q.M. concept which stresses the removal of barriers is opposed to the partial autonomy and teacher's isolation which lie at the root of the educational process.
In effect, it was not found that great school improvement occurred just thanks to the T.Q.M. introduction, but rather that there are areas where T.Q.M. does not fit the educational setting. The perception concerning the 'ownership of knowledge', autonomy, and communication patterns between customers and organization the way they exist in the school differs fundamentally from the way they are expressed in the T.Q.M. approach.

Therefore, the question that must be asked is why nevertheless a real improvement did occur in the three schools. One possible suggestion could be that there is harmony between the basic assumption and the key relationships which take place in the school and those which lie at the root of change making. The actual process of change in the three schools fits Fullan's (1992) suggestion about how a process must be more organic and dynamic:

"vision building;
evolutionary planning monitoring/problem-coping;
initiative-taking and empowerment;
staff development/resource assistance; and
restructuring." (p. 82)

In the three case-studies, there is participation in decision-making which led to satisfaction among the staff, motivation and identification with aims and finally a more flattened organization. Another possible alternative is that a real improvement took place in the three schools largely due to the special qualities of their Russian students.

The real novelty of this research lies not in one more model to implement in academic secondary schools but in research which has examined and evaluated the influence of the T.Q.M. approach implementation in the three schools which have a very special composition of students. Studies which were conducted in the past mainly focused on the general implementation of the T.Q.M. approach in education. However, this thesis corroborates the assumption that schools can make a difference regardless to the
socio-economic status of the Russian students. The difference was realized through enrichment lessons, tracking groups, and the correct thinking about the most appropriate management tools and techniques for the individual students needs.

The research has indeed examined whether the 'products' were increased at the end of the educational process but especially has examined the way the schools are run according to the tools provided by the T.Q.M. approach, namely the processes and their ability to lead to improvement in order to achieve the aims that the school has set. All the three schools which participated in this research have greatly improved and their performance was influenced to various degrees by the implementation of T.Q.M. but also by external factors and the most important one being the Russian newcomers and their quality. The research indicates success in assimilating T.Q.M. in the same areas where there is some harmony between the assumptions lying at the root of the changes and those of the educational setting. The success of the T.Q.M. approach stands out especially as a means of driving-out fear whereas in the past this fear lead to a dejected atmosphere, a somehow paralysis of the educational work and indifference on the part of the staff. However, the success in implementing the 'customer-based' and 'problem prevention' principles was not so sweeping and full, due to its inadequacy to the unique needs of the school on the level of its contents and its work processes.

In the context of the research a key question arose: Do the headteachers, teaching and non-teaching staff in the three schools in Tel Aviv area perceive that the introduction of a T.Q.M. initiative has contributed to school improvement? The answer that the research provides is that T.Q.M. was the trigger for rethinking the school's structure and processes. But, T.Q.M. was not perceived as the key to improvement, Thus, only parts of the T.Q.M. principles were assimilated in the schools. In these areas indeed there was a direct link between the principles and the increasing effectiveness of the school. It may be inferred that these changes in the three schools could have been made in the same way through the paradigms of improvement and/or effectiveness which also focus on leadership, quality culture, close relationships and problem prevention.
Further, the current research findings reveal that factors such as family background, the positive link between Russian parents and quality, the special characteristics of the Russian students, are the most important factors in determining whether or not T.Q.M. can be implemented successfully in schools.

It is possible to conclude that it is impossible to adopt one management approach as a whole and to borrow it from another world for which it was conceived. The T.Q.M. approach which was brought in from industry is far from being appropriate for the nature of the educational organization. Therefore, it is necessary to adapt every management approach that the school embraces to the school environment, the professional idioms and to the difficulties of the educational system. In addition, this thesis provided an in-depth look at schools which have improved and therefore gives an indication to other schools of what seems to have 'worked'. Thus, this study should be repeated in other schools which have similar student composition. The complexity of the issues would benefit greatly from larger sample sizes in order to be able to support the findings about the Russian students.
APPENDIX 1 - INTERVIEW SCHEDULE FOR HEADS

SCHOOL ETHOS, AIMS AND POLICY
Why and how did you implement the T.Q.M. initiative?
Can you describe for me what your school is like?
Do you consider this to be a quality school? If so, in what respects?
What changes, if any, have you seen in the running of the school resulting from T.Q.M.?
Who do you think T.Q.M. involves?
Do you have a vision for the school?
How did you develop it?
How have you communicated it?
To what extent do your colleagues share this vision?
To what extent is the success of the school due to having so many Russian newcomers?
How do you think teachers perceive this school?

LEADERSHIP AND MANAGEMENT
What type of a leader are you?
Do you involve people other than management members in your decision-making processes? If so, please give details.
On which aspects of your role as headteacher do you place priority?
Has your style of leadership changed since your appointment?
Has T.Q.M. changed the way you personally do your job as a headteacher? If so, how?
In relation to how the school is managed, what do you think are the main strengths and weaknesses?

CULTURE
How would you describe the culture of your school?
1. now 2. before the implementation of T.Q.M.
If it has changed how/why has it changed?
Do you have fear of criticism or blame in your job as a headteacher?
How effective do you consider channels of communication in the school to be?
Do you have any comments on the way meetings are run this year?
Can you think of any changes in the way that the school is structured or organized
which, if implemented, could increase its effectiveness?

MANAGING T.Q.M.
What are the main T.Q.M. changes you have made?
How effective have they been?
How long have they taken?
What were the blockers?
With regard to keep on moving the school substantially, what measures do you
consider are needed?
How do you measure quality at your school?
Would you make any changes to current T.Q.M. management processes and
procedures? If so, please give details.
Overall do you feel that T.Q.M. been a successful innovation at your school? Yes/No.
please give reasons
APPENDIX 2 - INTERVIEW SCHEDULE FOR DEPUTY HEADS

SCHOOL ETHOS, AIMS AND POLICY
Why and how do you think the T.Q.M. initiative was implemented?
Can you describe for me what it is like to work in this school?
Do you consider this to be a quality school? If so, in what respects
What changes, if any, have you seen in the running of the school resulting from T.Q.M.?
Who do you think T.Q.M. involves?
Does the head have a vision for the school?
How did you learn about it?
Did you play a part in shaping this vision?
To what extent do you and the management members share this vision?

LEADERSHIP AND MANAGEMENT
From what you know or have heard, what are the main similarities and differences between the present head’s approach to management and that which used to be before T.Q.M. was implemented?
Does the headteacher involve people other than management members in his/her decision-making processes? If so, please give details.
Has T.Q.M. changed the way you personally do your job as a deputy headteacher? If so, how?
In relation to how the school is managed, what do you think are the main strengths and weaknesses?

CULTURE, DECISION MAKING AND COMMUNICATION
How are policy decisions made in the school?
Do you have the opportunity to contribute to policy-making?
Would you like to have a greater say?
How effective do you consider channels of communication in the school to be?
Do you have fear of criticism or blame in your job as a deputy headteacher?
Do you have any comments on the way meetings are run this year? Can you think of any changes in the way that the school is structured or organized which, if implemented, could increase its effectiveness?

PROFESSIONAL WORKING RELATIONSHIPS
What are the main areas over which you have considerable autonomy? To what extent would you say the head empowers you? Do you feel valued as a member of the staff? Are there any opportunities to work collaboratively with colleagues or do you mainly work separately? How far are you encouraged to experiment and try things out, and to work your own solutions to problems that arise? To what extent do you talk informally about professional matters with your colleagues?

MANAGING T.Q.M.
What are the main T.Q.M. changes that were made? How effective had they been? How long had they taken? What were the blockers? How would you like to see this school develop? What do you think would need to be done in order to achieve continuous improvement? With regard to keep on moving the school substantially, what measures do you consider are needed? How is quality measured at your school? Would you make any changes to current T.Q.M. management processes and procedures? If so, please give details. Overall do you feel that T.Q.M. been a successful innovation at school? Yes/No. please give reasons
APPENDIX 3 -

Dear colleague,

I am a teacher in a secondary school that has undergone the T.Q.M. implementation and I am interested in checking the possible T.Q.M. effects on management issues.

I am writing to you as someone involved in the process, to ask you if you would complete the enclosed questionnaire and return it in the envelope provided, by the 10th of January 2001. Your cooperation in completing the questionnaire will be of great value to me. The questionnaire is sent to teaching and non-teaching staff in three secondary schools.

This is a personal piece of research and is not carried out on the behalf of any official body. Your reply will be read only by myself and treated in confidence in any reporting of the work. Confidentiality is guaranteed. I shall send you a brief summary of my research findings once it is completed (probably by the end of March) and hope that you will find it helpful in your work.

Name of school ____________
1. Do you belong to the teaching or non-teaching staff? (please circle)
2. How many years have you been working at this school? __________
3. How many schools, including this one, have you worked in? __________
4. Gender Female Male
5. Origin Israeli? other?
6. Do you hold a teaching license diploma Yes? No?
7. Do you hold teaching or non-teaching permanency Yes? No?
8. What is your highest degree? Teaching Certificate, BA (Bachelor), MA (Master), PhD (Doctorate) (please circle)
9. Are you interested in receiving a summary of the findings? Yes? No?

KEY

SA = Strongly agree = 5

357
A = Agree = 4  
DK = Don't know = 3  
D = Disagree = 2  
SD = Strongly disagree = 1

Are you aware of a Total Quality management in this school?
________________________________________________________________________
________________________________________________________________________

If so; who do you think initiated it?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Why do you think the T.Q.M. approach was initiated?
________________________________________________________________________
________________________________________________________________________

How has it impacted most of you?
________________________________________________________________________
________________________________________________________________________

Overall do you feel that T.Q.M. has been a successful innovation in your school? 
Yes/No
________________________________________________________________________
________________________________________________________________________

To what extent is the success of the school due to having so many Russian newcomers?  
Large extent, Small extent, No connection (please circle) 
________________________________________________________________________

These sections (1-2) are to ask opinion on possible connections between school's present performance and T.Q.M.
1. MANAGING T.Q.M.

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<tr>
<td>a</td>
<td>Collaborative working among the staff helps in preventing future problems</td>
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<td>b</td>
<td>Collaborative decision-making helps staff to solve problems</td>
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<td>c</td>
<td>Collaborative ways of working helps staff to cope with stress</td>
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<td>d</td>
<td>Whenever possible, money and resources are allocated to support the ongoing improvement of the school</td>
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<td>e</td>
<td>We are coping well with the implementation of the T.Q.M. approach</td>
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<td>f</td>
<td>We are very receptive to the ongoing process</td>
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<td>g</td>
<td>The T.Q.M. approach is being successfully managed in this school</td>
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<td>h</td>
<td>We are coping with assessment issues</td>
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<td>i</td>
<td>School's activities are designed to meet the students' needs</td>
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2. The school is making effective use of the following:

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<tr>
<td>a</td>
<td>ISO 9000 assessment</td>
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<td>b</td>
<td>The national curriculum</td>
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<tr>
<td>c</td>
<td>End of term assessment</td>
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<td>d</td>
<td>School development plans</td>
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<td>e</td>
<td>The counseling department</td>
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<td>f</td>
<td>The teacher's committee</td>
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<td>g</td>
<td>Local community</td>
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3. What impact, if any have these issues had on the management of the school? Please comment (continue to new sheet, if necessary)

4. Have you any views and opinions about how T.Q.M. approach has been managed? Please comment (continue to new sheet, if necessary)
These sections (1-3) are to ask opinion on the effectiveness of the school’s teams.

**PROFESSIONAL WORKING RELATIONSHIP**

1. **In this school teaching and non-teaching staff:**

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<th>Dk</th>
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<tr>
<td>a</td>
<td>Put a strong emphasis on effective personal relationships</td>
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<td>b</td>
<td>Feel able to express their views openly and honestly</td>
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<td>c</td>
<td>Feel that views are taken seriously by management</td>
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<td>d</td>
<td>Are encouraged to be involved in seeking solutions to problems facing the school</td>
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<td>e</td>
<td>Go out of their way to make new colleagues feel welcome and at ease</td>
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<td>f</td>
<td>Are encouraged by the head and senior staff to cooperate with colleagues on joint activities</td>
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2. **In this school teachers:**

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<tr>
<td>a</td>
<td>Are committed to working as a team</td>
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<td>b</td>
<td>Regularly discuss teaching methods in detail</td>
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<td>c</td>
<td>Regularly engage in joint planning of new approaches in some detail</td>
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<td>d</td>
<td>Often prepare teaching materials together</td>
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<tr>
<td>e</td>
<td>Often seek and give each other practical advice about classroom learning</td>
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<tr>
<td>f</td>
<td>Often observe each other teaching and give constructive feedback</td>
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<td>g</td>
<td>Experiencing difficulties receive support from their colleagues</td>
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<td>h</td>
<td>Are constantly striving to improve teaching and learning</td>
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<td>i</td>
<td>Have developed effective strategies for record-keeping</td>
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</table>

3. **In the school team you are in:** (If you are in several teams, choose one and state which one it is.)

360
There is genuine pride in team membership
Leadership is shared according to the needs
Team members are committed to the team objectives
Team members systematically review the performance
There is good team spirit among the members
Teachers develop new skills by undertaking management tasks
Teachers feel happy and satisfied with their work
Teachers feel that senior managers support their work in the classroom
Team's contributions and achievements are given public recognition in staff meetings or similar occasions
Team members are encouraged by the head to share their experiences and successes
Professional development occurs as an integral part of the job
Members support the senior management team
Communication is robust, open and honest
Team members share collaborative decision-making
Everyone knows who does what by when
The team abilities are fully utilized, the members are trusted

4. Have you any additional views and opinions on professional working relationships in the school? Please comment (Continue on new sheet, if necessary)

These sections (1-3) are to ask opinion on whether the school vision and goals are widely shared and understood. (as a fundamental indicator to effective and improving schools)

SCHOOL ETHOS, AIMS AND POLICY

1. In this school:
Most pupils feel a sense of achievement

Academic attainment is high

Teachers give pupils the confidence to learn

Good pastoral support is provided for pupils

Discipline is not a major problem

Vandalism by pupils is not a major cause for concern

The building and grounds are well maintained

Teaching, non-teaching staff and pupils feel safe and secure

There is relaxed but purposeful working atmosphere

Pupils attendance is consistently high

Teachers have high expectations of pupils’ achievement

Teachers have high expectations of pupils’ behaviour

Pupils display an active part in the life of the school

Parents are welcomed and integrated

Most parents are proud that their children attend the school

Parents’ evenings are well attended

Complaints are the basis of growth

2. In this school:

Most teaching and non-teaching staff understand the school’s aims and policies

Most teaching and non-teaching staff agree with the aims and policies

Teaching and non-teaching staff are involved in developing the school’s aims and policies

Most teaching and non-teaching staff share a common set of educational values

The school development plan is used to review the extent to which aims have been achieved

There is an explicit equal opportunities policy and this is generally implemented

There is concern to build a learning environment for staff as
well as pupils

3. **In this school:**

<table>
<thead>
<tr>
<th></th>
<th>A main aim is to achieve good academic results</th>
<th>A main aim is to meet personal and social needs</th>
<th>A main aim is to promote the acquisition of basic skills</th>
<th>A main aim is to promote the acquisition of moral values</th>
<th>A main aim is to promote a spirit of cooperation</th>
<th>A main aim is to promote the student’s satisfaction</th>
<th>A main aim is to help each child to achieve his/her potential</th>
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<td>a</td>
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This section (4) is to ask opinion on whether the school’s emphasis and activities are designed to meet customer’s (students, teachers and parents) needs.

4. **In this school:**

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<thead>
<tr>
<th></th>
<th>The learning is designed on the basis of the needs of the individual student</th>
<th>The school is organized around the needs of individual learner</th>
<th>There is a public commitment continuously to improve the services provided to students</th>
<th>Students satisfaction is regularly surveyed and acted on</th>
<th>The needs of the students’ parents are recognized</th>
<th>The needs of the teachers are recognized</th>
<th>‘Quality is what the student says it is’</th>
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5. Have you any additional views and opinions on the school’s ethos, aims and policy? Please comment (Continue on new sheet, if necessary)

These sections (1-2) are to ask opinion on whether the headteacher and SMT lead the improvement process and ensure that there is a continual process of improvement in operation.
## LEADERSHIP AND MANAGEMENT

### 1. The Headteacher

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<th>Description</th>
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<tr>
<td>a</td>
<td>Provides a clear sense for the core purpose of the school</td>
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<td>b</td>
<td>Provides known, shared and understood vision</td>
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<td>c</td>
<td>Is regularly seen around the school</td>
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<tr>
<td>d</td>
<td>Is involved with pupils</td>
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<tr>
<td>e</td>
<td>Is easily accessible to staff</td>
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<tr>
<td>f</td>
<td>Is open to other people’s ideas and suggestions</td>
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<tr>
<td>g</td>
<td>Provides excellent leadership for the school</td>
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<tr>
<td>h</td>
<td>Regards planning central to management processes</td>
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<tr>
<td>i</td>
<td>Promotes teaching and non-teaching development activities</td>
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<td></td>
<td></td>
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<tr>
<td>j</td>
<td>Promotes management development activities</td>
<td></td>
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<tr>
<td>k</td>
<td>Often communicates personally with team members to express appreciation for special effort</td>
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<tr>
<td>l</td>
<td>Regularly participates in staff development activities</td>
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<tr>
<td>m</td>
<td>Has a structured dialogue with each member of staff at least once a year</td>
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<tr>
<td>n</td>
<td>Can be relied upon to support the teachers in a crisis</td>
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<tr>
<td>p</td>
<td>Often communicates personally with pupils to praise special effort</td>
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</tbody>
</table>

### 2. Senior Management Team

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>a</td>
<td>Work well as a team</td>
<td></td>
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<tr>
<td>b</td>
<td>Take the key policy decisions</td>
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<tr>
<td>c</td>
<td>Consult the subject coordinators and department heads before reaching major decisions</td>
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<tr>
<td>d</td>
<td>Provide good and consistent support for the teaching and non-teaching staff</td>
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<tr>
<td>e</td>
<td>Promote the school image effectively in the community</td>
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</tbody>
</table>

3. Have you any additional views and opinions on quality of leadership and
management in the school? Please comment (Continue on new sheet, if necessary)

This section is to ask opinion on whether the school works towards the prevention rather than the detection of failure during work processes

1. **The headteacher and SMT**

   a. Define and specify all key strategies to achieve school goals
   b. Manage systematic results analysis to prevent failure
   c. Use measurement to improve teaching and learning
   d. Build evaluation into class practice
   e. Produce documentation to consist of standards
   f. Require an appropriate external validation of quality assurance strategies

These sections (1-2) are to ask opinion on whether the school’s structure is effective and how the school is organized.

**STRUCTURE, DECISION MAKING AND COMMUNICATION**

1. **In this school:**

   a. The structure and processes are team based
   b. The proportion of women in the staff is reflected in the number of managerial positions held at school
   c. The proportion of newcomer teachers is reflected in the number of managerial positions that they hold

2. **In this school:**

   a. Team meetings are used for discussion about major policy issues
   b. Teachers generally feel informed
   c. New ideas are encouraged
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<tbody>
<tr>
<td>d</td>
<td>Team meetings are used to investigate particular issues and to make policy amendments</td>
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<tr>
<td>e</td>
<td>Teachers are regularly briefed by the senior management team about day to day issues and news</td>
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<tr>
<td>f</td>
<td>Teaching and non-teaching staff are clear about the different roles and responsibilities of each of the senior management team</td>
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<tr>
<td>g</td>
<td>Each member of teaching and non-teaching staff has easy access to school policy documents</td>
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<tr>
<td>h</td>
<td>Teachers feel that they have a share in major decision making</td>
</tr>
<tr>
<td>i</td>
<td>Teams are ready to accept the responsibility which goes with shared decision making</td>
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<tr>
<td>j</td>
<td>Decisions are made by expert knowledge</td>
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<tr>
<td>k</td>
<td>Meetings are usually purposeful</td>
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<tr>
<td>l</td>
<td>Meetings are usually well chaired</td>
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<tr>
<td>m</td>
<td>Communication within the teams is an open-relaxed communication</td>
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<tr>
<td>n</td>
<td>Communication between the teams and the rest of the school is an open-relaxed communication</td>
</tr>
<tr>
<td>o</td>
<td>Teams are self-managed</td>
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</table>

Have you any additional views and opinions on the effectiveness of the structure, decision making and communication procedures in the school? Please comment (Continue on new sheet, if necessary)

2. In this school:  

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<tbody>
<tr>
<td>a</td>
<td>Inter-departmental links are encouraged</td>
</tr>
<tr>
<td>b</td>
<td>The departmental structure helps in the achievement of the school’s aims and policies</td>
</tr>
<tr>
<td>c</td>
<td>The year structure helps in the achievement of the school’s aims and policies</td>
</tr>
</tbody>
</table>
d | The pastoral and academic aspects of the curriculum are well integrated
---|---
e | Pastoral and academic staff roles are well integrated

Please set out any further views and opinions on issues related to the effective management of the school (continue to new sheet, if necessary)

Adapted from Bolam (1993), “Effective Management in Schools”
And
West-Burnham (1997), “Managing Quality in Schools”

This is the end of the survey. Thank you very much for your effort. Please return the survey to Kovrigaro Ricky in the stamped self-addressed envelope no later than 10th of November.

Kovrigaro Ricky
30, Hadekel st.
Herzeliya, 46313
09-9503236

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References


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