
CHAPTER 4

CASE STUDIES OF TQM SCHOOLS: A LITERATURE REVIEW

4.1 INTRODUCTION

The aim of Chapter 4 is to conduct case study research of schools where TQM was implemented (see 1.3). The following objectives were set:

- To describe the contextual approaches for the implementation of TQM in schools, and
- To collect and analyse data of case study schools from the literature in respect of the following indicators: general background; goals and objectives; leading quality principles; strategies, and outcomes or results.

As research method a literature study was conducted.

4.2 CONTEXT FOR THE APPLICATION OF TQM IN SCHOOLS

According to Berry (1997:61-62), there are mainly two approaches eminent to the implementation of TQM to schools. The one approach focuses on TQM initiatives in the individual school, whilst the other focuses on the improvement of school districts (educational systems).

The approach that focuses on the individual school maintains that individual schools incorporate quality management processes into their existing culture in a way which supports identified organisational learning needs. According to the advocates of this approach, TQM has implications for the improvement of learning outcomes and maximising the potential of the school to support learning (Berry, 1997:61).

The second approach is directed at the improvement of school districts, composed of a cluster of individual schools making up the system. Advocates of TQM at school district level argue that all organisations, regardless of their differences in purpose and structure, share a common quality language and similar quality

concepts. The argument is, furthermore, that school improvement initiatives can be undertaken more efficiently and effectively at a district level where all schools are parts of the improvement process. This is also at the level where school systems need to be restructured in order to meet emerging global economic and societal demands. This approach has two key features that have implications at the school level (Berry, 1997:61-62):

- *Organisational networks.* The fundamental assumption underlying district-based approaches is that the process of developing TQM in schools and non-school organisations can be undertaken within a similar conceptual and methodological framework. It is argued that quality can be enhanced in any organisation through the sharing of inter-organisational information and practices and the development of mutual support networks. Quality is dependent on a range of business and public sector organisations functioning as a unit for the mutual benefit of all involved. Individual schools have the advantage of sharing the knowledge and expertise of a range of TQM organisations, therefore becoming part of a larger TQM system.
- *Resource optimisation.* The district approach requires that a number of schools within a specified district function as part of a common quality improvement structure, which is non-competitive and collaborative in nature. Limited resources can be utilised within a district to maximise the advantages within each school.

It is evident from the above that the application of TQM in the contexts of both the individual school and the school district can have a positive influence on the establishment of a quality management system for schools.

The following case studies are examined as practical examples of methods that could be employed for implementing TQM in individual schools. All case schools were involved in the implementation of TQM.

4.3 GEORGE WESTINGHOUSE VOCATIONAL AND TECHNICAL SCHOOL, NEW YORK, USA (Schargel, 1991:34-35; Rappaport, 1993:16-20)

General background

In the early 1990's, public education in the USA was considered second rate: remedial classes were the norm in high schools, many high school graduates couldn't read, add, write or think, the dropout rate at high schools was 30% and the percentages for Blacks and Hispanics even higher.

Westinghouse High School is the largest technical and vocational school in New York City. TQM was initiated in 1987. The school, regarded as a typical inner-city school, enrolled 1 800 learners in the early 1990's, of which 75% were Black, 23% were Hispanic and 25% were females. Many learners came from single-parent, low-income families. The school had problems of a high transfer rate, learners entering with poor reading and mathematics skills, a lack of motivation, low self-esteem and a history of failure (Schargel, 1996).

Goals and objectives

- The school saw its task to respond to the many educational challenges such as the high dropout rate, absenteeism, failure rates and financial constraints by using TQM techniques used in the enlightened business community;
- To change the organisational structure and school climate, and
- The improvement of the instructional process.

Leading quality principles

All TQM efforts were based on Deming's 14 Points (see 2.7) on the involvement of customers and continuous improvement. The school developed a strong business orientation, focusing on learner responsibility, working through committees and outside companies would assist as partners. Educators would regard themselves as "service providers" and their learners as "customers" (Eppard, 1998).

It was aimed to change the learning environment of the school by identifying errors, locating their causes and removing them (Schargel, 1996).

Strategies

The introduction of TQM at Westinghouse has been an incremental process involving three distinctive phases. It began initially in the late 1980s with extensive networking with the business community.

This first phase (1990-1991) of TQM implementation focused mainly on staff involvement. It began informally with the formation of a staff selection committee, which represented a cross section of the staff. A quality coordinator was selected to design, develop and implement a systematic quality improvement process. It was realised that TQM had to be customised to the school's culture. In the absence of educational models, the school decided to benchmark leading enlightened industrial firms using TQM, including Colgate-Palmolive, Digital Equipment Corporation, IBM, Motorola, Xerox, etc. Those companies shared their TQM techniques with the school during training sessions.

A quality steering committee was established to plan, monitor, evaluate and support the individuals, teams and committees implementing the quality improvement process. This committee met once a week after school hours. The principal and quality co-ordinator were permanent members of the committee. The committee further comprises members of the staff, including educators from every instructional department, the school's union leader, school secretaries, learners and parents.

The first area targeted for improvement was staff morale. The staff decided to recognise and reward a quality staff member of the month. The recipient was granted recognition by having his/her name announced over the public address system, having his/her name placed on the quality staff bulletin board, and being presented with a plaque, a cheque, and a congratulatory letter at the monthly faculty meeting (Rappaport, 1996:72).

The principal and voluntary staff completed a quality-training seminar conducted by a national banking group. After the workshop, the staff wrote the following mission statement for the school (Schargel, 1996):

“The purpose of George Westinghouse Vocational and Technical High School is to provide quality vocational, technical, and academic educational programs that will maximise each student’s full potential in today’s changing technological society and prepare students to meet the challenges of our rapidly changing world. In an era of intense international competition, each student will be prepared to meet the demands of the world of work, pursue post-secondary education and address life’s challenges”.

An action plan was implemented, which listed actions required and solutions, showed how, when and where action should be taken and documented obstacles and advantages of the plan. In identifying the causes of a given effect they used the fishbone technique as a cause-and-effect diagramme.

Areas of concern were identified and they targeted at least one problem area per month to remove its causes. The following crucial areas were targeted:

- Improvement of staff morale. A plan was established to recognise and reward staff members for quality work. Volunteers formed a quality staff steering committee to address and monitor all efforts;
- Improvement of learner performance. A quality improvement team comprising of learners was established. The team met five days per week and once per month with the principal to discuss ways to improve learner performance, and
- Involvement of parents and the business community.

The second phase (1991-1992) focused on greater *parental involvement*. An orientation meeting was held with incoming learners and their parents. The parents were considered internal customers of the school, therefore, the parents had to complete a questionnaire to survey them so as to meet their needs best. Parents were further involved in the total quality process when some volunteers, together with a number of staff members and learners, attended a TQ training workshop offered by IBM. This helped the internal customers (employees, parents and learners) to become familiar with the quality philosophy, internalising it and excluding error factors (Rappaport, 1996; Schargel, 1996).

In the third phase (1992-1993) of the quality process at Westinghouse, *learner participation* was the aim. Learners were familiarised with the new promotion rule that specified the number of credits needed to be promoted. Promotion from one grade to another is based solely on achievement. Learners were taught skills in critical thinking, decision making, listening, test taking, and team building. It was believed that intrinsic motivation had to be developed in the learners for them to translate their motivation into greater achievement. Educators also experimented with cooperative learning and other approaches with learner driven learning as the goal. It was strongly believed that for TQM to achieve success, it must be brought into the classroom (Rappaport, 1996).

The school management team of Westinghouse placed much emphasis on networking with leading international corporations, which were also practising TQM. Those corporations were regarded as external customers and the school put much effort into getting their support and assistance. Rappaport (1996) regards the partnership with the Ricoh Corporation, a leading manufacturer of facsimile machines and photocopiers, of particular importance. The agreement was that learners would repair the power supply and circuit boards of Ricoh fax machines. As part of the Ricoh/Westinghouse Business Electronic Student Training (BEST) programme, the learner repairs were given a quality assurance rating.

Outcomes/results

The following results were achieved over three years:

- Learner involvement and participation increased. Learners provided peer tutoring and activities such as escorting senior citizens to shopping centres. School extra-curricular activities increased;
- The dropout rate declined to 2.1% (compared with the New York City's dropout rate of 17.2%);
- Seventy-two percent of the June 1993 graduates went to college;
- Membership in the parents-teacher association grew from 12 in 1987 to 211 in 1991;

- Twenty-five (out of 150) educators participated in unpaid after-school brainstorming sessions;
- Interdepartmental cooperation, for example, the English and social studies departments held joint meetings to discuss how to coordinate learning programmes and how to implement writing across the curricula;
- Educators in the vocational and technical department redesigned the entering class (ninth grade) to provide for a mentoring programme. Seniors from the twelfth grade served as mentors for the learners in the entering class. The programme trained the seniors in leadership responsibilities and on more focus on the work in class;
- Requests for admission to Westinghouse increased;
- The school received several grants from private companies to be used to further the TQM effort; and
- A curriculum has been developed to motivate the learners intrinsically to 'do the best you can and to be the best you can be'.

The maintenance of the process at George Westinghouse, however, seems to have lost momentum in subsequent years. According to Eppard (1998), only traces of TQM were existent at this school afterwards, contending that the school has shown pockets of success, but has not made the broader turnaround the school's architects envisioned. The dropout and failure rate has increased substantially. Eppard (1998) also highlights particular reasons for this deterioration. The school has been overwhelmed by new learners (apparently caused by an error in enrolment projections), has experienced a high staff turnover and they did not buy into the TQM concept.

However, some educators and learners still hold firm to the philosophy. There have also been efforts to revive TQM in the school and capitalise on quality committees which are essentially run by learners. Rappaport (1996:74) maintains that after six years of implementing TQM at Westinghouse "we are more

convinced than ever that the total quality process provides the tools for the successful restructuring of America's educational institutions".

4.4 MT EDGECUMBE HIGH SCHOOL, SITKE, ALASKA

(Rocheleau, 1991:14-18; Schmoker & Wilson, 1993(b):393-394)

General background

Mt Edgecumbe High School (MEHS) is situated on a small island across the channel from Sitke, Alaska. The learners come from various Indian tribes as well as Eskimos and Aleuts. Alaska is a very large state with a low population density, which causes difficulties to maintain high-quality schools in the small villages and towns. The problem is that a large number of small schools cannot be equipped with the facilities they require for a first-rate, modern education. MEHS is an attempt by the State to solve this problem (Tribus in Doherty, 1994:273).

MEHS is a residential state-run boarding school where most of the 215 learners are a mix of native Alaskans, having their own tribal customs and language, along with children of immigrants. The learners are 90 percent rural and about 40% were at risk or had problems before coming there. The school started in 1947 as a school for Native Americans and has since developed a culture and climate that is different from other schools. Since 1984 the school has been engaged in a unique experiment in education, applying the quality management concepts of W. Edwards Deming to the operations of the school (Tribus in Doherty, 1994:274). Schmoker and Wilson (1993:39) refers to MEHS as "perhaps the most explicit example of a 'Deming school'"

Goals and objectives

The conversion of MEHS into a quality school was not aimed at creating an elitist institution, but rather to provide value-added education to all learners. One of the major objectives initially was to turn the learners into entrepreneurs who would go back to their villages and make a difference.

MEHS adopted the quality philosophy and continually attempts to improve the learners' academic and residential lives.

Leading quality principles

The following quality principles guide the process at MEHS (Rocheleau, 1991:14-18):

- The learners are the school's customers;
- Participatory management and consensus for major decisions;
- Ongoing training;
- Systems approach: people are not blamed for problems but the system is rather fixed;
- Responsibility is shared among all, the top managers, educators and learners;
- Research improves quality: flow charts enable schools to improve processes and reduce cost;
- Systems should be regarded as flexible to serve the purpose of quality education, and
- Learning, teaching and administration have to be motivated intrinsically to ensure that learning is a joyful experience.

Strategies

The introduction of TQM at MEHS was, to a large extent, the result of the vision of Superintendent Larrae Rocheleau. The Superintendent and the State Board of Education recognised the strategic position of Alaska as the natural trading partner of Japan, China and the countries of Asia. They decided that all learners would learn either Chinese or Japanese and planned courses in entrepreneurship. The Superintendent recruited educators who shared his view and would use 'project-orientated learning' as a method to teach learners how to apply what they have learned purposefully.

One of the educators, David Langford, was also very enthusiastic about the experiment and has contributed much to implementing TQM in the classroom.

Both the Superintendent and Langford familiarised themselves with the quality philosophy. The following actions were taken (Tribus in Doherty, 1994:274-276):

- By reading about quality and talking to executives who were in companies applying TQM, they concluded that Deming's ideas could and should be applied in education;
- Attending Deming seminars convinced them that Deming's message would apply to their school;
- Introducing Deming's ideas in a special course named 'Continuous Improvement'. As part of the course learners had to use data to discover and remove inefficiencies from their own study habits, and
- A lack of motivation was observed amongst the learners. Langford spent a great deal of time at the start of a term to discuss questions such as 'Why are we here?', 'What do we want to get out of the course?', 'What are the barriers to success?', and 'What does it mean to do this course with quality?' This caused the learners to examine their own objectives and thereby alter their attitudes.

The fact that learners were taught to think about what they were learning has resulted in improved learner performance. The enthusiasm for this approach to learning also spread to other educators who gradually began to adopt similar approaches. The learners in those classes became 'co-managers' of their education, while the educators became enablers. As the educators' interest increased, Langford and the Superintendent developed workshops in which the educators could develop their skills and understanding of continuous improvement (Tribus in Doherty, 1994:275-276).

In MEHS, the focus is on the application of TQM more as a classroom-level strategy than as a school-management strategy. TQM is being integrated as systemic change into all subject areas and Deming's Fourteen Points are implemented in an adapted form. The following are distinctive elements of the school's TQM programme (Cotton, 1994):

- Both learners and educators participate in bimonthly TQM training activities to keep them focused on ways to improve and to achieve TQM goals. This training is crucial for new learners entering the system. Some of the contents of the training are:
 - The elements of a TQM approach to teaching and learning;
 - Key elements and operational definitions;
 - Developing a vision and improvement priorities;
 - Identifying and accessing sources of help, both human and material;
 - Team roles in the learning environment;
 - Designing individual and team projects;
 - Group and individual decision making, and
 - Staying focused on improvement.
- Learners take a high degree of responsibility for managing and assessing their own learning. The educator serves as a facilitator/coach/counsellor to assist learners with projects, which is the chief means by which learners develop and demonstrate competency. Educators help learners to determine what competencies are needed, how they will be assessed and how to work through and evaluate agreed-upon project components.
- Learner projects call for knowledge and skills from across the curriculum. For example, a project calling for design of a spawning channel for salmon might require knowledge and skill in marine science, geography, writing, and oral communication skills; together with generic skills in research, analysis, problem solving and defending one's ideas.
- Class periods at MEHS are 90 minutes long on most days, which means that learners do not have every class every day. Educators and learners agree that these generous class periods allow in-depth involvement in learning activities and greater opportunities to make progress on class and individual projects.

On alternative Wednesdays they have extra in-school time to work on the projects they have negotiated with their educators.

- The school moved away from the use of standardised achievement tests, paying more attention to assessment methods such as alumni and parent surveys and portfolios as a means of assessing learner learning and to determine programme success.
- Staff and learners are organised into “extended families” to provide academic and interpersonal support to learners. These extended family groups increase learners’ sense of belonging by giving them personal attention and involving them in out-of-school activities. What is important is to build character and to develop the young people as humans. Tribus (Doherty, 1994:279) also stresses the need to attend to the psychological aspects of the education programme.
- Learners are challenged to become independent and self-confident, self-centred and interdependent. This means that learners need to function as individuals within teams. Tribus (Doherty, 1994:279) describes this as an effort at MEHS to develop *autonomous team players*.

Learners were prepared to work as self-managers, assuming responsibility of managing their own learning. This created more time for staff development, planning and collaboration. Educators strived to arrange things so that they could spend 50% of their time planning and collaborating in teams, without hiring extra staff members.

Outcomes/results

According to Schmoker and Wilson (1993:394), the academic results were not yet conclusive. Standardised test scores went up only slightly. However, the school produced a significantly higher percentage of learners who attended some form of post secondary school.

The school, once known for its high rate of learner turnover, has raised the percentage of eligible learners returning to school to nearly one hundred percent.

Dropout rates have been reduced from 40% to about 1% per year. Educator turnover, once high, has become nearly non-existent.

It is evident that the quality programme at MEHS cannot simply be repeated elsewhere. MEHS has adopted TQM as a part of its own culture. According to Tribus (Doherty, 1994:283), MEHS is a "small laboratory in which it has been demonstrated that quality management principles work in education".

4.5 THE NEWTOWN SUCCESS-ORIENTATED SCHOOL MODEL, CONNECTICUT, USA (Freeston, 1992:10-13)

General background

According to Freeston (1992:10), the public schools in the Connecticut school district thought that they were leading in bringing educational practice into line with research. They discovered, however, that they created a scattered, disjointed pattern of programmes and projects over time. Although each individual programme was fine, no one was directed at continuous improvement. The schools met traditional expectations for learner achievement, yet did not have a quality perspective. Therefore, they were not sure of what to improve, or even which questions to ask.

After this discovery, the Newtown schools committed themselves to changing the situation by becoming a total quality system. They developed their own quality model, the Newtown Success-Orientated School Model (see Fig. 4.1), which became the cornerstone of their quality process.

Goals and objectives

The intention of the process was to improve public schools in the Connecticut district by achieving quality through constancy of purpose.

Leading quality principles

The model blends elements of Deming's 14 Points and Glasser's Control Theory and Reality Therapy. Glasser's theory acknowledges the psychological aspects of change and explains human behaviour as needs driven. People are internally motivated to meet their basic human needs for belonging, power, freedom and fun.

This model, therefore, reflects the proposition that all wants come from unfulfilled needs and that people are internally motivated to meet their individual needs.

Strategies

The staff was trained extensively in the role of human needs in the school organisation over a period of three years. Training was also customised to address the different needs that staff members had at different ages.

As the process unfolded, the staff raised a variety of concerns about the new approach. Freeston (1992:13) regards these concerns as attitudinal barriers to quality. They were:

- Many saw quality as a platitude, unobtainable and overused by advertisers;
- Scepticism about corporate example, rejection and customer orientation;
- Low confidence in leader commitment, scant examples of quality-orientated leaders;
- Regarded as another trend that will pass;
- Quality is a long-range commitment and schools plan on a one-year basis;
- Perception that there's nothing new in a quality orientation;
- No school improvement would be needed if only the learners worked harder;
- Changed social context of families presented insurmountable barriers to successful schools;
- The belief that quality management is only achievable in Japan's culture, and
- Teaching is an independent, isolated profession without the collaboration needed for a quality approach.

The Newtown model (see Fig. 4.1) explains how decisions for improvement are made. Decisions are not taken on what people merely want. The model shows that no arrow connects a *want* directly to an *action*. It focuses on the importance of

consulting knowledge and core beliefs before taking action. Knowledge derives from data, which needs to be processed to provide information. Because the conventional assessment techniques that were used offered data only and not information, it was decided to develop alternative standards for assessing Newtown learners' performance standards.

Beliefs are crucially important to quality management. Therefore, a quality council developed a set of core beliefs for the schools. The challenge was to bring group and individual behaviour into alignment with those beliefs.

The Newtown schools adopted a mission in which they agreed to provide an environment where "all children can and will learn well". The "all" notion is based on the belief that, though the learners' home lives and needs are important variables, it does not mean that they can't learn. This mission also acknowledges that every learner, based on the work of Howard Gardner, has unlimited and multiple abilities. The notion of up to potential is, therefore, rejected. According to Glasser's assertion, all people are internally motivated to learn. Finally, the *well* is the core issue of quality, meaning that minimal effort is not enough in the Newtown schools.

The quality outcomes pursued are to become a self-directed learner, achieve cognitively and master the curriculum, acquire process skills (decision making, problem solving, and critical thinking), show concern for others and know the importance of self-esteem.

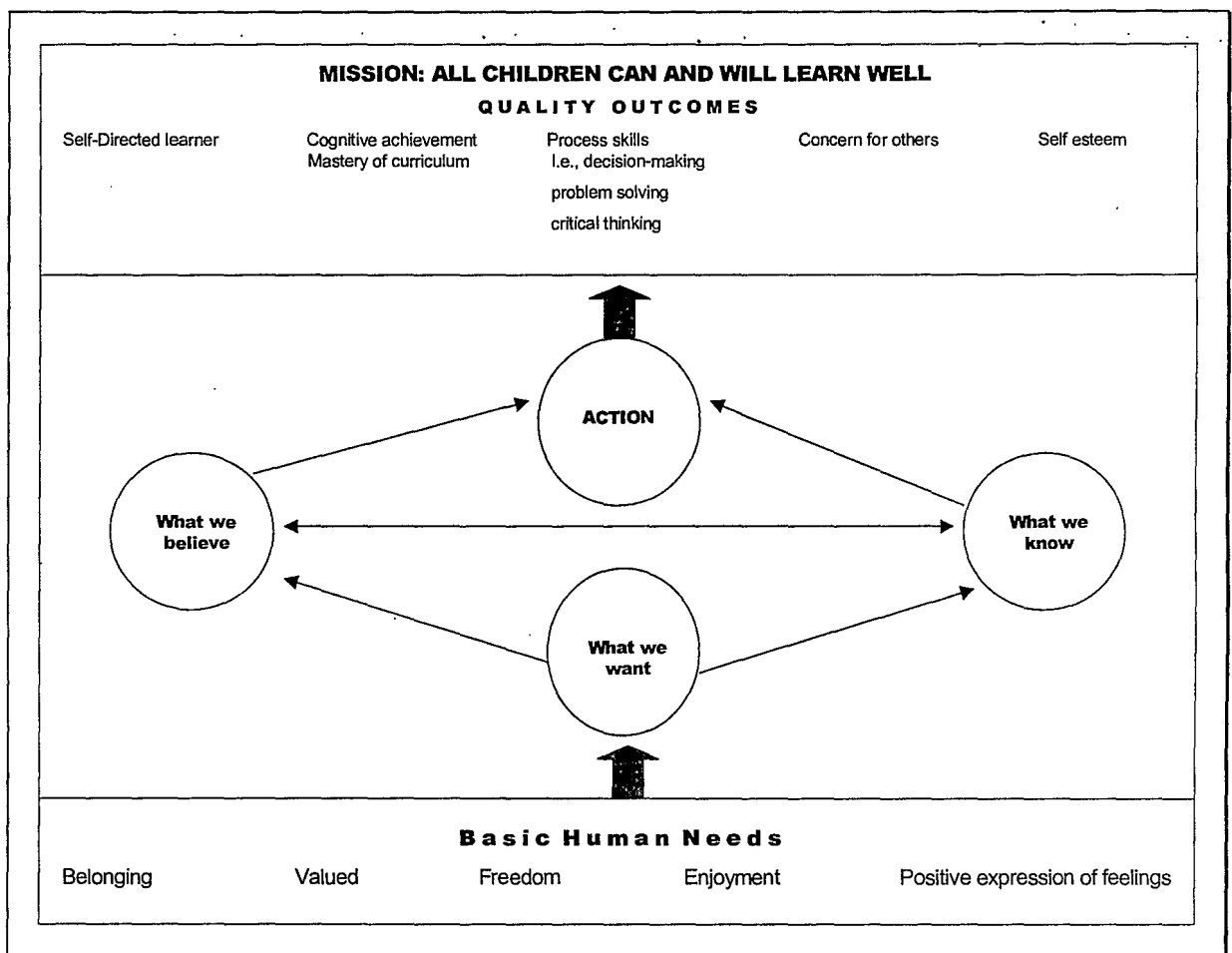
Outcomes/results

Freeston (1992:12) states that the schools were thinking differently and that they were guided in those thoughts by the logics of the model:

- They embarked on new educator training programmes and made projections for attracting quality staff in future;
- Quality core groups were established in each school to address quality issues;
- A quality orientation does not cost more money;

- The schools realised the need to stay close to the customer, and to become more knowledgeable on the needs of the parents and learners;
- They recognised the need to apply quality management techniques to problem solving at all levels of the school system, and
- The Newtown schools are committed to a long-term approach to continuous school improvement.

Figure 4.1 The Newtown Success Orientated School Model (Freeston, 1992:12)



4.6 ST ANDREW'S PREPARATORY SCHOOL, GRAHAMSTOWN, RSA

(Carlson, 1994:16-19)

General background

St Andrew's is an independent boarding and day school with pre-primary, junior primary and senior primary departments. At the time there were 290 children in the school which employed 22 educators, 16 administrative and support staff and 35 hostel staff.

The school has been known for its family atmosphere, but has also been run very much along traditional lines. In 1986 the school suddenly experienced a significant drop in learner numbers.

Goals and objectives

The school embarked on a quality process to become a leading school by restructuring the management of the school according to quality principles.

Leading quality principles

The school followed the quality principles and the "four absolutes of quality" of Philip Crosby. These absolutes are:

- Definition of quality: conformance to requirements;
- System of quality: prevention;
- Performance standard: zero defects, and
- Measurement of quality: the price of non-conformance.

Strategies

In response to the drop in learner numbers, a weekend seminar was held to analyse how the school could market itself more effectively. It was attended by staff, parents, and members of the school's governing body. On the agenda was a discussion of school's mission and objectives, a SWOT analysis, a study of the school's customers and their needs and how to develop a marketing strategy for the school.

A number of decisions were taken after this seminar and follow-up discussions:

- Acknowledging that the school was no longer primarily a boarding school but was a mixture of day and boarding learners, therefore it was important to try to capture as large a share as possible of the day learner market;
- Changing the focus from results to processes (that word was not used at the time) with a view to clarifying and quantifying what learners and parents would experience as members of the school family;
- Moving the school from the fringes of non-racialism towards becoming fully integrated with learners admitted on the basis of academic criteria rather than on race or language groups, and
- Developing the perception of the school as a leader in the field of education rather than a follower.

The school also developed its own mission statement, which had a strong unifying influence in the school, reflecting both the school's values and a sense of vision. From the mission statement the following concepts have emerged into powered core values which have played a major role in the subsequent success of the school:

- Creating a relaxed, caring environment;
- Developing positive, self-confident children;
- Applying modern educational principles to satisfy the needs of learners with a wide range of ability;
- Emphasising staff development;
- Cultivating strong communication links between parents and the school, and
- Offering a broad range of educational experiences.

The learner numbers have increased steadily since 1988 and by the early 1990's an almost entirely new school culture was firmly in place. Yet the school was still missing an over-riding philosophical framework which had the power to unite the entire school community and bring together the many individual initiatives.

In 1992, St Andrew's embarked on a joint project with a quality management company to adapt its quality business model to meet the needs of the school. The aims were to improve school management and classroom learning.

The first step was a motivational talk given to the staff and a two-day seminar designed to introduce the school to Crosby's quality improvement process and to gain the necessary commitment to proceed with the process of implementation.

In the next step a quality improvement team (QIT) was established to drive and manage the quality process at the school. The first team comprised individuals ranging from the principal to administrative assistant and classroom cleaner. This committee coordinated the quality activities throughout the school with each person taking responsibility for one of the sub-committees that reported to the QIT. There were sub-committees for education, aesthetics, measurement, curriculum development, awareness, cost of quality and recognition. The committee had to draw up and get support for a policy statement.

Staff members attended seminars and courses during 1992 and by the beginning of 1993 all staff had received one form or another of quality education which equipped them to apply the quality principles to their own work situations. The strength of TQM lies in the fact that "everyone in an organisation is included, and everyone learns to speak a common language of quality improvement and this makes it possible to create an organisational culture to support the process" (Carlson, 1994:19). A major drawback for the people to form a strong team was the language barrier between racial groups. The training material at some of the seminars was geared entirely towards the commercial world and, therefore, had to be re-written and simplified to make it applicable to a school context.

The process seemed to be painful and each step was met with suspicion and resistance by the staff. However, at the end of each stage, the staff had the option to continue or abandon the process. Carlson (1994:18) stresses that TQM cannot be forced upon anyone.

Outcomes/results

The school implemented Crosby's four absolutes of quality as follows:

- *Definition of quality: conformance to requirements.* The school's procedures were re-drafted so as to obtain agreement and commitment from everyone involved with each procedure.
- *System of quality: prevention.* By clarifying their procedures, the members of the organisation (school) can prevent problems from occurring and thus they can save money and time and avoid frustration by not having to repeat work.
- *Performance standard: zero defect.* This absolute caused the most problems, because this concept has been misinterpreted to suggest that the school is striving to produce zero defect people. Carlson (1994:19) stresses that zero defect is first and foremost an attitude. The concept is further viewed as problematic in that once zero defect has been reached by implication there is no longer any need to strive to improve. Continuous improvement is viewed as a more dynamic concept and thus has replaced zero defect at the school.
- *Measurement of quality: the price of non-conformance.* This absolute states that money is lost every time something goes wrong. It seems as if this is as true of schools as it is of business organisations. The price of non-conformance can also be measured in terms of time wasted (which can then be given monetary value) and in damaged human relationships, both of which tend to make more impact on people who work in a people-orientated organisation like a school.

Carlson (1994:19) emphasises a fundamental concept of quality improvement as understanding the work that people do as a series of processes with inputs, outputs, customers and suppliers. At different stages of the work process, people are constantly switching roles from supplier to customer and back again. This underlines the importance of people within an organisation treating each other with as much respect as they should give to their external customers. In the end, quality results from constantly improving processes and not from blaming people when problems do occur.

4.7 ST JOSEPH'S SECONDARY SCHOOL* (Quong & Walker, 1996:219-231)

General background

This is a self-managed school where the TQM philosophy has been implemented as an attempt to respond to a fiscal crisis and its community's demand for an organisation that was more caring and responsive to learner, parent and educator needs. St Joseph's is a private, fee paying partly residential secondary college with junior (years 8 to 10) and senior (years 11 and 12) sections. It is located in a moderately sized urban area. This case study addresses restructuring in the junior college level of the school. The junior college has approximately 450 learners and caters for learners of varied cultural backgrounds.

The school was faced with steadily decreasing enrolments, severe financial problems, low staff morale and rising parent and learner dissatisfaction.

Goals and objectives

The overall goal of the school was to adopt a structure to provide for the needs of a diverse learner and community population through considering a TQM philosophy.

Leading quality principles

Quong and Walker (1996:222) mention certain essential TQM features that distinguish it from other forms of quality systems and make it a management philosophy. These features also apply to the quality process at St Joseph, and are the following:

- There is a customer focus (focus on learners, not on teaching outcomes);
- A focus on processes and not people (under TQM it is assumed that every educator wants to do a good job, but the processes can sometimes stand in their way);
- Continuous improvement (do not rely solely on large planned change, but constantly seek small improvements in process), and

* The school was given a fictitious name in the literature.

- Participation or total employee involvement (the people who do the job know best how to improve it).

In addition, Quong and Walker (1996:222) state that it is important to look for signs of structural change in schools that reflect a commitment to the principles of TQM. They regard the most common 'structural' sign of TQM in progress as the inverting of the traditional hierarchical management structure (pyramid) and the appearance of *quality improvement* or *functional teams* that truly empower staff to make decisions (without approval of higher authorities) and to be involved in continuous improvement.

Strategies

The process started on a broad base of examining aspects of the school's operation, which led to an appraisal of the school's ability to be an effective and efficient education provider. Various community members through several forums, including staff meetings and school council meetings, identified the following problems:

- A lack of 'family' values taught to children;
- Learners feeling 'lost' and uncared for;
- Learners unhappy about going to school and feeling no sense of belonging;
- Minority learners feeling alienated and misunderstood;
- Learners inadequately supervised and supported when facing learning and personal problems;
- Learners and parents dissatisfied with the range of curriculum options, especially in languages;
- A 'loose' behavioural management policy;
- Low staff morale;
- Inadequate homework follow-up and assistance;
- An unsupportive administration, and
- Little dedication to different ways of learning and teaching.

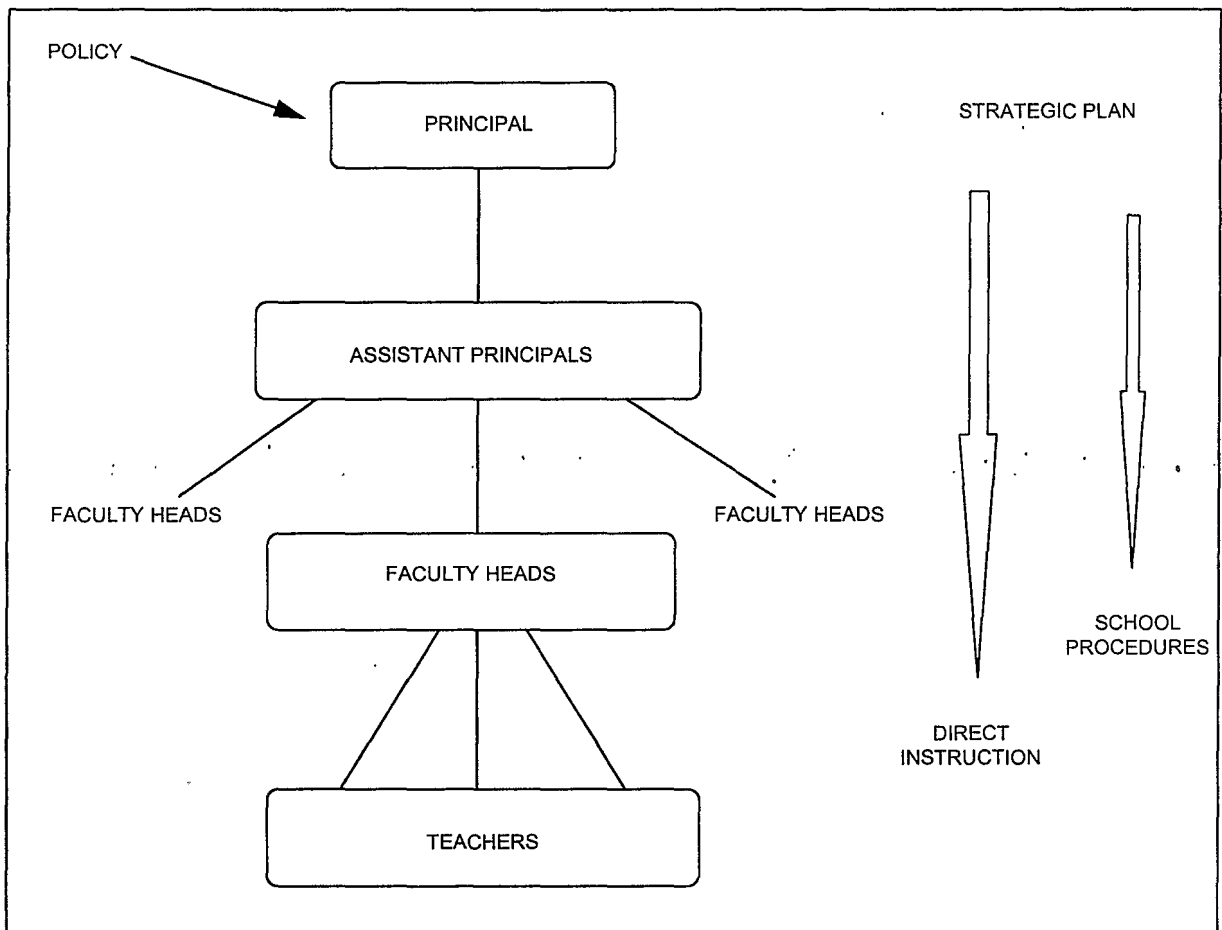
The low staff, learner and parent morale were negatively influencing learner outcomes. Public examination results had declined steadily and many learners and parents were dissatisfied with the values being transmitted by the school. A steering committee was formed, consisting of the assistant principal (who headed), chairperson of the college council and a number of other volunteer staff. The committee had the support of the principal and the majority of staff to address the problems. Over a period of approximately 12 months the committee investigated a number of solutions: extending the school day, increasing learner-educator contact time, increasing the length of lessons, restructuring administrative positions to provide more learner co-ordinators, isolated timetable changes and strengthening home-room periods.

In response to these suggestions, long debates followed within the college community. It was felt that the solutions were designed within the constraints of the existing school philosophy. After about one year the college community, including the staff, rejected the solutions as being incapable of getting to the heart of the problem.

The committee was expanded then to involve more personnel, parents and union representatives. They pushed for a major shift in thinking because they believed this was essential if the complex combination of problems were to be addressed. After extensive debate, research and visits to a number of innovative schools, the college decided to move towards a quality philosophy. The school didn't realise at the beginning that their planning was indeed in line with TQM principles.

At the beginning of the process, the school was structured on traditional hierarchical lines (see Fig. 4.2). The school principal had almost complete authority and laid down procedures, strategic direction and policy. The assistant principals controlled the timetable, which restricted approaches to teaching and learning. Many staff members viewed the timetable as restrictive, because the short periods encouraged direct instruction, rather than through guided exploration. Academic departments were structured on specific subject lines and educators had little to say about what happened at the school.

Figure 4.2 The traditional school structure (Quong & Walker, 1996:225)



The extensive philosophical and practical debate lasted almost two years and subsequently it was realised that the culture of the school itself had to be changed. A structure of sub-schooling paved the way toward a new school structure.

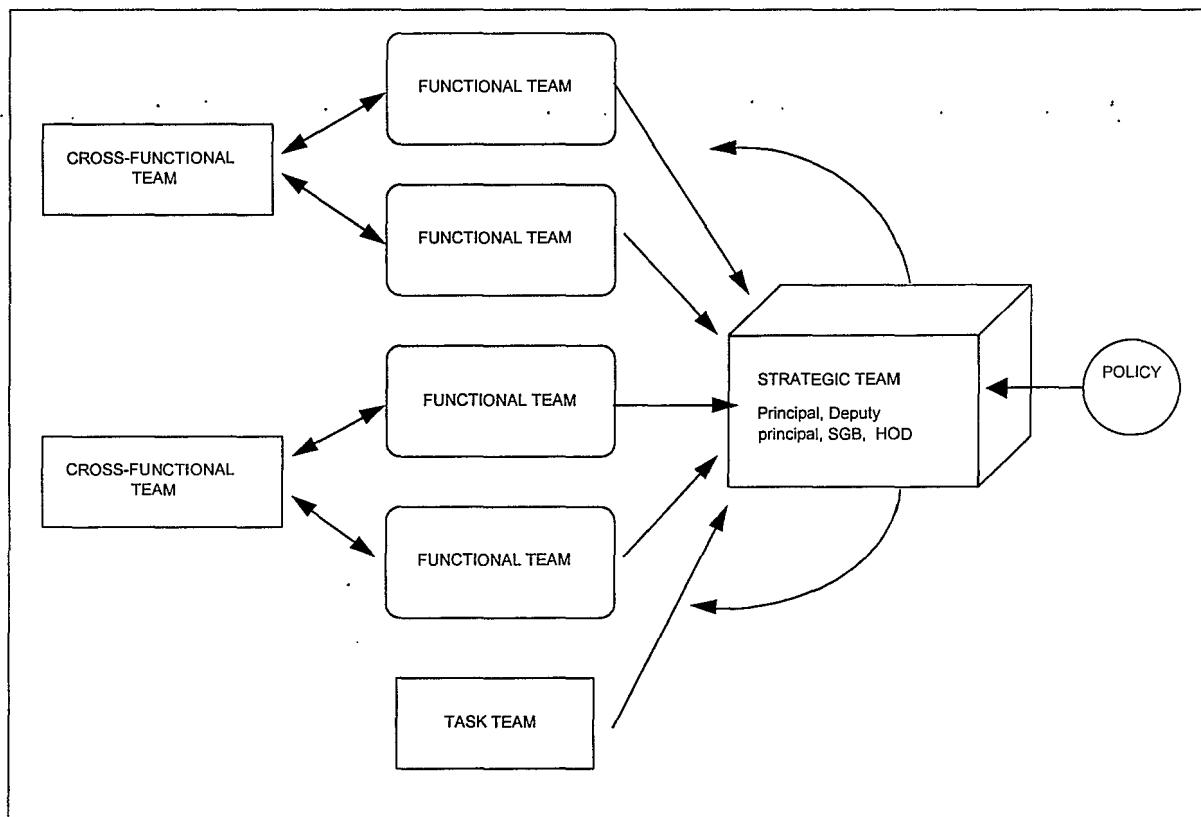
The aims of the sub-schooling change were to:

- Make the school an extension of the family so educators would get to know each other better;
- Provide peer support for learners and educators;
- Cater for individual development needs;
- Develop responsibility for curriculum, timetables, group sizes, structures and teaching methodologies for teams of educators;
- Cater for disadvantage and difference without resorting to streaming, and

- Ensure structural flexibility.

In the final agreed structure (see Fig. 4.3), there are four different types of operational units organised along horizontal rather than vertical lines. The operational units comprise functional teams, cross-functional teams, task teams and the strategic team.

Figure 4.3 The new school structure (Quong & Walker, 1996:226)

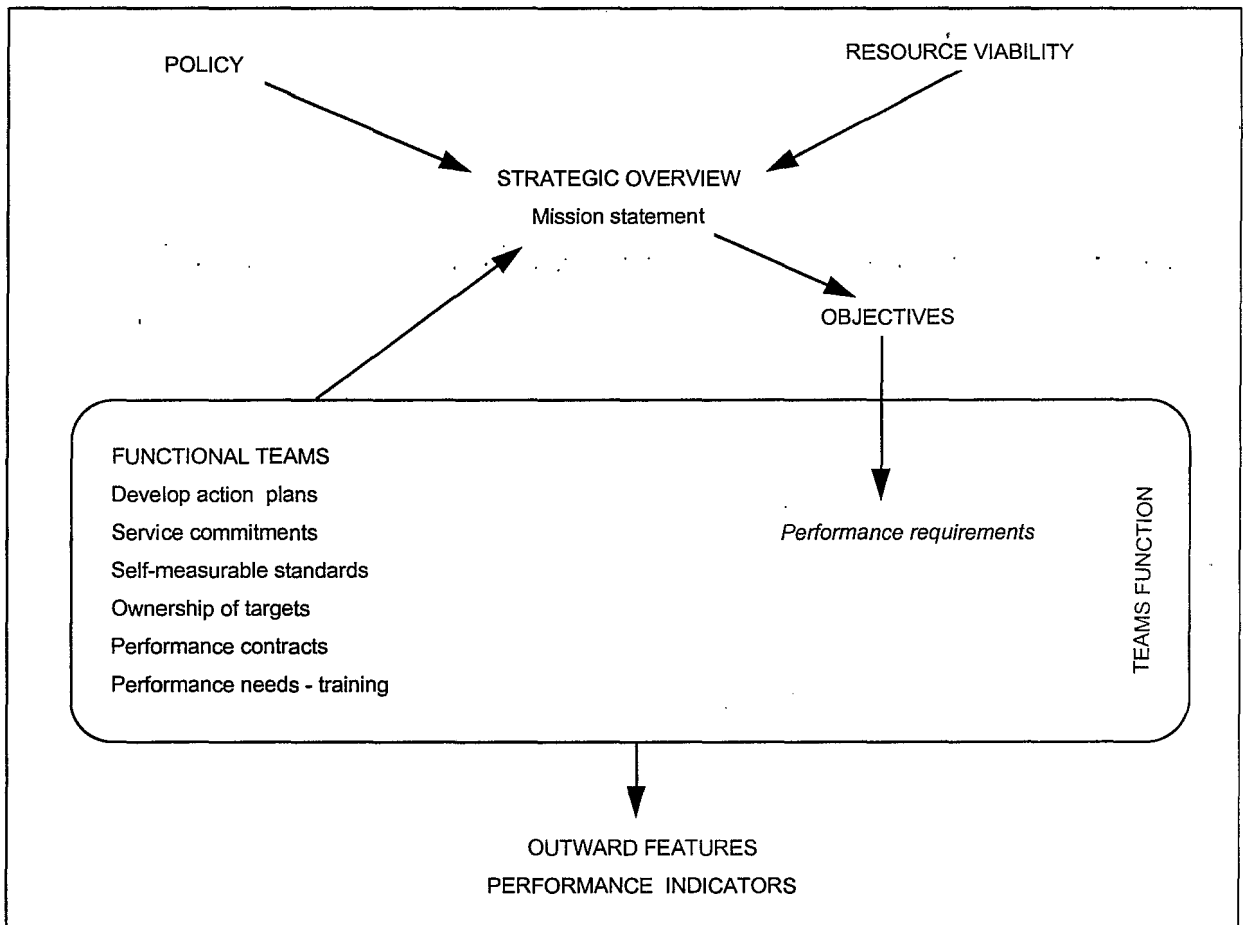


- **Functional teams**

The school has been divided into four sub-schools or functional teams (called homesteads). Each homestead has six to eight educators who are responsible for all teaching and learning-related activities in the junior secondary phase. Traditional subject based departments have been disbanded. Cross-faculty groups form the teaching staff of each sub-school. Each homestead comprises teaching specialists representing all curriculum areas and work together on the whole

education programme. The composition of the original teams remains intact throughout the three-year period of the junior secondary phase.

Figure 4.4 The role of functional teams in the new structure (Quong & Walker, 1996:225)



Faculty heads for particular subjects were replaced and now serve a 'cross'-homestead function as co-ordinators or 'boundary riders'. The co-ordinating role of those senior educators is carried out on a rotational or elected basis. Their roles changed from day-to-day operations of the faculties serving a broader role in co-ordinating the four areas of staffing, curriculum and moderation, marketing and community liaison and information systems. The task of the four senior educator is to bind all homesteads to ensure that the school as a whole is able to function as such. For example, the senior educator responsible for information systems is the contact person for the whole school's computing system maintenance and service.

Functional teams or homesteads serve a very different function from traditional subject faculties (see Fig. 4.4). In the original structure, the focus was restricted purely to one subject, while functional teams are concerned with providing the best quality education possible to the children in their care. Homestead meetings are designed to coordinate and ensure learner care and progress throughout their whole education. In TQM terms, this is about continuous service improvement, which, in this context, implies caring for and nurturing learners through their three years of junior secondary education.

Homesteads have complete responsibility for:

- Learner grouping within their homesteads;
- The timetable (each homestead may develop its own timetable providing outcomes are met and start, finish and lunch times coincide);
- Implementation of the behavioural management policy (each homestead has its own way of dealing with learners within broad parameters);
- Selecting and implementing the most appropriate learning and teaching approaches;
- Internal budgeting;
- Allocation of educators, who teaches what;
- Learner counselling and guidance;
- Parent involvement in their children's education;
- Uniforms (each has its own symbol), and
- Learner reports no longer go through the principal, but go directly to learners and parents via the homestead.

The teams are encouraged a certain amount of competition to engender a sense of belonging. It is the task of the cross-functional and strategic teams to keep an eye on this aspect. Wherever possible, educator and learner teams are expected to resolve their own problems as they arise. Problems are turned to the principal and the strategic team only in extreme cases.

- ***Cross-functional teams***

Cross-functional teams were formed to ensure that activities that impact across the whole school are effectively carried out (see Fig. 4.3). Membership and the role of cross-functional teams can change depending on issues that need to be dealt with and are drawn from the homestead groups. The two cross-functional teams at St Joseph's are sports and competition and religious studies.

- ***Task teams***

Task teams are formed when particular tasks need to be completed (see Fig. 4.3). They deal with specific issues that arise which affect all homesteads. Their membership can draw from any or all of the other teams and usually disperse once their task is complete. The scope of task teams, therefore, is to solve problem issues affecting all staff. One example of such an issue is the use of videos during school time. A task team can investigate the matter and then report to the school council on a video use policy for all homesteads.

- ***The strategic team***

The strategic team (see Fig. 4.3) is comprised of the principal, assistant principals and the school council (made up of educators, parents, community members and religious personnel). This team has a vastly different role to the senior management team and school council under the previous traditional hierarchy. The principal and senior staff no longer form policy and pass it to the classroom teachers to carry out. Policy is rather made by the homesteads and then it is passed to the strategic team to ratify in line with the overall strategic aims of the school. This bottom-up approach is seen as significant and in line with TQM principles.

Obviously the role of the principal within the structure has also changed. Most of the decision-making functions have been delegated to the homesteads. This has left the principal with more time to act as a 'boundary spanner' by working with community groups and marketing the school. The principal also works closely with separate homestead teams, not as an autocratic manager, but as a team facilitator. The principal and the strategic team, however, retain the right of veto with regard to the overall strategic direction of the school.

Outcomes/results

The restructuring was evaluated after one year and seems to be successful. The new structure and accompanying change in culture have been well received by the school community. It would, however, only after the first 3-year cycle be possible to assess the full impact of the change process.

From an economical point of view, enrolments have increased and an initial survey of parent perceptions showed renewed confidence in the school. The results drawn from formal and informal evaluations and from observations at the school indicated general satisfaction in particular areas:

- Learners feel more comfortable and less alienated being part of a homestead, rather than just another person in a much larger organisation;
- Learners are able to find 'mentors' amongst older learners in the same homestead and families are able to stay together;
- Learners and educators appear to have developed a greater sense of 'belonging' to homesteads, because of the smaller number of learners. Learners mix more readily with others from different year levels;
- Educators enjoy their increased autonomy and control over the learning process;
- Educators are more satisfied, they like having the opportunity to teach the same learners over an extended period and throughout their junior secondary education;
- Classroom educators, rather than the assistant principal and principal, are seen, and see themselves, as the most important persons for the day-to-day administration and problem solving;
- Educators no longer congregate in the old general staff room, but are to be found at lunchtimes and in breaks in the homestead 'family' rooms working with their 'family' groups;

- Most staff believed that the introduction of sub-schooling had resulted in positive benefits, such as better planning, a greater sense of collegiality and more effective time management;
- Parents believe that the school is a more caring place than under the previous structure;
- Parents appear to believe that the needs of their children are being served better by longer term matching with an identified group of educators, and
- Communication between home and school was seen to have improved.

The homesteads have committed themselves to continuous improvement (Kaizen) as the leading characteristic of TQM. Several examples show how this was done:

- Different homesteads use different mathematics textbooks (decided by the homesteads, as opposed to the traditional way of using the same textbook across the whole school regardless of learner or educator need);
- One homestead developed a reworked timetable that allows learners half a day off per week for work experience or general activities;
- The implementation of an after school homework centre staffed by parents and educators, and
- An independent sponsorship was obtained from a local company to supply computers.

Some homestead coordinators, however, remained frustrated by lack of administrative and professional support and found it somewhat difficult to coordinate resources.

Finally, it becomes clear that the changes at St Joseph's did not happen by chance and that structural change without cultural change was not enough to make a real difference. Through applying TQM principles the school has become more focused on learner needs and educator empowerment. The approach adopted was to develop a school that values and cares for the individual, not just through its curriculum, but also through its structure. TQM has made it possible to

develop a structure that is flexible enough to enable educators to meet the needs of learners more readily and easily.

4.8 DELL PRIMARY SCHOOL, WALES, UK (Rowlands & Kanji, 1998)

General background

Dell Primary School opened in 1989 and has grown rapidly from 170 learners to more than 395 learners in 1997. The school is a local education authority school and presently the largest primary school in the Monmouthshire Unitary Authority. The school's catchment area is a relatively prosperous one and the parents take a keen interest in their children's education. It is a primary school catering for the needs of 4-year to 11 year olds.

Firstly, the school had the challenge to put in place policies, processes and practices that would meet the aspirations of the parents. Secondly, a priority was to establish a philosophy, a set of aims and organisational climate that could respond successfully to the considerable pace of change schools had to adapt to.

Goals and objectives

The overall philosophy of the school is that every child should fulfil his/her potential. This philosophy has resulted in a set of aims related to providing spiritual, cultural, moral, physical and mental development. A crucial aim was "establishing an educational environment within which teaching and support staff, governors, advisors, parents and friends can work with each other for the successful achievement of these aims". The philosophy allows for constructive criticism, therefore, the school welcomes the inputs from parents, governors, children, advisors and other outside bodies. This is done to benefit the learners and their learning experiences ultimately.

As part of the school's philosophy, they work together to ensure a "oneness" of purpose within the school. The school also developed an understanding partnership with parents, i.e. putting parents and learners first, meeting and exceeding their expectations.

Leading quality principles

The emphasis the school places on embracing a philosophy, a set of aims and an organisational climate is in line with TQM principles. There is clear commitment by the school's management team and governing body. Through proper planning, the school has developed coherent policies and practices, including staff development and school development plans. The involvement of the key role players such as learners, teaching and non-teaching staff, parents and community/industry is quite prominent. In this respect, it is remarkable that the school puts parents and learners first by meeting and exceeding their needs and expectations. Underlying this approach is the philosophy of being a caring school and of valuing all who work in or for the school, whatever their role.

Furthermore, the school has a 'working together policy', which is consistent with Deming's constancy of purpose. The school is viewed as a system where all role players are working together to improve on quality collectively. This approach adds to the educationally sound principle that the totality of the child's education should be addressed.

The school has a strong view on continuous improvement, which provided the impetus for the school measuring itself continuously against external standards. External auditing as a means of quality improvement at schools is hereby highlighted as crucially important.

Strategies

In the first five years, the emphasis was on ensuring a coherence of policies, such that each child received an equality of entitlement. A staff development policy was designed, where job descriptions for curriculum co-ordinators and senior management were extended by the introduction of job clarification sheets, setting annual targets. The policy also provided opportunities to monitor the work of colleagues in each educator's specialist role, to chair curriculum development meetings and to provide opportunities to evaluate the effect of in-service training on classroom practice.

The school developed an increasingly comprehensive school development plan (SDP), which provides the opportunity to review and improve all aspects of school life in a flexible, yet systematic way. Priorities for change at the school are set in a 3-year cycle. The priorities for school improvement for 1998 were *curriculum, personnel, environment and community/industry*. A series of staff meetings and surveys made it possible to prioritise and cost all initiatives for the following three years. Before a new cycle of SDP is introduced, the success of the previous SDP is evaluated against previously agreed criteria.

It was realised, however, that the school would also have to apply an external standard to benchmark its current policy and practice. The school, therefore, committed itself to the following external audits with the aim of quality improvement:

- The Investor in People standard (1994-1996) which made use of questionnaires and surveys to audit its staff development policy;
- The Government Charter Mark for public sector organisations (1995) on customer satisfaction;
- Assessment by the Welsh Joint Education Committee (WJEC). In 1996 the school submitted a record of achievement files, which celebrated learners' academic and non-academic achievements. The aim was to receive WJEC accreditation for meeting a standard for policy and practice. Those files were also part of *curriculum vitae* to present to colleges and employers, and
- The business excellence model of the Wales Quality Centre was used (1996) as a basis for self-assessment and provided the opportunity to be externally assessed against a relevant national standard. The process of submission, assessment and feedback was seen as an ideal model in which to continue to make the school better tomorrow than it is today.

Outcomes/results

Dell Primary School was adamant to improve the quality of the school continuously by subjecting the school's policies and practice to relevant external standards. As a result of their commitment to meet those standards, in 1996, the school became

the first in Monmouthshire to gain the Investor in People Award. In 1995, the school became and remains the only school in Wales to hold the Charter Mark for public organisations. The following quotation from the judges' report (Dec. 1995) confirms the school's commitment to quality:

"The cycle of consultation with customers, analysis of their views, the incorporation of those views in revising and improving services and the repetition of this cycle as part of a continuous improvement process is finally in place".

In 1996 the school's policy and practice on keeping record of learners' achievement resulted in Dell Primary and other local schools receiving accreditation for meeting a suitable standard of policy and practice. Learners leave the school after 7 years with a full record of their achievements.

Existing policies and practices were sufficient to see the school gain the Wales Education Sector Award of the Wales Quality Centre in 1996 and 1997. In 1997, the head teacher was the Quality Person of the Year at the Awards. The school also entered the UK Quality Awards of 1997 and became the first public sector organisation in the UK to achieve the award winner status.

The school, however, realised that quality was and is not a once-off event and will therefore continue setting standards against an external standard. Rowlands and Kanji (1998) conclude by contending that the most important recognition has been by the school itself, in realising the importance of applying TQM principles to a primary school.

4.9 SUMMARY

The case study schools share some practices and the application of a number of TQM elements. These practices and elements are summarised below and are presented according to the different indicators.

The **general background** of the case study schools differ substantially from each other, ranging from public schools serving disadvantaged communities to private, fee-paying schools. The cultural backgrounds of the learners in the various

schools were also diverse. In most cases there were particular circumstances that urged the schools to reconsider their current management practices. The schools first realised a lack of efficiency and effectiveness as educational institutions. In at least one case, the school did not sense any particular problem other than to realise the need for continuous improvement.

It is apparent that the impetus for turning around the decline of education standards emerged from within the schools. The process started at the top and was driven by leading and accepted TQM principles, including continuous improvement, customer involvement and satisfaction, the focus on processes, participation and total employee involvement, performance standards and measurement, intrinsic motivation, shared responsibility and ongoing training.

The **goals and objectives** are to:

- Apply TQM techniques to address educational challenges (see 4.3);
- Change the management (see 4.6) and organisational structure to meet customer needs (see 4.7);
- Change the organisational climate (see 4.3) and create an environment for participation (see 4.8);
- Improve instructional processes (see 4.3);
- Teach entrepreneurship skills to learners (4.4), and
- Improve the quality of public schools (see 4.5).

The following are the **leading quality principles**:

- School management team commitment (see 4.8);
- Planning (see 4.8);
- Continuous improvement (see 4.7; 4.8);
- Intrinsic motivation (see 4.4; 4.5);
- Shared responsibility (see 4.4; 4.8), learner responsibility (4.3) and participation in management (4.4; 4.7; 4.8);

- Committees (4.3)
- A systems and process approach (see 4.4; 4.7);
- Training (see 4.4);
- A business orientation (see 4.3) with a customer-supplier relationship (see 4.3; 4.4; 4.7; 4.8), and
- The four absolutes of quality (see 4.6) and Deming's Fourteen Points (see 4.3; 4.5).

The quality processes or **strategies** followed by the case study schools appear to be consistent with that of TQM: The following processes are common to most of the schools:

- The initiative started with top manager commitment followed by voluntary commitment of staff members (see 4.3 - 4.9);
- Involvement and training of all role-players are vital element to prepare for implementing TQM (see 4.4; 4.6; 4.7)
- A steering committee is needed to manage and drive the TQM process (see 4.4; 4.7; 4.8);
- A situational analysis needs to be conducted in order to inform the implementation process (see 4.7; 4.8);
- The TQM philosophy has to be reflected in the mission statement and objectives of the school (see 4.7);
- The implementation of TQM is a process and comprises various phases (see 4.4; 4.8);
- The implementation plan needs to list actions required and solutions, it should show how, when and where action should be taken. Obstacles and advantages of the plan should be documented. TQM techniques should be used to identify the causes of a given problem (see 4.4);
- The application of TQM to the classroom should also be attended to. One school afforded much time (one week) to make the learners understand the

worth of the curriculum. Learners were prepared to assume responsibility of managing their own learning. They are to become self-directed learners, master the curriculum and acquire process skills. Educators collaborate in teams and plan together (see 4.4);

- It is necessary to overcome the staff's concerns and attitudinal barriers to quality (see 4.6);
- Internal motivation is the driving force that makes educators participate and makes children learn. In the Newtown schools the vision is that internal motivation equips children with the ability and will to learn well. This vision also holds that every learner has unlimited and multiple abilities. The *well* is the core issue of quality and it is consistent with Deming's quality principles, for example, to break down the barriers to quality improvement, to eliminate targets and numerical quotas and to remove the barriers to work pride (see 4.6);
- The culture of low performance needs to be replaced by a quality culture, and
- School policies and practices are subjected to relevant external standards to ensure continuous improvement of the school as a whole (see 4.8).

The case study schools reported the following as **outcomes/results** on the application of TQM:

- Increased stakeholder and learner involvement and participation (see 4.3);
- A change in the paradigm (see 4.5) and culture of the schools (see 4.4), including a long-term approach to quality improvement (see 4.5);
- Continuous improvement (see 4.6; 4.7; 4.8);
- Educator training (see 4.5);
- Problem prevention (see 4.6);

- The application of quality improvement techniques (see 4.5), including quality-assurance systems (see 4.8), and
- The restructuring of the school management (see 4.8) and provision for quality improvement teams (see 4.5; 4.8).

It becomes evident that the application of TQM has indeed brought about tangible results. In all case study schools, improvements were reported which involve learners, educators, parents, community and the school system. Although some improvements were already visible shortly after the introduction of TQM, it appears as if a cycle of at least three years is needed to assess its impact on the school. One of the most important outcomes of TQM seems to be the fact that schools were thinking differently. A new culture emerged which surely was a prerequisite to structural change. The changes, however, were not only of a philosophical or cultural nature, but clearly also involved cost savings.

The ultimate goal with the application of TQM seems to be the optimisation of the school as a system. The optimisation of the system should result in improved education and learning for every child. This important principle is explicitly acknowledged by the Newton School Model (learners have unlimited and multiple abilities) and the Dell Primary School (each child should fulfil his/her potential).

It is evident from the case studies that elements of TQM (see 2.10; 3.5) are applied in schools. These elements can therefore be considered when developing a management strategy for schools (see Chapter 7).

In the next chapter the design for the empirical study will be outlined.