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AN IMPLEMENTATION PLAN FOR TOTAL QUALITY MANAGEMENT (TQM) PRINCIPLES IN THE SECONDARY LEVEL, PERFORMANCE-BASED, CHORAL MUSIC CLASSROOM

By

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ABSTRACT

AN IMPLEMENTATION PLAN FOR TOTAL QUALITY MANAGEMENT (TQM) PRINCIPLES IN THE SECONDARY LEVEL, PERFORMANCE-BASED, CHORAL MUSIC CLASSROOM

By

Kevin Earl Morrissey

Total Quality Management (TQM) principles, formulated by Edwards Deming, build on a systems approach, focusing on long-term success through sensitivity toward the customers of the organization. One of its main tenets is that the customer defines quality. This system of continuous quality improvement, involving all people in the transformation, was adapted to the educational setting in 1988 by David Langford. In the classroom setting, teachers act as true facilitators in the learning process, thus empowering students in a non-coercive environment.

The aim of this thesis is to provide a brief history of TQM, explore the various learning theories it adopts, apply these theories to the choral classroom, introduce a sampling of tools specific to the application of its philosophy, and document an initial implementation plan for the secondary level, performance-based, choral music classroom based on its principles.

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INTRODUCTION

Total Quality Management (TQM) principles at one time were known only to persons in business and industry. Formulated largely in part by W. Edwards Deming, this new paradigm builds on a systems approach, focusing on long-term success through sensitivity towards the customers of the organization (Langford, 1995; "The Quality Glossary," 1992). This approach to management was first applied to education in 1988. Its effects have been so powerful that many leaders in education see this approach as the means for a major paradigm shift. Individuals such as David Langford (1992, 1994, 1995), Myron Tribus (1992), and William Glasser (1992, 1993) have all adapted and implemented TQM practices in the educational setting.

Total Quality Learning is based on Deming's fourteen points of continuous quality management and on theories of how people learn. One of its main tenets is that the customer defines quality. In the classroom setting, teachers act as facilitators in the learning process. This approach leads to a student-centered environment without coercion. Its philosophy attempts to revolutionize the school systems of today in order to prepare students for the future. TQM's success in business and industry, as well as results from limited empirical research of its success in education, have established it as a viable means for educational reform. School districts throughout the nation are rapidly adapting TQM principles to all facets of education. Indeed, applications of TQM in the

music classroom are valuable for continued growth in the profession as well as a means for pulling together many ideas under the principles of one system.

Thus, the aim of this thesis is to provide a history of TQM, its subsequent value in the educational setting, and an implementation plan for the secondary level, performance-based, choral music classroom based on its principles. Chapter One will provide an overview of TQM, Chapter Two focuses upon the various learning theories that proponents of TQM embrace, and Chapter Three specifically applies these theories to one's teaching style in the choral rehearsal setting. Chapter Four will then define and contextualize a sampling of data collection tools specific to the application of its philosophy in the secondary level, performance-based, choral music classroom. Finally, Chapter Five will provide an overview of my efforts in implementing TQM. It will include what has been successful, what needs to be improved, and what ideas may be explored in the future in regards to the application of TQM in the secondary level, performance-based, choral music classroom.

Chapter 1

AN OVERVIEW OF TOTAL QUALITY MANAGEMENT (TQM)

The need for educational reform

American education has received much criticism in recent years. Media attention toward low SAT and other standardized test scores and international comparisons of student achievements have led to the current national educational reform movement (Bonstingl, 1992). One of many critical studies that has been undertaken is The National Commission on Excellence in Education report (1983), "A Nation at Risk: The Imperative for Educational Reform." The report brought into question the public school's ability to develop in students the basic knowledge and tools necessary to function effectively in today's society.

> Each generation of Americans has outstripped its parents in education, in literacy, and in economic attainment. For the first time in the history of our country, the educational skills of one generation will not surpass, will not equal, will not even approach, those of their parents. (p. 11)

As a result of this and other criticisms, the concern in education shifted from the individual to the school. Turk (1994) states that "The concern for the quality of the product, the student, has redirected the focus of standardized test results from measuring

individual ability to assessing the capability of the school to produce quality students" (p.22).

Regauld (1994) cites three separate problems that have brought about the educational crisis. One problem is the burden placed upon the schools in regards to students' socio-economic status. Many teachers must learn how to meet their students' basic need for survival. Developing their minds is secondary in comparison. A second problem involves the inflexibility of administrators, school boards, union officials, and classroom teachers. The third problem relates to the nation's continually rising drop-out rate among students.

Myron Tribus (n.d.a) views our educational crisis as the fault of management and unqualified teachers. However, he believes that our nation's school systems contain the necessary components for a high quality educational system. A key element in place is that educators realize the need for change and are ready to act. Unfortunately, administrators and boards of education are often unwilling to accept new paradigms. Instead, Tribus writes, they believe that schools ought to be run as they did years ago when they were still in school.

Fusco (1994), however, is not as optimistic about educators' recognition of the problem.

> Unlike business, education does not see adversity now or in its future. One of the reasons there is no clamor for change is because education has chosen mediocrity. The problem is that educators are in a paradigm paralysis and continue to rationalize these differences rather than facing their reality. (p.105)

Even the latest vision of the United States Department of Education, Goals 2000, is basically a return to the older paradigm of education, with an emphasis on testing and competition. Tribus (n.d.f) believes that it "does not begin with a vision of the future. It seems to be aimed only at repairing what is obviously wrong today. It is certainly a step in the right direction, but it represents a limited, near-term vision, . . ." (p.9).

Regauld (1994) cites valuable models that have attempted to restructure education: effective schools, cooperative learning, accelerated schools, site-based management, and outcome-based education. All of these reform movements are aimed at meeting and exceeding the needs of the students. But the reform movement must involve more than just tools and processes that solve short-term needs. Tribus (n.d.a) believes that the entire system of management in education will need to be changed. "What is needed is a transformation of the management of the entire system, at all levels, from the classroom to the state boards of education" (p.3).

The educational reform movements that have arisen and subsequently failed have done so for many reasons. Some failed due to underfunding and others because of fundamental flaws in their thought. The most important cause of these reform failures, according to Langford (1995), is the lack of identifying with educational purpose. They fail to address the largest context of education, the very purpose of schools. Excellent classroom teaching techniques have failed in reform because they were not part of a larger system that embraced a holistic approach towards the educational environment. This new system of implementation that Tribus and Langford speak of is based upon the management principles of W. Edwards Deming. In order to better understand its

philosophy and principles, an understanding of its development in business needs to be traced.

Foundations of Total Quality Management (TQM)

Frederick Winslow Taylor, an industrial engineer, established a scientific management theory early in this century that has become the norm among leadership philosophies in American industry. According to Taylor, individual creativity is not needed and only serves to disrupt the realization of management objectives.

> Taylor's industrial model was a top-down, authoritarian structure, in which management's job was to worry about quotas and quality if necessary, while subservient workers mindlessly did management's bidding without questioning the reasons for their work or the overall plan. (Bonstingl, 1992, p. 67)

The industrial revolution rendered obsolete most tradesmen and craftsmen. The adoption of mass production resulted in lower worker commitment toward producing quality products. Inspectors were placed at the end of the assembly line, but this did not improve workers' interest or investment in producing a quality product (Chappell, 1993).

Walter Shewart, an employee at Bell Telephone laboratories, developed a theory of statistical quality control. Inventing the control chart in the late 1920's, he is considered the father of modern quality application (Langford, 1994). The control chart maps company production in an effort to determine variation in product quality. Every process has a normal variation, known as common cause variation. The control chart defines the limits of common cause variation for a particular product, and then charts the product's quality in relation to its variation limits. A second type of variation is known as special

cause variation. This occurs when the results fall outside of the control limits. The cause for this irregular variation is then investigated to make certain that the control limits are still acceptable. By continuously researching the cause of product variation, the needs of the customers (with regard to the product) are consistently met (Chappell, 1993).

Shewart served as a mentor for W. Edwards Deming at Bell's Hawthorne plant in the 1920's. It was there that Deming, primarily a statistician, developed his thesis of continuous quality improvement based on a fourteen-point system. The following is a summary of his system that serves as the basis for the transformation of American industry (Deming, 1986, p.23-4).

1. **Create constancy of purpose** for improving product and service, with the aim of being competitive, staying in business, and providing jobs.
2. **Adopt the new philosophy.** We are in a new economic age. Managers must awaken to the challenge, learn their responsibilities, and take on leadership for change.
3. **Cease dependence on inspection to achieve quality.** Eliminate the need for inspection on a mass basis by building quality into the product in the first place.
4. **End the practice of awarding business by price alone.** Move toward a single supplier for any one item on the basis of a long-term relationship of loyalty and trust. Minimize total cost by working with a single supplier.
5. **Improve constantly and forever** every process for planning, production, and service, to improve quality and productivity, and thus constantly decrease costs.
6. **Institute training on the job.**

7. **Adopt and institute leadership.** The aim of supervision should be to help people and machines and gadgets do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.

8. **Drive out fear,** so that everyone can work effectively for the company.

9. **Break down barriers between departments.** People in research, sales and production must work as a team to foresee problems of production and those that may be encountered with the product or the service.

10. **Eliminate slogans, exhortations, and targets** for the work force that ask for zero defects or new levels of productivity. Such exhortations create adversarial relationships, since the bulk of the causes of low quality and productivity belong to the system and thus lie beyond the power of the work force.

11a. **Eliminate work standards (quotas)** on the factory floor. Substitute leadership.

b. **Eliminate management by objectives, numbers, and numerical goals.** Substitute leadership.

12a. **Remove barriers that rob the hourly worker of his right to pride of workmanship.** The responsibility of supervisors must be changed from sheer numbers to quality.

b. **Remove barriers that rob managers and engineers of their right to pride of workmanship.** This means, among other things, abolishing the annual or merit rating and of management by objective.

13. **Institute a vigorous program of education and self-improvement.**

14. **Put everybody in the company to work to accomplish the transformation.**

The transformation is everybody's job.

In this system, quality is the first priority. When quality is increased, the product gets better, costs go down, customers are happier, employees are happier, market share increases, and profitability goes up (Tribus, n.d.c).

When Deming's management approach was dismissed by "the strong and then unchallenged industrial complex of the United States, he accepted an invitation from Japan to devise a manufacturing system that would compete in the world market" (Aamot, 1995, p. 21). Over the span of four decades, he taught Japanese owners, managers, and workers the practices and principles of his philosophy (Bonstingl, 1992).

In the 1950's, the United States owned half the world market for goods and services. Langford (1994) believes that "American managers were pre-occupied with making more rather than producing quality" (p.20). It wasn't until 1978 that America turned its eyes to Deming once again. The media reported that the average productivity rate for Japanese workers had surpassed that of American workers.

In 1980, NBC aired a special broadcast "If Japan can, why can't we?" featuring Deming and his work in Japan based on the principles of Total Quality Production. Today, many companies are adopting these principles, realizing the importance of continuous high quality processes in fulfilling customer satisfaction foremost (Bonstingl, 1992). Once defined as the Japanese management style approach to quality improvement, TQM is now recognized as a management approach focusing on continuous improvement and long-term success through customer satisfaction (Regauld, 1994).

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Studies have found that "TQM is an emerging business strategy, that it does improve organizational performance, that TQM is still the most viable long-term business strategy, and significant gaps have been identified between what is needed for successful implementation and actual execution" (Kendrick as stated in Chappell, 1993). Rhodes (1992) states that:

> For business and industry, it created a fundamental paradigm shift by refocusing attention on the 'customer' whose needs, requirements, and potentials must now drive the work process. In industrial TQM, the voice of the customer provides the information an organization must have to remain responsive. (p.77)

Foundations of TQM in education

Many educational leaders believe that schools, like most businesses, are modeled after the Tayloristic model of management. American education, according to Bonstingl (1992), mimicked this military-industrial model of "efficient" work.

> The philosophy and practice of Taylorism is still in place in many schools, industries, and government offices throughout the country. And yet, it is becoming abundantly clear that this model will not serve us well in the world of the future, where workers will need to be sharp, creative thinkers with a keen sense of intellectual curiosity and a personal dedication to lifelong learning, as well as an individual commitment to the collective good. (p. 67)

Management consultant Robert F. Lynch (1991) linked antiquated educational philosophies and practices with antiquated workplace philosophies and practices.

> The workplace often reinforces the values of compliance. The student going into the workplace has been taught there will always be someone in charge who has the 'right' answer. Satisfying the supervisor becomes akin to getting a passing grade. Satisfying the customer is secondary or nonexistent in this system. (p. 64)

Myron Tribus (n.d.a) adds his thoughts on the current recognized educational practices as well: "Students do not put their hearts into their work. They do the minimum they can, barely satisfying the teachers. They find the assignments boring and less attractive than many other alternatives, such as street gangs and television" (p.4). He believes that with quality management in the classroom, it does not have to be that way. By drawing upon Deming's principles, students will become internally motivated and experience joy in learning.

Based on the belief that our current approach must undergo a drastic change, David Langford (1994, 1995) recognized the need to improve student learning. Quality learning was developed in 1988 based on Deming's philosophy of Total Quality Management. Langford was the initiator of quality method in the classroom and the first teacher in the world to start on this path (Tribus, n.d.e). He implemented Quality Management tools, techniques, theories, and philosophies in his educational classes. The results were dramatic.

> Using basic statistical tools, students were able to chart their own learning process. They also learned how to evaluate their own work and started taking on responsibility to do work before they were told. All effort was directed toward improving the learning process by identifying, defining, and overcoming the

barriers which stood in their way. Most importantly, students realized that school exists to foster lifelong learning. (Langford, 1994, p.3)

In 1990, PBS aired the sequel to the NBC special, "If Japan can, why can't we?" Focused on TQM's application in the educational setting, "Quality. . . Or Else!" featured the application of Langford's Quality approach at Mt. Edgecumbe High School in Sitka, Alaska (Langford, 1994). Langford's approach is based on a fifteen point system taken from Deming's fourteen points (Aamot, 1995, p. 22; Byrnes, Byrnes, & Cornesky, 1992, p. 12-16; Langford, 1994, p. 22-23; Schmoker & Wilson, 1993, p. 11-17):

1. Constancy of purpose in creating quality students and a quality system.
2. Adopt a new philosophy.
3. Work to abolish grading and the harmful effects of rating people.
4. Cease dependence on mass testing--start individual quality performance levels.
5. Work with suppliers.
6. Constantly focus on improving the system.
7. Institute education and training on the job for students, teachers, classified staff and administrators.
8. Institute leadership to help people use machines, gadgets and materials to do a better job.
9. Drive out fear--improve team building and team decisions.
10. Break down barriers between departments.
11. Eliminate slogans and targets. Exhortations create adversarial relationships.
12. Eliminate work standards (quotas) for teachers and students. Substitute leadership.

13. Eliminate the annual or merit rating and management by objective. Change from quantity to quality.

14. Institute a vigorous program of education and self-improvement for all.

15. Involve everyone in the transformation.

Just as in Deming's theory, quality is the first priority. When quality is increased in the classroom setting, the product gets better and customers are happier. But what is the product and who are the customers in education? As we investigate TQM in the classroom, these words will be defined.

As mentioned previously, other reform attempts have not worked because they do not address the entire system. TQM, however, attempts a holistic view towards education in the schools. "Quality learning is not neuroscience or psychology, nor is it a specific theory of cognitive development. But quality learning facilitates the application of knowledge from these important studies to the learning process in the classroom, and optimizes that application" (Langford, 1995, p. 129). Specifically, TQM can incorporate classroom approaches and strategies such as discovery learning (Lefrancois, 1994), cooperative learning (Langford, 1995; Schmoker & Wilson, 1993; Turk, 1994), the constructivist classroom (Turk, 1994), and outcome-based education (Byrnes et al., 1992). Quality learning principles also adhere to various theories on learning and development based on the work of individuals such as Lev Vygotsky (Tribus, n.d.c), Reuven Feuerstein (Tribus, n.d.d), Alfie Kohn (1986, 1993), William Glasser (1992, 1993), and Milhalyi Csikszentmihalyi (1990). Langford addresses TQM's ability to incorporate and optimize various theories and approaches to learning:

> The concepts of quality learning do not contradict, but do indeed support, educators' approaches to harnessing what they know about learning theory and the brain. This is why quality learning cannot be seen as simply another program, operating separately from other school programs. It is instead a way of seeing and understanding, so that the best of other programs and approaches might be utilized to bring about the best that is possible from all learners in the classroom. (p. 122)

It is important to emphasize that success in TQM requires a complete transformation of the educational structure. That is, the whole system must adopt the philosophy, starting with the superintendent, school board, and administration. The implementation plan that will be proposed in this study for the secondary level, performance-based, choral music classroom is meant for a school district that has begun, or plans to begin to adopt Total Quality principles. If this changing paradigm is not set up, success may still be obtained, but not nearly to the extent that it could be otherwise.

Some important differences between industry and education

When transforming TQM methods from industry to education, there are some differences that need to be kept in mind. Basic principles remain the same, but some adaptations must be made. Turk (1994) also reminds us that it is essential to realize that this model is not a design for use in education, industry, government, or any other specific organization. "The reality is that TQM is designed to be adapted to the individual setting with the goal of producing a quality outcome (p. 30). Tribus (1992, p.1) has developed a short list articulating these differences:

1. The school is not a factory.

2. The students are not the product.

3. Their education is the product.

4. The customers for the product are several:

    a) The students themselves

    b) Their parents

    c) Their future employers

    d) Society at large

5. Students need to be "co-managers" of their own education. The student should be involved, consciously and with skill, in the continuous improvement of the processes which create the product.

6. There are no opportunities for recalls.

Even though there are differences between the application of TQM in these two areas, the expectation of quality work remains the same. Turk (1994, p. 24) discusses their overriding commonality: "In a broad sense, their philosophies for achieving quality are through empowering and encouraging each worker to be a part of a team." So in the educational setting, a system is established that empowers the teacher as manager in the process and the student as an individual that is active in the constant improvement of the process to obtain quality results.

Success in education

TQM is only a recent implementation in the schools. Because it also takes time to show results, the research base is limited. Many of the studies that have been conducted involve data with how school districts are using TQM and are not based on the results of

their efforts. However, based on this limited empirical research performed on TQM (in terms of results), some of its benefits and successes include: students and staff that do their jobs more effectively, improved student test scores, decreased incidence of disruptive behavior, reduced dropout rate, improved management of the classroom environment, shared knowledge and experience between teachers, new tools used to analyze student performance, more effective tools used by administrators to do their jobs more efficiently, and established collaboration between education, business, and government (Fusco, 1994).

According to responses of a survey based on a pilot study conducted during the 1993-94 school year in Texas, students identified five key benefits of TQM: learning to work in teams, gaining responsibility, learning concepts that will help in real life, becoming more empowered, and learning continuous improvement. Teachers also noted the following benefits: student responsibility for learning increased, student grades improved, classroom discipline improved, student-teacher relationships improved, student enthusiasm increased, and teacher stress was reduced (Leigh, 1995).

J.S. Lares (1995) studied TQM as a means to improve discipline. Results indicated that the teacher was placed in a more nurturing role. A trusting atmosphere was established in which students felt supported and could accept the responsibility for their own actions. Any consequences as a result of their actions became a means of support rather than punishment.

TQM training in the Rappahannock County Schools (Chappell, 1993) has had a significant impact on the way associates do their jobs and work with people. There is a feeling of more connectedness rather than isolation of individual roles within the district.

The quality team that each associate served on was cited by 61% of the people as being the reason why they felt more empowered. Teachers, administrators, bus drivers, cooks, secretaries, parents, and students all serve on quality teams in order to design or improve processes within the school district.

Positive results from a continuous improvement study conducted by Regauld (1994, p. 64) include:

(1) educational specifications developed for a new middle school;

(2) a streamlined purchase order process;

(3) a change in the district homework strategy;

(4) a revised process for elementary unit development;

(5) regular customer surveys in the physical plant department;

(6) development of strategies to increase food service participation;

(7) strategies to increase use of instructional television;

(8) cross functional teams to control tax collection;

(9) a change in the delivery system for vocational education; and

(10) student instructional teams for the delivery of academic education.

In a study conducted by Turk (1994), three schools were researched in regards to their implementation of TQM. Some of the results included: (1) each of the schools used significantly different approaches in implementation, so it is important to realize that each educational setting is unique and the application of TQM to the setting should serve to that end; (2) the non-coercive, lead-management style of the principles created a climate that nurtured a collaborative decision-making environment; (3) the principles of TQM were accepted and practiced by the staff and administrators; (4) trust building was an

integral aspect of achieving total staff commitment; (5) teacher stress level was reduced and an interdisciplinary learning environment was established through academic teaming; (6) responses to questionnaires indicated that not all schools had developed a collegial climate, thus stressing the importance of staff involvement in the decision-making processes; (7) responses to questionnaires also indicated that the different stages of development within each school has a relationship to the degree of trust level in regards to the implementation of TQM; and (8) the realization was made that programs are often evaluated and discarded before an accurate determination of their value can be made.

Results from other studies (as cited by Chappell, 1993, p. 32) include:

(a) reduced cycle time for special education referrals in Waco, Texas,

(b) reduced student tardiness at Southbridge, Massachusetts,

(c) reduced school safety problems at the Sacramento Office of Education,

(d) reduced 4th grade remedial counts at Rappahannock county, Virginia, and

(e) reductions in the cost of tax collections at the State college, Pennsylvania.

The results of these research studies all appear to indicate a level of success with regard to the implementation of TQM within a school district. Unfortunately, few research studies have been conducted that document the results of specific classroom implementation efforts. However, the implementation efforts by David Langford (1994, 1995) in Sitka, Alaska, contain results based on specific classroom strategies. The data from this study provide a strong foundation upon which creative thought can be generated with regard to specific implementation strategies in the classroom.

The Quality classroom in action

In 1988, Mt. Edgecumbe High School in Sitka, Alaska, began the transformation process into Total Quality Management. Founded as a school for rural and native Alaskan Indians, these students are known to be "at-risk", coming from remote village schools with a wide variety of socio-economic backgrounds (Tribus, n.d.a). Under a traditional approach to education, this school was in danger of failing.

Upon implementation of TQM in the school, student tardiness was reduced by 71%, dropout rate fell from 40% to 1%, and student and teacher turnover rates declined (Schmoker & Wilson, 1993). Student behavior problems all but vanished, and the unemployment rate for graduates of Mt. Edgecumbe in 1992 was 1% (as compared to the 20% rate of unemployment in the state of Alaska). All of this was achieved in a school where poverty, lack of parental support, learning disabilities, drug- and alcohol-related problems, and a diversity of ethnic backgrounds existed (Langford, 1995).

Some of the major changes in the classrooms at Mt. Edgecumbe High School include the following: (Tribus, n.d.e, p. 16)

1. The teacher and students review together, the topics they are to study in the coming semester. They confirm, often by independent research, that the list of topics is relevant to their expected lives.
2. The teacher and students together, discuss what it means to achieve various levels of competency with respect to the various topics. Each student uses spread sheet technology to keep track of his or her own performance on each of the topics.
3. They discuss their respective obligations, i.e., what the teacher is expected to do and what the students are expected to do to achieve the necessary competencies.

4. They discuss how each student will be able to self test, to demonstrate for the teacher that the agreed upon competencies have been achieved and, most importantly, how they will assemble the evidence to convince a third party that they have met high standards.

Establishing a class consensus regarding what is to be learned and how it is to be obtained is essential. From Langford's experience, he believes that:

> Even if the first 15% of the class is spent gaining this consensus, it is not time lost. The students will be so much better motivated that in the remaining 85% of the time they will learn and retain twice as much as if they had spent all their time in the conventional way of learning. (Tribus, n.d.g, p.11)

Specific examples of quality implementation in the classroom (purpose and vision statements) come from the Computer II class at Mt. Edgecumbe:

> The purpose of Computer II is to optimize student use of technology for now and in the future. When the skills are learned they can be applied throughout life in a constant gain of knowledge and application--where work is quicker, easier and more enjoyable with the world at our fingertips.
>
> The vision of Computer II students is to demonstrate our commitment to learning on a daily basis. We will become super at spreadsheets, hyper at hypermedia, dynamic at databases, wonderful at word processing, dominant at desktop publishing and terrific at telecommunications. (Langford, 1992, p. 2-3)

Through much experimentation, grading was eventually reduced to either A's or incompletes. In order to replace the traditional grading process, the competency matrix (explained in detail later) was developed for each subject level in the school. Students

were able to assess their own level of knowledge by referring to Bloom's taxonomy for cognitive levels of learning (Langford, 1992). A training program was established in their second year of the quality philosophy. Twice a week for 90 minutes, the students and staff received training in TQM principles. Within the classroom, all bathroom rules (and other hall pass guidelines), seat rules, and other discipline philosophies (attempts to control people) were replaced by trust and systems knowledge (Langford). These are but few of the many quality improvement measures established at Mt. Edgecumbe High School. Based on this example, and the many other school districts around the country that are implementing TQM principles, an implementation plan designed specifically for the secondary level, performance-based, choral music classroom can be established.

Purpose

Therefore, the purpose of this study is to explore the ways in which TQM can be implemented in the secondary level, performance-based, choral music classroom. Chapter Two will describe the learning process associated with TQM, emphasizing ownership, empowerment, and intrinsic motivation. In Chapter Three, these processes will be applied specifically to classroom teaching approaches in the secondary level, choral music rehearsal setting. Chapter Four will then discuss specific data collection tools that identify and solve problems as well as provide the means for student measurement of progress. These tools will be discussed within the context of the secondary level, performance-based, choral music classroom. Finally, in Chapter Five I will discuss what applications have worked well for me, what needs to be improved based on my experiences, and what can be done in the future to more successfully and

completely adapt the principles of TQM to the secondary level, performance-based, choral music classroom.

Chapter Two

LEARNING THEORIES

The process of TQM attempts to provide an eclectic approach towards learning, as its principles are broad enough to draw upon the work of many individuals as well as some highly effective learning processes. This chapter will explore in greater depth the foundations that TQM embraces. Areas of exploration will include humanistic psychology, student empowerment, Reuven Feuerstein's paradigm for learning, joy in learning, motivation in the classroom, quality learning and continuous quality improvement, and measurement of learning.

TQM and the learning process

Possessing knowledge about the Deming approach and the tools and processes involved (which will be explored in Chapter Four) does nothing in itself. It is when TQM is applied within the context of the basic fundamentals of learning and development that it is effective:

> When the understanding of learning theory is put into the framework of quality learning, these implications are even more lucid, providing the theoretical framework for understanding the purpose of every classroom activity, appreciating

> variation among students with respect to their rate and depth of development, and clarifying the needs of customers. (Langford, 1995, p. 128)

Above all, TQM adopts an humanistic approach towards education. Students are the focus of all change. It involves working with the student, not just making decisions for the student (Rhodes, 1992). A quality system is student-centered in a supportive classroom environment. "TQM's approach to managing the classroom allows students to become members of a team in establishing rules and consequences, thus empowering all students and teaching them problem solving as a way of achieving success in school and in life" (Byrnes et al., 1992). Applying Deming's principles will produce students who are empowered and internally motivated (Iachini, 1992).

The word "empowerment" may trigger thoughts of teachers relinquishing control of the classroom. However, Byrnes et al. (1992) counteracts this thought:

> Student empowerment is the key to successful classrooms. This should not be confused with lack of discipline. On the contrary, students who are fully empowered will not act-out. In fact, one will discover that empowered students will seek to cooperate and will be able to maintain a better focus. And, when acting-out behavior does occur, the students will have learned problem solving skills and will be able to resolve them. In actuality, TQM is a freeing experience for both teacher and students. (p. 36)

As Tribus (n.d.c) states, "I am proposing negotiation, not abdication" (p. 9). His justification for empowerment is in the realization that it is futile to impose ideas of quality on students. Students' joy in learning will be because the teaching/learning process conforms to their ideas about what joy is.

It is also important to make the distinction between a learning objective and a learning process. According to Tribus (n.d.a):

> A learning objective describes a goal that a learner is to attain. Learning goals are set by adults. As students mature, they can take more and more responsibility for setting learning objectives, . . . A learning process describes how a learning goal is attained. Students should be involved in improving their learning processes. (p. 11)

Accordingly, the quality of the learning experience depends upon how the teachers manage the learning process of the students (Tribus, n.d.e). No one is really taught how to "manage" the process. They have been taught how to "teach," to organize and deliver information. As a manager of the learning process, the teacher strives for continuous improvement of how the student learns (Tribus, n.d.a). This belief is fundamental to a humanistic approach to education.

Another quality principle states: "If you want to improve the student's achievements, put your attention on the teaching/learning process and not on the achievements in examinations" (Tribus, 1992, p. 11). Reuven Feuerstein's paradigm for learning challenges the Skinnerian stimulus-response theory in establishing a more humanistic approach towards the teaching/learning process. The student is not just treated as "an empty vessel into which knowledge must be poured" (Tribus, n.d.d, p.7). Rather, it enables the student to learn how to learn (metacognition) and improve the process. Information is provided not just for the purpose of learning it for an examination, but to understand the process of learning. A mediator (the teacher) helps the student to understand how to take in information. The mediator does not solve the problem, but rather helps the student in developing his or her own cognitive structure,

i.e., propensity to learn. The intention is for the student to become aware of how s/he is attempting to solve a problem.

According to Langford (1995), thinking about the process enhances the learning opportunity:

> By focusing on it, students are able to capitalize on their own learning styles; develop intrinsic motivation by doing something in which they have ownership; open the doors to investigation from a variety of their own sources of experience; utilize tools of brainstorming, . . . ; and develop enthusiasm for their learning because they have invested so much in the planning of it. Their motivation will be enhanced when they are given opportunities to determine their own sources and even their own due dates. The quality of learning will improve if they continue to revise until it satisfies their own standards. (p. 127)

Quality and joy in learning

Quality is a subjective term for which each person has his or her own definition (Quality Progress, 1992). David Langford (1994) states that "Quality Learning in organizations means learning to consistently meet or exceed expectations, . . . , a commitment to excellence by each individual. It is achieved through teamwork and a process of continuous improvement and redesign" (p. 14). A student that enjoys what s/he learns usually engages in higher quality work. Tribus (n.d.a & n.d.c) believes that quality is what makes learning a pleasure and a joy. The section on motivation will discuss how students' performance may be increased using external (outside) motivators such as grades, prizes, and threats and punishments--but the attachment to learning will

be unhealthy. It requires a quality experience with learning to attach a student to a life-long pursuit of knowledge and growth. Langford (1995) strongly agrees with this: "The very purpose of the educational system is to cultivate a sense of joy in learning so that students will be equipped by their education to continue that process throughout life, even in the face of change. Yet it is this very love of learning that is missing from many schools" (p. 9).

Joy in the learning process is not a new concept. Glasser (1992) speaks of human beings' motivation based on need-satisfying activities. His control theory contends that "all human beings are born with five basic needs built into their genetic structure: survival, love, power, fun, and freedom" (p. 43). Our life is therefore spent attempting to live in a way that satisfies these needs. If the schools satisfy these needs, then students will find greater joy in the learning process.

As a teacher, without joy in the workplace, it becomes difficult to maintain the enthusiasm necessary to be a quality teacher. The same is true for students. Milhalyi Csikszentmihalyi, in his widely read book, Flow: The Psychology of Optimal Experience (1990), espouses his belief that a sense of joy must permeate our working lives. Essential conditions for optimal happiness include clear goals, immediate feedback, a sense of control (this relates well to Glasser's theory), and the move from competition to cooperation ("I" to "we" in the workplace). TQM strives to uphold and maintain a constancy of purpose (clear goals), its system of continuous quality improvement provides the necessary feedback, it is an adherent of Glasser's control theory, and the learning environment is focused on teamwork in achieving these goals.

An important distinction must be made between quality and content. By calling upon students to take charge of the quality of their learning, we are not necessarily asking them to decide what they would like to learn (although with higher level groups, this is possible). Tribus (n.d.c) labels the subject matter or course content as the "features." How they are taught is what determines quality, and quality is defined by the customers. The student is the co-manager of the teaching/learning process. A simple management principle states: "The quality of the product is determined by the quality of the process which produces it. If you want to improve a product or service, concentrate on improving the process which produces it" (Tribus, n.d.f, p. 18). Therefore, the students learn what quality is by examining the process through means of discussion, negotiation, and observations of what it is that gives them joy and pleasure (Tribus, 1992).

What exactly are the components of quality work and how can it be established in the classroom? William Glasser (1993) devotes his book, The Quality School Teacher, to six specific conditions of Quality Schoolwork that can be used as a guide in the teaching process:

> (1) There must be a warm, supportive classroom environment; (2) Students should be asked to do only useful work; (3) Students are always asked to do the best they can do; (4) Students are asked to evaluate their own work and improve it; (5) Quality work always feels good; and (6) Quality work is never destructive. (p. 20-25)

While these six statements may seem quite obvious, Glasser expounds upon them in specific detail, providing insight into the elements of a Quality Classroom.

If students cannot understand the usefulness of a certain task, perhaps it should not be presented until a time when the students understand the context in which you wish to present this information and make it valuable. Kohn (1993) states that the content of learning must be contextualized. He likens decontextualized learning to acquiring a brick of information. At the end of an education, students are assumed to have acquired a house. But instead, they have accumulated merely a pile of bricks. So what is taught in the classroom must have a context. Students must be shown why it is important that a certain task be learned. Learning should never be a mystery. Unfortunately, many teachers are forced to give instruction on what they and their students perceive to be useless information, only to be learned and mindlessly recited on a standardized achievement test. Operating under this mindset, it is easy to realize how the educational system, as Deming (1986) expounds, is to blame for at least 85% of the failure in the schools, not the students themselves.

Developing a love for learning in students should be much more important than making sure the necessary standards established by local, state, and national agencies are met. Meeting standards is important, but should be secondary in consequence. By focusing on the standards, we have our sights set on the product and not the process. Richard Ryan states that it is not enough "to conceive of the central goal of 12 years of mandatory schooling as merely a cognitive outcome" (as cited in Kohn, 1993, p. 147). Students' attitudes towards learning are just as important as their performance on a given task.

As students develop joy in learning, their focus will shift from thinking about how well they are doing (grades), to what they are doing. Unfortunately, our current system

(as well as society as a whole) perpetuates the belief that the final grade is of utmost importance. As students fail to perform a task up to the expected level, they begin trying to avoid difficult tasks so as to escape a negative evaluation. A perfect example of this is the student at the top of his/her class that chooses the "easier" course because it will keep the grade point average from slipping. For without the high class rank, scholarship opportunities for post-secondary education wane. Often, teachers tend to perpetuate these mindsets when reminding students of the grade that they will receive on a given task. Another example is of the teacher insisting that all the students pay close attention at a certain point in the class period because, "this information will undoubtedly be on your next test."

> Finally, students that are focused on how they are doing increase their fears of failure: Trying not to fail is, of course, very different from trying to succeed. One's efforts in the former case are geared at doing damage control, minimizing risks, getting by, . . . the point is to do well, not to learn. . . . Anything that gets children to think primarily about their performance will undermine their interest in learning, their desire to be challenged, and ultimately the extent of their achievement. (Kohn, p. 196-7)

Any form of extrinsic motivators such as rewards, grades, and other coercive techniques, will only dilute the pure joy that comes from success itself (Kohn, 1993).

Motivation

Empowerment techniques and the focus on process in the TQM model, establish the environment for students to become intrinsically motivated (that is, motivated from

within). Teachers that begin to lead in need-satisfying ways will not resort to coercive techniques in getting students to learn. In regards to the often asked question, "How do you motivate students?" Kohn (1993) replies:

> Children do not need to be motivated. From the beginning they are hungry to make sense of their world. Given an environment in which they don't feel controlled and in which they are encouraged to think about what they are doing (rather than how well they are doing), students of any age will generally exhibit an abundance of motivation and a healthy appetite for challenge. (p. 188-9)

Kohn points out research showing that controlling environments calling for tighter standards, additional testing, tougher grading, or more incentives, consistently reduce one's interest in whatever task of engagement.

If one accepts the notion that educators need not motivate students, that their interest in learning is in-born, then the responsibility of educators is to eliminate the loss of innate enthusiasm (Jenkins, 1997). Enthusiasm is not often considered an asset by educators. But Jenkins believes that it is learning's twin. As kindergartners, children are excited about their learning. At five years of age they have all the enthusiasm they need. But somewhere during the course of their education it is diminished. Therefore, educators must be responsible for both enthusiasm and learning. Because of this, "having talented, dedicated, creative teachers in the classroom is crucial" (Jenkins, p. 115). A possible aim for education could then be: "Maintain enthusiasm while increasing learning" (Jenkins).

Teachers certainly feel more comfortable doing their jobs when administrators are not dictating the way in which they must teach. The more standards set down from above, the less desirable one's job becomes. So why would it be any different for

students? A teacher that makes all the decisions for the class is, in effect, saying that what his/her students prefer does not matter. The less choice students have in decision-making about their own learning, the less they will enjoy their learning.

> Once teachers internalize that (1) everyone is born motivated; (2) the management techniques they have observed throughout their lives demotivate; and (3) whatever demotivates adults also demotivates children, they are ready to use with students only the management techniques they want their principals to use on them. (Jenkins, 1997, p. 28)

Students will only act in a certain way because it is to their benefit. Glasser's control theory (1992) expands this idea in that the information one is confronted with may have a lot to do with what one chooses to do, but it is ultimately up to the individual how s/he will act upon this information. So any rewards or punishments that may be effective are so only because the student decides that the punishment or reward is important to him or her. Tribus (n.d.a) goes so far as to say that "the use of extrinsic motivators such as ratings, grades and competitive rankings, kill the students' innate desires to learn" (p. 6). The alternative is to promote joy in learning through cooperation while diminishing competition.

Cooperative efforts

Cooperative learning thus fulfills an important element of TQM in the classroom. Deming (as cited in Jenkins, 1997) argues that cooperative effort is more likely to achieve excellence and improvement than is individual effort: "All the qualities that have been traditionally and erroneously applied to competition actually apply better to cooperation.

Cooperation builds character, is basic to human nature, and makes learning more enjoyable and productive" (p. 27). Working in teams to solve problems means that the joy of their success will be shared. Success will be measured in terms which are meaningful to them (as co-managers of the learning process), and will go beyond the concepts of grades (Tribus, n.d.a). Kohn (1993) elaborates that collaboration is an essential tool in the classroom: As thinkers such as Piaget and Dewey have explained, learning at its best is a result of sharing information and ideas, challenging someone else's interpretation and having to rethink your own, working on problems in a climate of social support" (p. 214).

Continuous Quality Improvement (CQI) of the system

"Without an aim, there is no system. It is impossible to improve a system which does not have constancy of purpose" (Tribus, n.d.c, p. 5). Before beginning a discussion on Continuous Quality Improvement (CQI), the emphasis of a constancy of purpose must be addressed. Byrnes, Byrnes, and Cornesky (1992) believe that establishing a quality statement is the first step in the quality classroom. In other words, the classroom aim (purpose) must be defined before a system can be improved. Csikszentmihalyi's (1990) flow theory testifies to a life with unified goals that provide constant purpose. Deming's first point is to create a constancy of purpose. Once this is established the system can be improved.

> The need for an aim is further developed by a specific example of classroom instruction: Spelling instruction is an example of an aimless segment of education. . . , nobody has told them [students] the aim of spelling. The spelling test in week 1

> generally has nothing to do with week 2 spelling or any other week's spelling. It is merely a collecting of Friday tests that, when added up, equal a collection of tests. An example of a spelling aim is for students to know how to spell, by a particular grade, the 1000 words most often used in English." (Jenkins, 1997, p. 3-4)

Deming (as cited in Jenkins, 1997) provided an overall aim for education: "Increase the positives and decrease the negatives so that all students keep their yearning for learning" (p. 4).

TQM's success lies in its systematic approach. It operates under the belief that the system causes at least 85% of the problems. Fusco (1994) emphasizes that "one of the most important concepts that must be understood is that TQM is systemic--the entire organization must be viewed as a whole because everything is connected; any change in one facet of operations or procedures will have an effect somewhere else" (p. 106). One reason for the failure of a school is that no one really knows what the system is. Langford (1995) discusses various subsystems within a school district including customers (universities, communities, students, teachers, parents, employers, and so forth), inputs (materials, techniques, equipment), and outputs (information, learning skills, access to knowledge).

For the purpose of this paper, Tribus (n.d.d) defines the word "system" in the classroom setting:

> [System] is a way of describing a set of interacting processes. When a student learns, the student becomes involved with a number of processes, many of which involve other human beings. The processes involve the receiving of assignments, the identification of data and other inputs, the use of various devices, ... Taken

> together, these various processes combine to produce systems for learning. It is the teacher's job to improve these systems, but teachers seldom know what is actually happening in most of these processes. Only the students know. . . . Improvement can only come if teacher and student work together to identify and make improvements. (p. 5)

So the paradigm shift is from an emphasis on directing and controlling people, to an emphasis on improving systems (Tribus, n.d.c). Controlling deals with forcing students to adhere to a set curriculum that tells them how to learn, what to learn, and when to learn it (Kohn, 1993). Improving systems involves working with the students to determine the best way that a specific competency can be learned.

Many individuals have documented ways to continually improve instruction. Jenkins (1997) believes that the three building blocks for improving schools (and improving classroom instruction as well) are: "(1) a commitment to stop blaming; (2) the establishment of clear aims; and (3) agreement on a definition of improvement" (p. 13). The Quality Improvement philosophy is based on two statements: "Every person wants to do a good job. Decisions are made based on data" (Langford, 1994, p. 17). Patterns, problems, and trends are revealed by examining the educational system. Therefore, no changes are made without data to support the claims. Data collection is valuable and worth the time and effort, according to Schmoker and Wilson (1993), because it isolates problems and enables the teacher and students "to focus their effort where it is most needed and lets them know that their efforts are bringing them closer to their goal" (p. 142). Through this data collection, new standards (theories) are set by all involved. It is "we" based. Continual collection of data provides the means for raising or lowering

standards as needs arise. It is essential to understand that standards that are set based on data are first and foremost intended for feedback purposes. Setting standards to evaluate individuals is secondary. Improvement must be the focus.

Deming was clear on the difference between evaluation and feedback: "Evaluation is what the boss says, feedback is what the customers say. Improvement occurs, in Deming's opinion, when managers pay very close attention to feedback" (Jenkins, 1997, p. 47). When evaluation is the goal, the teacher gives assignments, tests, and evaluations of student success. The students are held responsible for doing the work, but cannot change the system in any way. Only the teacher has the power to influence the instructional system. But when improvement is the goal, the teacher realizes that the instructional system is what gets in the way of student learning, and only the teacher has the power to facilitate this improvement. By focusing on feedback, both teacher and students work together to plan different instructional strategies so that the learning process will improve.

Measurement and grading

To be successful in the learning process, all students must be able to demonstrate what they know. In other words, evaluation is essential. However, proponents of TQM believe that grading is an unnecessary process of measurement and evaluation. Tribus (n.d.a) emphatically states that, "The only legitimate purpose of an examination is to permit the teacher and learner to work together to decide how to improve the learning processes of the student" (p. 18). If the purpose of an examination is to provide feedback, then it is acceptable. Kohn (1993) states that in certain circumstances, grading may also

make sense if it is done to determine the skill level of a student in order to facilitate placement or instruction. But our system of grading today is destructive. In this present rating system, half of the students will be labeled as failures. The other half that find success do so because they learn what the raters want, and then do that (Langford, 1995). The joy of learning and pride in workmanship are reduced by the coercive elements of grading.

Communicating a level of achievement is another function of the grading system. Higher education and future employers depend on grades to know how well students have mastered certain concepts. But David Langford (1995) argues that grades are not always clearly understood and meaningful in this respect. It is a highly limited vehicle for communication of student progress. Grade inflation and fear of parent wrath if a student receives a failing grade from their teacher serve to support Langford's argument. Kohn (1993) successfully argues that even the most selective colleges accept children that have been home-schooled, so they surely will accept (and have accepted) students that, instead of possessing the usual transcripts, present a portfolio of their work over four years of high school with a written statement by the school explaining the process of learning adhered to in the district. Langford quotes from Paul Dressel, who calls grades "an inadequate report of an inaccurate judgement by a biased and variable judge of the extent to which a student has attained an undefined level of mastery of an unknown proportion of an indefinite amount of material" (p. 83). Kohn supports this notion by stating that grades do not provide students with useful information about where they stand in the learning process. He believes that comments should replace, not merely supplement, grades.

Jenkins (1997), too, believes that the grading process destroys students' joy in learning:

> No adult I'm aware of wants to be publicly ranked *bad* at anything. Even in a simple game of Scrabble, no one wants to be ranked last. . . . Consider being ranked for something important. The major way educators rank is with grades. Grades destroy joy. Destruction of joy destroys learning. Built into Dr. Deming's complete theories are the necessary tools to eliminate ranking through grades while, at the same time, being more accountable to the public" (p. 29)

Lev Vygotskii (Tribus, n.d.c) challenged the use of conventional standardized tests in that the focus of evaluation is not on whether or not students can solve problems unaided, but rather on the basis of what they already know. In this system, education is oriented towards assessing what the students already know (rating students to one another, thus deciding who is a "success" and who is a "failure") and not towards what the students need to know. Vygotskii termed the gap between actual and potential level of development as the "Zone of Next Development." This, according to him, is what education needs to focus upon.

Alfie Kohn (1993, p. 208-9) lists seven ways in which the emphasis on grading can slowly be reduced before being eliminated altogether.

> 1. **Limit the number of assignments for which you give a letter or number grade, or better yet, stop the practice altogether.** . . . Some students will experience, . . . , [that] their bearings are gone. Offer to discuss privately with any such student the grade he or she would probably receive if report cards were handed out that day.

2. **Limit the number of gradations.** For example, switch from A/B/C/D/F to check-plus/check/check-minus. Or. . .

3. **Reduce the number of possible grades to two: A and Incomplete. . .,** helping students improve becomes more important than evaluating them; learning takes precedence over sorting.

4. **Never grade students while they are still learning something.**

5. **Never grade effort. . .,** while coercion can sometimes elicit resentful obedience, it can never create desire. . . . Most of all, rewarding or punishing the *child's* effort conveniently allows educators to ignore the possibility that the curriculum or learning environment may just have something to do with his or her lack of enthusiasm.

6. **Never grade on a curve.**

7. **Bring students in on the evaluation process** to the fullest possible extent.

Referring back to Reuven Feuerstein's research on the learning process, a main element of focusing on the process involves determining evaluation of class content by both teacher and students. Appropriate measurement and evaluation is achieved as students take an active role in the learning process:

> The students actively participate in defining what it means to achieve the learning objective with style and excellence. The students actively measure their own performance against these standards and are helping one another to improve. . . . The students actively compile their own documentation to demonstrate to themselves, the teachers and others that they have achieved their objectives in a quality way. (Tribus, n.d.a, p. 19)

Kohn's sixth point, to never grade on a curve, is emphasized by other adherents of TQM as well. In Chapter One of, Schools of Quality: An Introduction to Total Quality Management in Education, Bonstingl (1992) attempts to destroy the notion of the bell curve as the ideal result on any type of measurement of student learning as a class. The bell curve supports the belief in a normal distribution of above average, average, and below average levels of achievement on any particular task. If a business operated on a bell-shaped curve, their output would be excellent as often as it was poor. Surely it would not survive very long. So why should it be different in regards to our educational system?

This deliberate design for mediocrity and failure labels kids early on in their education, at which point these failures become self-fulfilling prophesies later in life. "Young people who grow up believing that, despite their best efforts, they are incapable of achieving quality results in their schoolwork, begin to see themselves as having little inherent quality. Rightly or wrongly, they may even come to believe that schools exist, not to help them improve, but rather to judge, criticize, and rank-order their efforts" (Bonstingl, p. 5).

So how do we convince students otherwise? Show them our desire to work with them to help improve the system. Take blame away and work to change and make better what is currently getting in the way. This change must come about in a highly structured manner. The use of data collection tools are the means by which information can be gathered about the current system, and steps can be made towards constantly improving what is getting in students' ways.

Structured improvement

The word change is neutral--it could indicate either a positive or a negative. But improvement is defined as positive change. Education often goes from change to change without any data on improvement. The latest theory, curriculum, or scheduling "savior" is immediately implemented because it is new and indicates change. However, all too often the change is not supported by data that indicates improvement. "Bright ideas appear constantly, but they should not be implemented right away. The bright idea decision must be delayed. First the organization members must gather data on the current situation" (Jenkins, 1997, p. 6).

Successful standards (i.e., improvements) are indicated by fewer failures and more successes, and ideally, there is also less variation (Jenkins, 1997). Data collection documents these indications of improvement. Quite often schools consider a change a success when only one end of the curve has changed. Jenkins provides an example of high school dropout rate on one end of the curve, and preparation for college on the other end of the spectrum. A decrease in dropout rate alone does not represent improvement unless there are also more kids prepared for the university. Likewise, higher scores on standardized tests does not mean improvement if the dropout rate has risen. Finally, improvement also means that the variation among students has decreased as well (i.e., the range is smaller).

Jenkins (1997, p. 99) provides a seven-step process for improvement at any level (district, school, classroom), the process being the same in all cases:

1. In what new subject [unit, lesson] or behavior do we desire improvement?
2. What is the aim?

3. How do we define success and failure?

4. What is the system producing now? Display on a histogram [discussed in Chapter Four].

5. By what method do we plan to bring about improvement?

6. How will we know our progress throughout the year [or whatever time period is designated]?

7. Did we improve?

The Plan-Do-Study-Act (PDSA) cycle, invented by Walter Shewart, outlines a step-by-step approach to bringing about change and improvement in any system (Langford, 1995). What Jenkins (1997, p. 126) refers to as "the recipe for working together," this process utilizes the tools and techniques unique to TQM. The PDSA cycle is summarized by means of a four step process:

(1) Plan for improvements after studying the present situation. Most planning ignores this first important step by not taking the time to truly understand the current system. After gathering data and graphing the current situation, writing a vision for improvement is much easier.

(2) Do what you have planned.

(3) Study the result.

(4) Act upon the results of your study--then return to step one (Byrnes et al., 1992; Jenkins, 1997; Langford, 1994; Langford, 1995).

This cycle can be visually represented as a wheel with four spokes, where each turn of the wheel leads to the beginning of the next wheel (see Figure 1). Thus, this data-driven

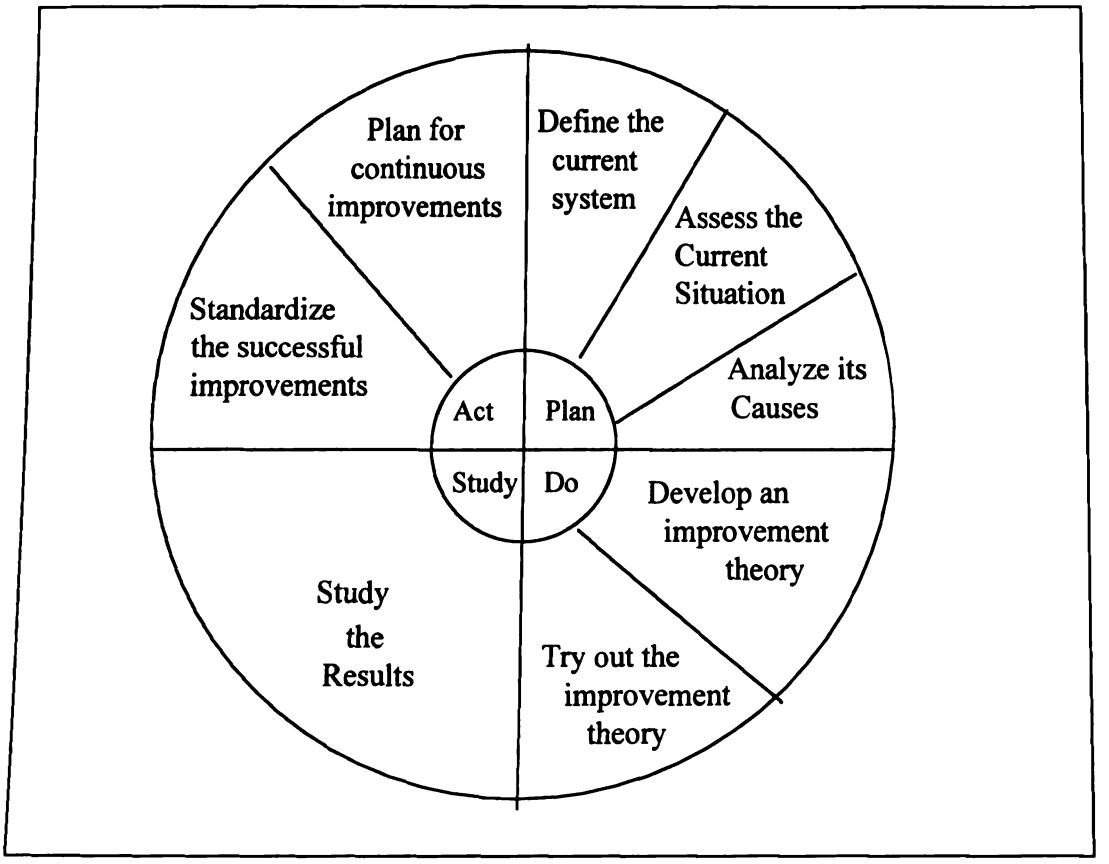

Figure 1 - PDSA Cycle

instrument establishes a system of continuous quality improvement. It is essential to realize that if the "do" step does not involve decision-making tools and clear data documentation, any change stemming from it can be seen as a top-down decision. If the study step does not involve all (teacher and students), then "act" will not occur because doubters of the change will not believe the results. Indeed, TQM tools are essential for a successful implementation plan. These tools will be introduced in Chapter Four. First, examples of the learning processes expounded in this chapter will be specifically applied to the secondary level, performance-based, choral music classroom.

Chapter Three

TQM PRINCIPLES AND LEARNING THEORIES IN ACTION

The learning theories espoused in Chapter Two contain principles that can lead to specific applications for the instructor of the secondary level, performance-based, choral music classroom. Also included in this chapter are specific implementation ideas based on TQM's basic principles that were outlined in Chapter One. These ideas are intended as a stepping stone for creative thought. Countless teaching techniques and specific lesson plans can be created based on these basic theories. My intention is to share the ideas rooted in my teaching style that compliment these learning theories. By sharing them, the hope is that one's teaching style can become more consistent within a set of clear, overriding principles, those of TQM. Different learning theories and basic TQM principles that will be put in context include: (1) Deming/Langford's 14/15 points of continuous quality improvement, (2) humanistic teaching, (3) empowerment, (4) metacognition, (5) contextualized learning, (6) cooperative learning, (7) motivation, and (8) ideas for feedback and measurement.

Deming/Langford and the 14/15-point system of CQI

Perhaps the most logical point of departure is based on Deming and Langford's system of quality improvement. These point systems were addressed in Chapter One

(p. 7-8, 12). Recalling that the purpose of this paper is to merely establish an implementation for the classroom setting, one easily recognizes that not all of these points of quality improvement relate directly to the classroom. Some of them deal with administrative or more holistic means for improvement of the entire structure of education. Therefore, only a select number of these points can have direct application to the classroom setting, and in this case, the performance-based classroom.

Point #1 states: **Constancy of purpose in creating quality students and a quality system.** The mission and vision statement is an imperative for any system that wishes to strive for improvement. There must be an end goal, a destination for which to continually strive. An example of such a statement was shared in Chapter One (page 18) under the specific application of TQM to Mt. Edgecumbe High School in Sitka, Alaska. The following is the mission and vision statement that the choirs at Sheboygan Falls High School, Sheboygan Falls, Wisconsin, developed:

> The mission of the Sheboygan Falls High School choirs is to provide students an opportunity to learn more about the choral art. This is accomplished through daily song performance and musical/vocal skill development exercises. Leadership opportunities help students enjoy ownership in the classroom. As students focus upon their contribution to the ensemble's success, they experience joy in the learning process. The reward of quality work becomes evident in the group's performances.
>
> The vision of the Sheboygan Falls High School choirs is to develop lifetime singers and patrons of music. Participation in the choir provides students the opportunity for continual contact with music in whatever form they desire.

The process by which such a mission and vision statement can be formulated will be articulated in greater detail in Chapter Four, as specific tools will be introduced that aid in its construction.

Point #3 states: **Work to abolish grading and the harmful effects of rating people.** In a school system where TQM is implemented, ideas for the elimination of grading will most likely be structured consistently from classroom to classroom. However, if TQM is adopted within the classroom, apart from the school district, there are limitations as to the extent to which grading can be eliminated. There are certainly ways that grading can be de-emphasized by the teacher. At Sheboygan Falls High School, students documented their progress in portfolios, using rating scales and rubrics to measure their progress in pitch and rhythm development on the songs that they are learning, as well as basic tonal and rhythmic skill development. Students are responsible for charting their own attendance records in daily rehearsals and in weekly lessons. Finally, once becoming accustomed to the system, students gave themselves their own grades the final two quarters of the school year. The specific tools incorporated to achieve these results, and their application to the portfolio process, will be introduced in Chapter Four.

Point #4 states: **Cease dependence on mass testing--start individual quality performance levels.** More than half the total number of students in the choral program were able to attend weekly voice lessons on an individual or small-group basis. In these lessons, students charted their progress on basic skill development and documented it in their personal portfolios. Students were grouped in lessons, wherever possible, according to their skill level, in order that individuals could continue to make progress. Students

were therefore in charge of their own learning, as they progressed only as much as they wished to push themselves. As the teacher, I merely looked at their checklist at the beginning of each lesson, and started on the next level of development. In this way, individual needs were met. My best students could continue to be challenged, and those students without the basic skills were afforded one-on-one time to build these skills.

Point #6 states: **Constantly focus on improving the system.** In my first year of teaching, a group of students was formed that helped in the transition process as one teacher left and a new structure was established. This group was completely voluntary throughout the year. However, the group only allowed new members to join at the beginning of each semester. We learned after the first month of the year that continuity and progress was tough to be had with new members coming and going as they pleased. This group was appropriately named, "The choral action team." Meeting twice a month for a half-hour, this group helped to identify problems, both in and out of the classroom, and helped to establish possible means for meeting the needs of both the students and the teacher. The specific work of this group will be made clearer as further examples of their efforts are documented in subsequent pages.

Point #8 states: **Adopt and institute leadership.** While both Deming and Langford applied this point in regards to helping people use machines, gadgets, and materials to do a better job, I manipulated the intent of this point to mean something slightly different. There are many background obligations that consume much of one's time as a choral director. Concert dress, fundraising, publicity, and touring, for example, are all areas in which students welcome the opportunity to have input. Committees were formed, and students were voted in as leaders of specific committees. The students began to have a

sense of pride in the choir more than ever before, as they were empowered to have responsibility of important processes within the group.

Point #9 states: **Drive out fear--improve team building and team decisions.** For the performance ensemble teacher, an advantage is already in place because in order for a choir to be successful, it must function as a team. By establishing a program of excellence, students join together in a common bond, regardless of differences. It is important to realize that fear as a motivator only works to a certain degree. What good is it to achieve excellence but have no joy in the process? Specific ways in which to drive out fear will be discussed later in this chapter under headings such as humanism and motivation.

Point #15 states: **Involve everyone in the transformation.** Once again, if one is part of a school district that is adopting TQM at every level, there is probably time set aside during which students and teachers are trained in TQM principles. Thus, involving everyone in the transformation is an easier process. However, from the standpoint of the individual attempting to establish classroom strategies based on TQM principles, the process is much more difficult. Every minute of rehearsal time is important for the choral director. Debates over how much time to spend in warm-ups, and how much time to spend teaching students about music rather than just conducting a rehearsal are numerous. Now add to this the idea of training students in TQM principles and one would perhaps never be prepared for the upcoming concert. This is an issue that will continue to be addressed over time. My attempts to involve everyone in the transformation have not been successful. The intrinsically motivated students that want to be involved and do the

best job possible did, of course, quickly respond to these ideas. Involving everyone in the process will be a continued concern now and into the future.

Humanistic teaching

TQM principles align well with the beliefs of humanistic teachers. Lefrancois' (1994) textbook, Psychology for teaching, describes humanistic psychology:

> Humanistic psychology is concerned with the uniqueness, the individuality, the humanity of each individual. . . , humanists present a strong plea for student-centered teaching. . . , teachers should be learning facilitators rather than didactic instructors and that to be successful as learning facilitators, they must be trained to be sensitive and caring, genuine and empathetic. . . , orientation is toward discovery rather than reception learning. (p. 240, 246-7)

So how does one display humanistic characteristics in the music classroom?

It is important for the teacher to be seen by his/her students as a fallible human being. For the teacher to pretend that mistakes are never made on his/her part, or that there is always an excuse or justification as to why something went wrong, is to create a wall between teacher and students. I have witnessed numerous incidences during which a teacher places the blame on his/her students for any negative occurrences in the classroom. Instances during which a teacher has clearly acted inappropriately frequently occur. It is how the educator responds to this that identifies him/her as a humanistic teacher. As time is taken to apologize to students for behaviors and actions, the teacher serves as a model of personhood. Admitting blame is quite humbling, but in doing so, a closer bond is established between teacher and students.

I have also experienced that honesty is truly the best policy. On days where I am a bit cranky, or perhaps personal issues are affecting my teaching, I have discovered that telling my students in advance can only help the situation. Students are compassionate and as I share with them some of my struggles, they will more often than not attempt to work even harder for me to try and make my day a better one. When nothing is said, it is easy to take out my personal problems on my students and before long, the entire mood of the rehearsal turns negative. Being honest up front can not only save a rehearsal, but it can also turn my day around.

As students view their teachers as real human beings with real needs and concerns, they will be more likely to share with them their concerns. As a result, the choral director can serve not just as a teacher, but also as a counselor. And for students, music is probably not what drives them in their lives. Therefore, teachers use their subject area as a vehicle for humanistic teaching. As they demonstrate compassion to their students' needs, the students will open up to their teachers. Students will then be more willing to actively and enthusiastically engage in the learning that is presented to them.

Another way to build trust in student-teacher relationships is for the teacher to treat his/her students as responsible adults. At Mt. Edgecumbe High School (refer to p. 18), students were able to abolish bathroom rules, seat rules, hall passes, and other disciplinary philosophies that attempted to control them. In its place, students decided what would work best. If any of these new rules were broken, the consequences were set up by the students. In my classroom, I have attempted to eliminate the need to take time out of rehearsal to sign a hall pass if my students wish to leave and go to the bathroom or to get a drink. After some initial "taking advantage" of the new teacher, the system has

worked well. Students rarely leave my class, and if they do so, it is for a good reason that I do not need to take time from rehearsal to know. What has not been set up however, is a consequence for breaking that trust. This will be an effort undertaken in the future.

Another way that teachers can demonstrate to their students their desire to know them on an individual level is to take the time to discover what outside activities they are engaged in--whether it be a sport, a job, or another extra-curricular event. By asking students how these activities are going, the teacher demonstrate a care for them as more than just a singer in the choir, but as a valuable human being with unique and individual skills and talents.

Empowerment

Working with the student, not just making decisions for the student could perhaps be the easiest explanation of empowerment. The concept of the student as "co-manager" in the learning process (refer to p. 15) has been realized at Sheboygan Falls High School with the formation of the Choral Action team. In these meetings, students are given the opportunity to discuss what is working well in rehearsals and what they would like to see done differently. It often takes a prepared outline and some prompting by me to get a discussion initiated. Only then does valuable information become revealed. Students are not used to having input into how they learn, or even what they learn to some extent, so it will take some time for this process to fully emerge.

An important distinction was made between the learning process (quality) and learning objectives (content). A clear list was made documenting the difference between the two. At first, the students merely worked with improving the quality of the process.

Once they understood the importance for the content of their learning, they were given more say in determining what exactly they would learn. Areas of discussion and change dealing with the process included: concerts, publicity, student leadership, fundraising, costumes, group name, fun activities, and outside opportunities. Categories focused on the content of student learning (as developed by the students in action team) were: voice lessons, measurement, logistics, music literature, sight reading, and warm-ups. Details on how this list was formed, and steps taken to improve the system will be addressed in Chapter Four (under "affinity diagram").

CONTINUOUS PROCESS IMPROVEMENT

How can choir be improved so that you can continue to grow in your musicianship while maintaining joy in the process?

1. Clearly articulate how the system is hindering your growth and joy in the learning process.
2. Offer any suggestions you may have.
3. You will receive an answer within three days:

a) Yes, the change can be made
b) No, we cannot make the change
c) It's a good idea and we'll work on it

Date:

Problem:

Suggestion:

Signature (optional):

Figure 2 - Green Card

Some students may be shy to speak out about something that bothers them. An attempt to meet their needs was established with the formulation of the "Green Card" (see Figure 2). Students are encouraged, but not required, to sign their name to the bottom of the card, and the issues they bring up are then discussed in the Choral Action team meetings. A key requirement is that if something is not met with approval, then an alternative must be offered to improve the situation. In this way, the use of the card as merely a "complaint card" is diminished. Issues we have dealt with in the past include: (1) the efficiency of sectional rehearsals, (2) the effectiveness of the green card, (3) the gathering of data to form the choir's mission and vision statements, (4) a diagram documenting all the components of the choral music program at Sheboygan Falls High School, (5) ways to deal more effectively with a new teacher's style and personality in relation to the previous director, and (6) improving the process for measurement and grading. These issues will be treated with more specificity as the tools and processes of problem identification and data collection are introduced in Chapter Four.

Inside the classroom setting, teachers need to take time to let their students know why they are presenting a certain lesson in a certain way. Learning should not be a mystery, as it sets up an environment of compliance. The students are reinforced with the mindset that someone will always have the right answers and means by which they will be led to success (refer to Lynch quote on p.10). Students need to be allowed to question issues such as: why they need to learn a specific concept, why time must be taken to do warm-ups every day, why music literature was selected for what reason, why they may not be able to sit next to their best friend in rehearsal, why learning solfege is valuable for them as a singer, and the list could go on and on. If they do not enjoy the process

(relating to Csikszentmihalyi's flow theory), the commitment towards producing quality results will not exist. Students are committed to something they can understand. The choral educator must help them understand not only why it is valuable for them to learn a particular concept or skill, but also how they are to learn.

Metacognition

When students begin to understand how they are learning, there is more joy in the process. As students answer the teacher's questions, they should be asked how they came up with their response. When the teacher asks them discuss their thought process out loud, it reveals how the student learns and also allows classmates to understand the thought process that leads to the answer. For instance, my students perform sight singing exercises on a regular basis. My first question is always, "What is 'Do' in this example?" After calling on an individual and receiving a response, I will ask how s/he came up with the answer. As s/he explains the thought process, other students learn how to learn more efficiently, and I am given valuable insight as to why a student may be struggling with a particular answer. If s/he provided a wrong answer, I am able to trace the thought process and determine exactly where s/he went wrong. By doing so, I am not a judge (evaluator) in the learning process, but rather a guide (facilitator).

This mentor-teacher process is crucial because it is so easy for teachers to just "give away" their methods and approaches to music-making. The choral educator must learn to give up control and instead lead students in their musical development. Directors need to have a concept of the sound they want, but the teacher still must allow students to be intuitive—they need to be lead through the process in order that their musicianship can be

developed. Reimer (1989) states: "It will be difficult for many performance directors to give up complete ownership of creativity to become nurturers of it. But when they do, they become music educators, offering the gift of musical creativity to their students' experience and sharing that gift as they shape the unified creative act" (p. 193).

How do teachers lead their students in the process? It is accomplished by beginning instruction with low-level comprehension questions such as: "Is this music fast or slow? What is the dynamic marking at the beginning of the song? What note name do you begin on?" Basic questions such as these set up a non-threatening environment of support for one another which lead the way to higher level questions such as: "Based on the words of this text and the way in which the music coincides with the text, how do you think the composer interprets the poetry? What do you think is the most important note of this phrase? What musical element drives this piece--is it the rhythm, the harmonies, the melody, or something else?"

As teachers seek to increase students' awareness of their own learning, it is important for them to allow their students to experience their own thoughts before attempting to conceptualize and analyze it for them. It would be easy for the director to merely state the answer that s/he has developed, but the teacher's goal is not to be the all-knowing provider of information. His/her task is that of mediator (Feuerstein's theory) in the learning process. The leading questions that one asks are most often more important than any answers that may given. Students' creative thinking skills can be developed when asked open-ended questions that probe at the inner meanings of the music and what it may mean to them on an individual basis. By involving students in the process, they

become more excited about the music, and a personal attachment is made that adds more value to the performance of the piece.

By helping them walk through the process of their thinking, the educator can share with students his/her process of learning. This "apprenticeship" model of education means that the goal is not just to pass along information about the music or develop students' technical capabilities, but it involves leading them to think about and approach music the way that their teacher does. In this way, students are learning how to learn (metacognition), developing higher-order critical thinking skills.

Contextualized learning

The importance of contextualized learning stems from the idea that students must be shown why a certain task is important for them to engage in. So for learning to not be a mystery, it must be given a context. On a daily basis, directors are confronted with opportunities in rehearsal to provide contexts for their students. Some opportunities during which they can be given a context for their learning (and therefore be helped to appreciate their learning, which leads to greater joy in the process) include: warm-ups, solfege, sight singing, music history and discussion of song texts, and basic music theory.

Rather than just teaching students warm-ups that they mindlessly perform at the beginning of each class period, teachers can discuss with them what they gain through the process. Students have every right to know how their posture affects their sound, why the low abdominal/diaphragm-engaged breath is the most efficient breath for singing, and how the warm-ups that they perform help prepare them for the songs they are learning to sing. For example, a song in a certain mode (perhaps dorian) would best be prepared by

conducting some warm-ups in that mode. Warm-ups should always have a specific purpose and context.

Solfege skill development is a task many students grudgingly adhere to because they usually do not grasp the overall purpose. By engaging students in solfege development based on harmonic function (for instance the tonic [do, mi, sol], sub-dominant [fa, la, do], and dominant [sol, ti, re, fa] chords) rather than just individual intervals (do, re, mi, and so on), the students have a context for their learning. A greater contextualization of solfege skill development occurs when students begin to realize how the solfege syllables exist in the music to create a particular harmonic structure. Also, by engaging students in tuning exercises using solfege syllables, their intonation will be much better. When a particular passage in a song is out of tune, they need merely refer back to what solfege syllables make up the chord, sing those syllables, and fix the problem. The students are given a context that they already know, and then merely apply it to the song. As students become more aware of these strategies, their sight reading skills improve. This can all be taught without telling the students in advance how they will learn, but my experience is that students will have much greater joy in the process if they can understand what they are working towards.

Quite often, students will desire to have the notes played for them on the piano rather than working through them on their own. Through discussion they come to realize, however, that it is more valuable for them to spend some time working through their individual parts, incorporating the sight singing skills they have learned. By teaching them how to apply to the music what they have learned in out-of-context sight singing

practice (metacognition once again through an apprenticeship model of teaching), they will begin to tolerate, and even appreciate, the sight singing process.

Another means for contextualizing learning concerns song texts and music history. Teaching students the different periods in music history, as well as the characteristics of each period, is of vital importance. But if taught in lecture format, without a context, students will probably not remember much of it, nor will they have joy in the process. However, if the song literature is used to teach the stylistic periods in music, students have a context within which to work. Not only that, but they can actively engage in the styles specific to a certain period in music. They will begin to take pride in the realization that through active participation, they can actually re-create historical events by singing songs of past generations and of other cultures. The same is true for the song texts. If the texts can have personal meaning for students, they will experience a deeper, more feelingful response. Time should be taken to ask students what the song text means to them, what it may mean to the composer (based on his/her compositional devices), and how the music serves to heighten these interpretations. When this is done, the students have a personal context for the songs they sing--the music has meaning for their lives.

Finally, rote memorization of musical terms, note names, and other vocabulary words, when treated in context, can help maintain enthusiasm in the learning process. For example, my students that are not involved in private lessons fulfill their obligations in my class with worksheets. Initially, these worksheets had no context. I asked them to identify note names, half-step and whole-step patterns, create scales based on specific key signatures, and to define musical terms. The action team worked to develop a worksheet that had more use for them. While the content remained the same, the students improved

the process in that the new worksheets incorporated the songs that they were currently working on in class. In that way, knowing the note names and musical terms for the songs they were working on had a purpose--it was given a context. While the worksheets still may not be fun to do, the students can realize their importance within the context in which they are now presented.

Cooperative learning

An essential element of TQM in the classroom is cooperative learning. In the performance-based music classroom, cooperative learning takes place almost constantly. Individual singers are asked to come together to create a whole. Students must rely on one another for the group's success. With the pressure of peer approval so great at this level, it only takes a few dedicated students to help establish a program of excellence. Likewise, it only takes a few disruptive students to destroy what the group is attempting to accomplish. Slowly, as the entire group works together to create ways in which the rehearsal setting and process can be improved, the ones that still refuse to do the work will be left behind. Proponents of TQM understand that not everyone will suddenly become excited about learning. But the students that have just "gone with the flow" of the system, as well as those who already seem excited about their learning, will experience even more joy in the process. What are some ways to establish even more cooperative effort in the rehearsal setting?

Firstly, sectional rehearsals are an excellent means to build up a feeling of *esprit de corps* within an individual section. Students can be proud of a product that they accomplished on their own, apart from their director. While some professionals in the

music field believe that sectionals are a taboo because it does nothing to promote students' ability to sight sing, I believe that what sectionals offer in other ways is far more important than losing an opportunity to allow students a sight reading experience. Learning must be varied, and the sectional rehearsal is certainly one of many viable means to learn notes. The greatest reward of sectional rehearsals is when the group returns to the large-group setting and performs with success in front of their peers. The pride of accomplishment through this cooperative effort is what creates and maintains joy in the learning process.

Secondly, the choir can break off into small groups to discuss the meaning of a song's text. It is important for students to first decide on their own why a song is important to them. The small group setting can help to get started those who struggle to formulate ideas. By sharing one another's insights both in the small group and later in the large-group setting, students can create a closer bond with one another, thus enhancing the learning process in the rehearsal.

Finally, splitting the choir into small groups to improvise and create warm-ups is another effective tool of cooperative learning. A recent surge towards incorporating creativity and improvisation in the performance-based music classroom (MENC committee on performance standards, 1996) can be met as students create new warm-ups that will help them prepare for the songs they are working on. This activity will have difficulty of success, however, if students have not been taught how warm-ups are used most effectively in the classroom. With this context learned though, this cooperative lesson can result in success.

Motivation

Recall that motivation (p. 27-9) with regards to TQM calls upon a focus on the process and that students be empowered to actively create and improve their learning in the performance-based choral music classroom (as demonstrated in detail throughout this chapter). It is essential to understand that regardless of the system in place for maintaining a positive classroom environment (in other words, the discipline guidelines), these standards need to be established (or at least agreed upon) by the entire group. In the performance-based music classroom, much of one's grade is traditionally based upon his/her participation (effort, attitude, and attendance). Without a clear set of expectations set up by both students and teacher, a controlling environment can easily emerge.

Threatening students with loss of points (in the basic "assertive discipline" model of instruction) as a result of inappropriate behavior is only a negative means of coercion that will destroy the joy of learning. Also, to threaten to take away the upcoming field trip because behavior is poor, or because notes have not been properly learned, only gets in the way of quality learning. Conversely, telling students that if they do well in rehearsal they will have the last few minutes free to chat with one another, only sets up a goal that shifts the focus away from learning and achieving high quality for its intrinsic value. Before long, students will want more and more free time at the end of the rehearsal if they believe that they have performed well during the class period. So the focus of learning is not on its inherent qualities, but rather on an extrinsic goal.

This is why grading is even a coercive means of control. Threatening students to behave or else their grade will suffer will do nothing if a students does not care about their grade! Just as Glasser's control theory states (page 29), one must find what it is that

does motivate students, and appeal to that so that the learning process can be a joy. Sending a student down to the office will not help if the student is sent there on a regular basis. It is important to set up a system in advance that is agreed upon when behaviors are inappropriate. Expectations need to be made clear and it is essential that everyone agrees to them. Students will tend to be harder on themselves when setting up a consequence based on a breech of the discipline guidelines that have been set up as a group.

At Sheboygan Falls High School, students' participation grade is based on six different areas: rehearsal, attitude, discipline, performance, materials, and attendance (see Figure 3). The scale for measuring student participation was agreed upon by the action team, and then approved by the entire choir. So a clear set of expectations were set up by the teacher and refined by the students. Not only were students empowered to grade themselves, but behavior problems were diminished as well, as this measurement scale set clear guidelines as to the behavioral expectations of the choir. Once this process was set in place, the students marked their own participation grade every three weeks (or three times in each grading period) based on their work in class. At the end of the quarter, their three marks were averaged together, and the students calculated their own overall participation grade. This is just one of the processes that has been set up for student measurement and feedback of learning. For every category in the participation grade, specific guidelines were established such as: what it means to be on task in rehearsal, what producing to the best of one's ability entails, what can be expected in terms of discipline, what materials are expected to be brought to class, and how missed classes can be made-up.

CLASS PARTICIPATION RATING SCALE

I. REHEARSAL

5	4	3	2	1
Student is on time and on task in rehearsal		Student is sometimes on time and on task		Student does not arrive on time and is not on task

II. ATTITUDE

5	4	3	2	1
Student participates and produces to the best of his/her ability		Student sometimes participates and produces to the best of his/her ability		Student does not participate and produce to the best of his/her ability

III.DISCIPLINE

5	4	3	2	1
Expectations are always met		Expectations are sometimes met		Expectations are never met

IV. PERFORMANCE

5	4	3	2	1
Student attends the choir's performances				Student does not attend the choir's performances

V. MATERIALS

5	4	3	2	1
Students always brings materials to class		Student sometimes brings materials to class		Student does not bring materials to class

VI. ATTENDANCE

5	4	3	2	1
Student is always in attendance		Student is sometimes in attendance		Student does not attend class

(appropriate make-up lessons fulfilled?)

Figure 3 - Class Participation Rating Scale

Before moving ahead to measurement in more depth, it is important to put the idea of enthusiasm (page 28) in context as well. If the notion of enthusiasm as being learning's twin can be accepted, then the leaders of the classroom environment (teachers), are responsible for setting up the mood of each rehearsal. Do they allow their personal problems get in the way? How easily does one become upset by a student's behavior? Does it ruin the process for the rest of the class, or is it put to the side and dealt with later? A wonderful way for the teacher to maintain enthusiasm is to be unpredictable. Each class period can begin in a new way. The same warm-ups do not always have to be used. Humor can be incorporated in spontaneous ways. A teacher should not be afraid to be embarrassed in front of his/her students. By being goofy and showing such open behavior, they can set up an environment in which students can be more comfortable and feel less constricted in the creative music-making process. It will help keep students motivated when they are guessing how each class may begin or how their teacher may react to a certain situation on a daily basis.

Measurement and feedback

To be successful in the learning process, all students must be able to demonstrate what they know. In other words, measurement of student progress is essential. Reimer (1989) discusses the importance of measurement devices:

> So we need measurement devices separated from the actual performance as a way to (1) get some valid feedback as to whether our teaching is producing the heightened awareness we expect, (2) clarify to the performers the perceptual learnings they are pursuing, and (3) demonstrate to the education community that we are capable of

both pursuing tangible learning objectives and giving evidence that they are being met (p. 202).

At Sheboygan Falls High School, criteria for measuring growth were first established by myself, and then as students became more knowledgeable in regards to their achievements, they were asked to re-formulate the objectives that may not be appropriate for their current needs. These objectives are documented in chart form (the competency matrix will be explained in Chapter four) and they establish the basis for each student's portfolio.

A portfolio is a collection of work that a student accomplishes. In the secondary level, performance-based, choral music classroom, the portfolio contains a variety of measurement documents that testify to individual progress gained. Indeed, as students are able to chart their own growth throughout their education, they have the tools available to evaluate their own learning and provide for themselves the feedback necessary to improve. Thus, students determine their own grades based on the fulfillment of the class objectives that have been either established or approved by the individual. The teacher merely facilitates this process.

So for the teacher attempting to incorporate TQM in the classroom setting, apart from a district-wide restructuring incorporating the process, I believe that the best alternative to the traditional grading system is for students to give themselves their own grades. And through the use of TQM's measurement tools, students are equipped with all the information necessary to effectively document their progress and self-assess their level of achievement. Thus the focus of learning shifts away from the product (grade) and onto the process (feedback and improvement of learning by charting growth).

Students are empowered in their learning and a system of continuous quality improvement in the music classroom is established.

Students at Sheboygan Falls High School charted their learning in many different ways. The method for charting one's participation grade was articulated under the "motivation" heading of this chapter. Another area of student progress that they had ownership of was their development on pitches and rhythms in songs performed for each concert. A continuous rating scale was set up for song pitches and rhythms (see Figure 4) and as students came in for their lessons, they charted their development based on this scale.

Song Pitches
1 Difficulty performing any pitches correctly in the song
2 Ability to sing some pitches correctly, but not an entire phrase without error
3 Ability to sing some phrases correctly
4 Ability to sing most phrases correctly
5 Ability to perform all of the pitches correctly in the song

Song Rhythms
1 Difficulty maintaining a steady beat while performing a phrase
2 Ability to maintain a steady beat most of the time
3 Ability to maintain a steady beat and perform some rhythms correctly
4 Ability to maintain a steady beat and perform most rhythms correctly
5 Ability to maintain a steady beat and perform all rhythms correctly

Every student will be expected to sing all of the pitches and rhythms correctly in every piece that we perform. By the end of the quarter, every student needs to come in outside of regular class time and check-off the song material for the grading period (either alone or in a small group). For those of you in lessons, this will take place during your scheduled lesson time.

Figure 4 - Continuous Rating Scale for Song Pitches and Rhythms

Once "5"'s were obtained, the song was considered to be checked-off. Every quarter, the

students were urged to check-off all the songs that would be sung at the concert. In such a way, students were able to learn the songs much better than previously because they were empowered to continually develop and fix problem spots in the songs. Eventually, most students had a higher expectation level than I did for what they could accomplish with each song. If I had to play any notes to help them along, or re-strike the tonality on the piano, the students were not satisfied with their performance. Nothing less than flawless notes and rhythms, without the aid of the piano, became the level of expectation that they set up for themselves. If they were unable to accomplish this, they reflected it in their "song check-off" grade. Many times I had to urge students to give themselves a higher grade because of their hard work and development from the level in which they had begun.

Song pitches and rhythms are certainly not the only two aspects of the music-making process within which directors seek students' proficiency. Dynamics, phrasing, and articulation are other important musical elements that warrant separate rating scales as well. In my experience, the music program that I took over last year did not enable me to set a standard any higher than expecting students to learn pitches and rhythms on song material. Certainly more rating scales will be developed as the choir's level of achievement is set higher.

Another checklist used to help students chart their progress at Sheboygan Falls High School is the "Tonal Skill Development Additive Rating Scale" (see figure 5). Both during warm-ups and at the beginning of every lesson, I work with the students in developing their tonal skills based on solfege syllables. An ability to perform the rote pattern means that they can copy back a pattern that the teacher sings to them. To

perform a pattern by inference through means of hand signs, students are required to view the solfege hand signs the teacher presents, and then sing the correct pitches back. Inference learning by means of neutral syllable is achieved when the student is able to sing back the correct syllable and pitch as the teacher merely sings a set of pitches on a neutral syllable ("bum", for instance). The fourth item to check off is the ability to make up a pattern within a set harmonic function (for example, tonic major pattern means that the student can sing a series of pitches involving the "do, mi, and sol" syllables). Finally, when three students demonstrate an ability to maintain their appropriate pitch as they change pitches within the given chord, the fifth line may be checked off.

This form is considered an additive rating scale because one may be able to perform a task at any point on the sheet. That is, the scale is set up so that in any item may be checked off at any point in time. One item does not serve as a prerequisite toward attaining the next item. The "synthesis" section incorporates more than one harmonic function at a time. Students are asked to discriminate between or among different harmonic functions (tonic, dominant, or sub-dominant). The aim (refer to p. 30-1) for every student is to be able to check off the entire sheet by the end of his/her four years in the high school choir.

Finally, for students not involved in lessons, the worksheet serves as a means for compensation. It is understood that much more is learned through active participation in lessons, but that not all students can fit it into their schedules. The teacher assesses the work done on each worksheet, but no grade is given. Students mark their scores in their portfolio (the competency matrix is the source of the documentation--to be explained in Chapter Four) and can then view how they progress throughout the quarter.

TONAL SKILL DEVELOPMENT

Tonic Pattern -- Major

_____ -able to perform the rote pattern
_____ -able to perform the pattern by inference (hand signs, non-pitched)
_____ -able to perform the pattern by inference (neutral syllable, pitched)
_____ -able to improvise patterns
_____ -able to freely harmonize within the tonic pattern

Tonic Pattern -- Minor

_____ -able to perform the rote pattern
_____ -able to perform the pattern by inference (hand signs, non-pitched)
_____ -able to perform the pattern by inference (neutral syllable, pitched)
_____ -able to improvise patterns
_____ -able to freely harmonize within the tonic pattern

Dominant Pattern -- Major

_____ -able to perform the rote pattern
_____ -able to perform the pattern by inference (hand signs, non-pitched)
_____ -able to perform the pattern by inference (neutral syllable, pitched)
_____ -able to improvise patterns
_____ -able to freely harmonize within the dominant pattern

Sub-Dominant Pattern -- Major

_____ -able to perform the rote pattern
_____ -able to perform the pattern by inference (hand signs, non-pitched)
_____ -able to perform the pattern by inference (neutral syllable, pitched)
_____ -able to improvise patterns
_____ -able to freely harmonize within the sub-dominant pattern

Synthesis

_____ -able to harmonize within the tonic and dominant pattern in a progression
_____ -able to harmonize within the tonic, dominant, and sub-dom. pattern in a progression.
_____ -able to discriminate (aurally) between tonic and dominant patterns
_____ -able to discriminate (aurally) among tonic, dominant, and sub-dominant patterns
_____ -able to discriminate (aurally) between tonic and dom. chords (with inversions)
_____ -able to discriminate (aurally) among tonic, dominant, and sub-dom. chords (with inversions)
_____ -able to identify chord functions (I and V) from a melodic line
_____ -able to identify chord functions (I, IV, and V) from a melodic line
_____ -able to identify and perform (harmonize) chord functions (I and V) from a melodic line
_____ -able to identify and perform (harmonize) chord functions (I, IV, and V) from a melodic line
_____ -able to write a melodic line from a given chord progression (I and V)
_____ -able to write a melodic line from a given chord progression (I, IV, and V)
_____ -able to write and perform a melodic line from a given chord progression (I and V)
_____ -able to write and perform a melodic line from a given chord progression (I, IV, and V)

Figure 5 - Additive Rating Scale of Tonal Skill Development

At the end of the quarter, students evaluate themselves based on the measurements and checklists from their portfolios. Each quarter, the students discuss whether or not the distribution of the grade is appropriate (for example: 50% participation, 30% song check-offs, 20% lessons and portfolio). In this way, feedback is an important element in the measurement process (refer to p. 33). It is quite simple for them to determine their own grades, as their work has been documented throughout the quarter. As the teacher, I merely check each student's portfolio, and assess whether or not they have "tallied" up all the figures correctly. On only rare occasions do I need to change a grade, and when I do, it is usually because of an inaccuracy in calculations, not because the student felt he/she deserved a different grade.

This process has afforded better relationships between student and teacher because the teacher is no longer the evaluator that determines the grade. Parent-teacher conferences focus not on whether or not the appropriate grade was received, but rather on how the grades can be made better. Ownership in the grading process rests entirely upon the students. The details of charting progress in the portfolio by means other than a checklist will be addressed as we move to Chapter Four and learn about the tools specific to TQM and its implementation in the secondary level, performance-based, choral music classroom.

Chapter Four

TQM TOOLS

TQM provides the tools and techniques to help define components of a system, to work towards identifying and solving problems within a system, and also to provide the means by which student growth in the learning process may be documented. Langford (1994, 1995), Byrnes et. al. (1992), McClanahan and Wicks (1994), Jenkins (1997), and Cornesky (1993) document a list of about 37 tools of TQM. It is too large an undertaking for the purpose of this paper to list and define them all. However, the tools that have been applied successfully to the program at Sheboygan Falls High School can be explored in detail. In addition, other tools will be mentioned periodically that would serve to complement a tool that has already been successfully implemented.

Tools that facilitate problem identification and the gathering of data that will be explored in this paper include: brainstorming, affinity diagram, nominal group process, deployment planning, cause and effect (fishbone) diagram, purpose and vision statement, survey, column chart, and competency matrix. An explanation and successful application of each of these tools to the secondary level, performance-based, choral music program at Sheboygan Falls High School will clearly demonstrate how they operate in one of three ways: (1) for organization of extra-classroom duties (such as fundraising, costuming, and

touring), (2) to improve classroom (rehearsal) processes, and (3) as a means for measurement of student progress.

It is important to emphasize that these tools should not just be used by the teacher, but rather both the teacher and students should be involved in problem identification, data gathering, and implementation of new ideas based on the results. Without this cooperative atmosphere between teacher and student, this process will be no different than any other independent (coercive even) measure initiated by the teacher. TQM's success lies in the how the process is organized and facilitated. At Sheboygan Falls High School, the Choral Action Team meets bi-weekly for thirty minutes to work together towards improving the system.

Brainstorming

Brainstorming is a process by which ideas can emerge from individuals of a group in a non-threatening fashion. It provides the means for generating many ideas quickly. An important element of this process is that no one's ideas are judged or rated in any way, merely documented. With a large group of people, it is a good idea to split the class into smaller groups of 4-7 members. This will facilitate greater individual participation. Langford (1994) outlines a step-by-step process for brainstorming:

1. The objective of the brainstorming session is clearly stated.
2. Each person in the team has the opportunity to identify at least one idea.
3. Each person has the option to "pass" when it is their turn to contribute if they do not have an idea.
4. All ideas are good ideas.

5. A recorder can ask for clarification of an idea in order to correctly record the suggestion.

6. The recorder writes down each idea on a flip chart, Mylar, or chalk board so everyone can see the accumulation of ideas.

7. People can create new ideas based on another person's brainstorming efforts. This is called "piggybacking." (p. 89)

Within the secondary level, performance-based, choral music classroom, brainstorming can easily be implemented. For instance, this year at Sheboygan Falls High School we set out to determine, "What are the components of the Choral Music Department at Sheboygan Falls High School" (our objective). Our purpose for gathering such data was to provide a foundation for future processes. It also allowed the students to grasp just how many different components are involved in the process. Participation in the process was on a volunteer basis. Four groups were formed totaling 22 members. Figure 6 provides a list of one group's brainstorming ideas.

A second type of brainstorming is silent in nature. In choral action team meetings at Sheboygan Falls High School, anywhere from 7-14 students were in attendance. As students brought specific problems or needs to the floor, a silent brainstorming process would take place. For instance, one particular concern dealt with sectional rehearsals. Green cards had been filled out, and the "buzz" was that there were situations occurring within the sectional rehearsals, away from the director, that were getting in the way of students' ability to do the best they could. So this particular topic was, "How can sectional rehearsals be improved?" The members then spent time listing single ideas on

"post-it" notes until an adequate amount of time had passed by. The reason for listing ideas on sticky notecards is so that they can be easily manipulated to form categories.

What are the components of the choral music department?	
concerts	Morrissey says, "Pick a note"
solfege	disputes with students
identifying note names	optional drink of water
reviewing with Mr. Morrissey	bring a pencil
fundraising	chord building
reflections	tuning
discuss text	vowels/consonants/pronunciation
portfolios	tonic/dominant pattern
lessons	costumes -- need of new ones
worksheets	trips
warm ups	dynamics
sectionals	text painting
green cards	advertising
choreography	exams
rhythmic skill development	try-outs for madrigal
tonal skill development	computer program
song check-offs	choral festival

Figure 6 - Brainstorming Process in context

Affinity Diagram

The tool in which categories are formed from a pre-established list is called the Affinity Diagram. Langford (1994) outlines a step-by-step process for this tool. The first step is to refer to the list of brainstorming ideas written on sticky notecards. Next, each student (or group of students if the brainstorming process was not done on an individual basis) randomly places his/her ideas on a large blackboard. Silently then, the students group similar ideas together until verbal communication must occur to finish categorizing

the more difficult items. From there, students discuss why one idea would fit better in a certain group than another. When these issues are resolved, the group leader then leads a discussion in which category names are placed at the heading of each group. The end result is that the ideas under one category have an "affinity" with one another, hence the tool's name. A positive result of the Affinity Diagram is that group consensus is achieved.

Referring to the brainstorming process (Figure 6) at Sheboygan Falls High School based on the question, "What are the components of the choral music department?", an affinity diagram was established. Figure 7 displays this list. Realize that each one of these ideas was initially placed randomly on the board, and then manipulated by students into categories, upon which headings were then agreed upon. Through this process, students clarified what each point specifically meant, and how it was important to be included. By spending so much time on this process, students took more ownership and seemed more excited about what they were learning--they were able to clarify, refine, and focus their learning into categories that made sense to them. Perhaps it could be said that a greater understanding of the overall aim was thus achieved.

Once these categories are established, the next task is to rank order them in terms of importance. After this, a structured and detailed improvement plan can be initiated for every facet of the choral program. This process at Sheboygan Falls High School began the last four weeks of the school year, so we were unable to get to the next task before classes ended for the summer. Therefore, examples of the next two TQM tools will still be related to music, but will come from a class in higher education.

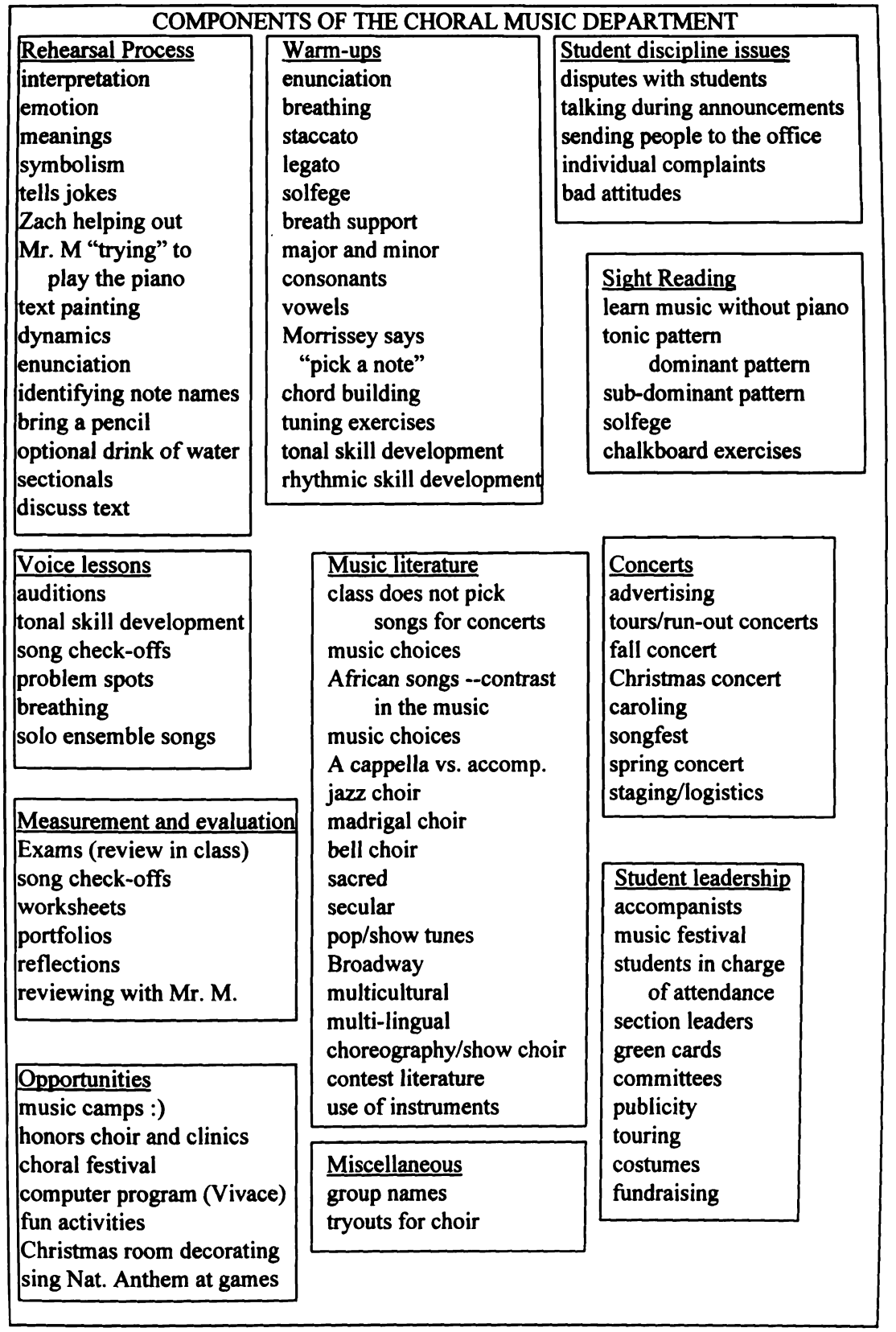

Figure 7 - Affinity Diagram in context

Nominal Group Process

The Nominal Group Process is another tool that helps to identify and order problem areas and to begin a sequenced course of action. Figure 8 displays the nominal group process forms. The list of perceived problems can, of course, be more than just five items long. The word "problem" could perhaps indicate that this tool should only be used to identify and rank problems, but in the example taking from a secondary music methods course at Carroll College, Waukesha, Wisconsin, it also serves as a hierarchical organizer of the curriculum set up by the students. The students of the class, myself included, used the brainstorming process and the affinity diagram to develop categories of topics that needed to be explored and learned in order to become the best teacher possible. So instead of a list of problems, we had generated a list of topics. The same is true for the categories developed at Sheboygan Falls High School that outline the components of the choral program.

The task for the nominal group process is as follows (based on Langford, 1994):

1. List the items to be ranked.
2. Using the chart on the lower left in Figure 8, students insert the number from the list corresponding to what item they believe is most important to learn (and therefore will be explored first). Only five items are given a ranking, so many will have zero's. The items are not all ranked.
3. Once each student has generated his/her list of the five most important items, the facilitator of the process goes through each item and students call out their rank.

NOMINAL GROUP PROCESS FORMS

Listing of perceived problems

Item #	Perceived Problem
1	
2	
3	
4	
5	

Initial Ranking of Perceived Problems

Item from master list	Initial Ranking Value
	5 (most important)
	4
	3
	2
	1

Final Ranking of Perceived Problems

Item from master list	Final Ranking Value
	5 (most important)
	4
	3
	2
	1

Figure 8 - Nominal Group Process forms

4. After the initial scores are tallied, a discussion ensues. This is the point where individuals "lobby" to attempt to convince their classmates why one item is more important than another. It is quite common for valuable discussions to occur, where

students discuss the process and think through all the elements to such a degree that would not have been thought out otherwise.

5. Once discussion is complete, students rank a final time using the chart in the lower right corner of Figure 8.

6. Again, when students are completed with these, the facilitator of the process tallies up the final scores and then assigns a final ranking to each item. Group consensus has been obtained. Figure 9 documents the results of the process from the secondary music methods class at Carroll College.

NOMINAL GROUP PROCESS
MUSIC 353 - FALL '94

Items	Initial Score	Final Score	Final Rank
Curriculum	14	15	1
Choral Pedagogy	6	7	4
Touring	0	0	8
Keyboard Skills	0	0	9
Concerts	6	9	3
Quality Literature	6	10	2
Budget	1	0	7
Classroom Mang.	5	1	6
Meth/Philosophy	7	3	5

Figure 9 - Nominal Group Process data

I have found that it is best to have a predetermined list to be ranked, rather than trying to generate a list before beginning the ranking process. It is crucial to realize that when everyone uses the same process to identify needs, it gives the group a consensused focus for beginning improvement. Other processes that help to identify problems, rank-order problem areas, and determine relationships between the problems (or items) include: the relations diagram, the bubble chart, and the pareto diagram. I have not attempted to incorporate these three tools yet in my work with TQM. Therefore, future papers will include results incorporating these tools. For more information about these tools, refer to the work of the authors listed at the beginning of chapter four.

Deployment Planning

In the example of the course at Carroll College, deployment planning (another TQM tool) was initiated to organize what would be learned, how it would be learned, where information could be obtained to facilitate the learning, how to document that it had been learned, and a due date for when it would be learned. Figure 10 lists the first two of the ranked items from the nominal group process in "deployed" format. In other words, each item is broken down into sub-groups of information to be learned. Resources for these targets came from the "post-it" notes written by students during the brainstorming process, and later organized through the use of the affinity diagram tool. Now these targets are further delineated. Means for gaining an understanding of these items, where to obtain the information (resources), who will be in charge of gathering and presenting the information (owner), how understanding of this target will be measured, and when it will be learned, are all listed in the deployment planning chart. All of the resources used,

as well as the measurement of the learning, are organized in a portfolio, with the deployment planning chart serving as the "table of contents."

Deployment planning may also be set up for a process such as one initiated at Sheboygan Falls High School. Once the components of the choral music classroom are ranked, each target can be delineated as to how the process may be improved. Headings specific to these needs will be established. They do not have to follow the headings listed in Figure 10. The intent of Figure 10 is to serve as a starting point for creative thought in establishing deployment planning charts appropriate to individual needs. The Lotus diagram (another TQM tool that I have not worked with yet) may also provide the means for delineating items into sub-groups to be improved upon. Once again, refer to the authors listed at the start of this chapter to gain insight into this process.

DEPLOYMENT PLANNING

1. SETTING UP A CURRICULUM

TARGET	MEANS	RESOURCES	OWNER	MEASURE	WHEN
1.1 Getting Started	Lect/Disc.	Chp. 2, Jen. T.	Doc/Jill/Kevin	Ten Steps	Oct. 15
1.2 Designing the Curriculum	Plans/ Discuss.	Chp. 2/Articles/ Wauk. curriculum	Students	Class Report	Oct. 15
1.3 General Music Class	3 week unit 3 mtg/week	Chp. 3/Articles	Students	Critique each others lesson	Nov. 1
1.4 Recruiting	Disc./Interv.	Area Teachers	Kevin/Doc	8-10 ideas	Nov. 1
1.5 Goals of the Curriculum	Statement	Where we are at now	Students	Defend stat.	Oct. 8

2. CHOOSING QUALITY LITERATURE

2.1 Define Q.L.	Discussion	Riemer p. 133/ articles	Doc/Jill	2 pieces - 1 good, 1 bad	Nov. 1
2.2 Choosing Music	Interview/ Discussion	Area Teachers/ articles	Kevin	Dev. a list of methods	Nov. 1
2.3 Sacred/Secular	Int./Disc.	Area Tch./art.	Cory	Personal stat.	Nov. 1
2.4 Appropriate?	Choose 5 pieces	White House (music store)	Students	Defense of the 5 pieces	Oct. 15

Figure 10 - Deployment Planning

Cause and Effect (fishbone) Diagram

The cause and effect diagram is a tool that helps determine root causes of a problem. Its visual orientation makes interpretation of data much easier. The chart is developed on a single sheet of paper. Using a modified format based on Cornesky (1993, p. 107-9) and Langford (1994, p. 103) models, the following is a step-by step process.

1. State the problem. Identify a specific problem. In this example, refer to the question brought up in the choral action team meeting at Sheboygan Falls High School, where students were concerned about sectional rehearsals. This problem is visually placed on the far right-hand side of a sheet of paper (Figure 11). The line proceeding from the back of the box is called the "backbone".

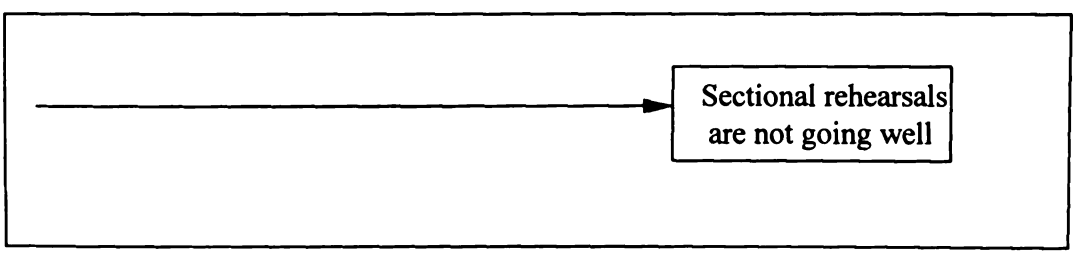

Figure 11 -Fishbone Diagram, Step 1

2. This "fishbone" diagram takes shape as angled lines are drawn from the backbone, representing the causes for the problem. There are five primary causal category boxes that are standard for this TQM tool: equipment, environment, materials, people, and methods (Figure 12).

3. As a group, brainstorm to identify the causes for this problem. The sticky notepads once again come in handy, for once the brainstorming process is

concluded, students can easily arrange causes into one of the five category boxes. In some cases, sub-causes emerge and additional fishbones may need to be added.

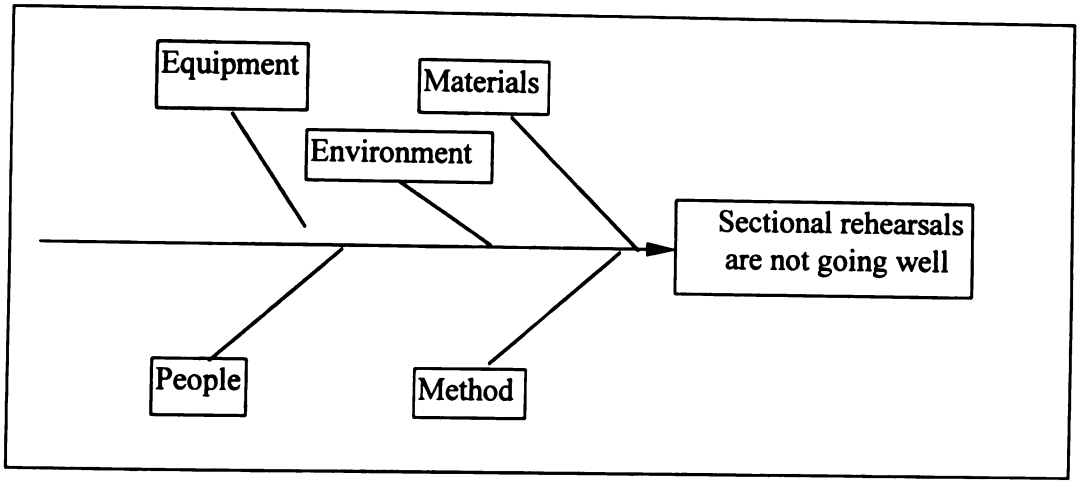

Figure 12 - Fishbone Diagram, Step 2

4. Insert the causes into the appropriate categories on the diagram. Figure 13 documents the completed fishbone diagram addressing the concern: How can sectional rehearsals be improved? Notice that a sub-cause emerged under the attitude line of the people box.

5. Identify the most likely causes and begin with them--working to improve the process.

Another tool that can help identify and clarify problems is the force field analysis. Once again, I have not yet implemented this tool, but its effectiveness for the secondary level, performance-based, choral music classroom is apparent based on my readings in Cornesky (1993, p. 117-190) and Langford (1994, p. 108-9).

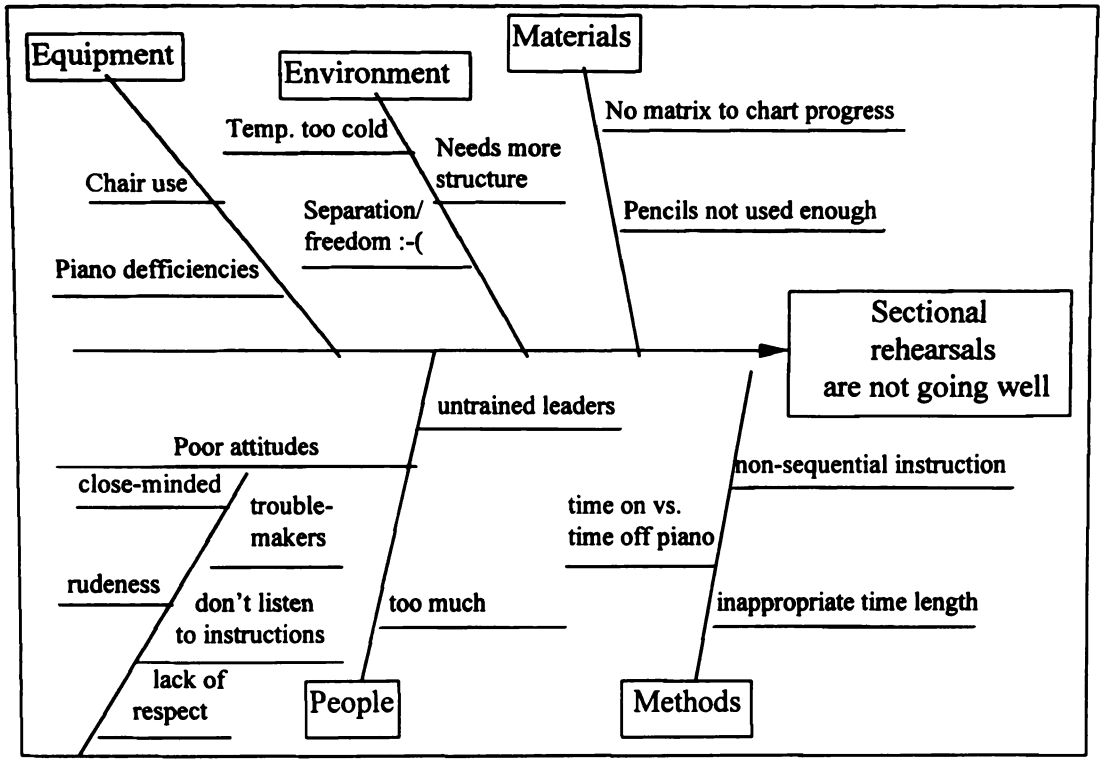

Figure 13 - Fishbone Diagram, complete

Purpose and Vision Statements

Without a clear purpose, any attempts at change within a system have no foundation and are only short-term visions for fixing an existing problem. A purpose and vision statement provides a focus towards achieving a common goal. It identifies an organizations purpose for existence and lays the groundwork for direction in the future (Langford, 1994, p. 138). With a purpose and vision statement in place, it challenges members of the group to constantly evaluate the daily processes which lead to the fulfillment of the aim. It challenges the members to constantly improve these processes if they are hindering the achievement of these aims. Langford establishes a 6-step process for the purpose and vision statement:

1. Sit all members of the group around a table, and give each person a sheet of paper.
2. Each team member receives 5-10 minutes to write a purpose and vision statement on why their organization exists (purpose) and where it is headed (vision).
3. Statements are passed to the recorder for the group, who then writes all statements on a board so that the whole group can see the responses.
4. Taking all of the personal ideas, feeling, thoughts, etc., into consideration, the group brainstorms and creates a statement that all can agree upon.
5. Once the final statement is complete, all the team members sign it.
6. The statement should be periodically reevaluated to ensure its validity in relation to new learning.

The first task towards the implementation of TQM principles at Sheboygan Falls High School was to establish a vision and mission statement for the choirs. Rather than sit all three choirs down and brainstorm (thus losing valuable rehearsal time, of course!), a notecard was passed out. The students were asked to respond to two separate questions, placing one answer on each side of their notecard. The two questions were: "Why have you chosen to be a member of the choirs here at Sheboygan Falls High School" and "What can you do to contribute to the choir's success?" Based on every individual's responses, the Choral Action Team developed a mission (purpose) and vision statement. Taken to the entire group, everyone agreed that these statements reflected their individual interests and needs. These statements, if you recall, are located on page 42-43 of this document.

Survey

The survey is used to collect data from a group of people to be used as a means for identifying current problems, thoughts, or trends (Langford, 1994). Surveys are used to keep students' needs foremost. It is easy to make decisions with the student's best interests in mind. But TQM is based on student ownership in the continuous improvement of the system. Therefore, student input is necessary on a consistent basis. Anytime improvements are sought after, input from the students should be obtained. For example, when the Choral Action Team at Sheboygan Falls High School makes decisions to improve the process, a survey discussing our proposals are sent out to the students so that we can proceed with the entire choir's consensus. By having all members of the choir fill out a survey, it helps identify the exact number of satisfied and dissatisfied students in regards to the topic at hand.

At Sheboygan Falls High School, the Green Card is an attempt to involve students in the process on a continual basis. Even when a survey is not being conducted, students are encouraged to share their concerns on the Green Card form (refer to Figure 2). The Choral Action Team expressed concern over the effectiveness of this card because its use was so infrequent. The team decided that a survey would be valuable to determine students' opinions in regards to the value and need for the Green Card. The questions were formulated during a Choral Action Team meeting, and members of the team passed them out to the class and tallied the results. Figure 14 shows the survey, in Likert-scale format, distributed to the students. The information we got back would help us in determining whether or not to continue the use of the Green Card, how it could be used

SURVEY

NAME: _____

1 strongly disagree
2 disagree
3 neither agree nor disagree
4 agree
5 strongly agree

1. I believe that there is a definite use for the green card. 1 2 3 4 5

2. If we had a couple of minutes of free time at the end of the hour, I would take time to write out my concerns on a card more than once a month. 1 2 3 4 5

3. I would never write a comment on a green card. 1 2 3 4 5

4. I would feel comfortable sharing my concerns with an action team member. 1 2 3 4 5

5. I would prefer to come to an action team meeting and share my concerns with the group, rather than write it on a green card or share it with an action team member. 1 2 3 4 5

6. I would like to take the time to learn how I can make a more significant contribution to this group (it would involve about a three hour training session--perhaps on a Sunday evening?) 1 2 3 4 5

7. It is important for me to share my ideas on what processes are a waste of class time, as well as what processes are an effective use of rehearsal time and should be maintained. 1 2 3 4 5

8. It is not important for me to be part of the decision-making process in this choir to any extent. 1 2 3 4 5

9. All the decisions made for this choir should be the decision of Mr. Morrissey, and the students don't need to give their input. 1 2 3 4 5

10. Is there a better way for concerns to be expressed and ideas to be implemented? Should we, as a group, attempt to find ways in which we can work together better in the learning process? Or would you rather just have me teach what I think is important for you to learn, and you not have input on the process? I am convinced that the classroom environment can be much more positive if we truly work together to achieve our goals. Please share any comments (on the back side) that you may have on this subject, or anything else that may be on your mind.

Figure 14 - Survey

more efficiently if it was kept, or whether or not there would be a better outlet for students to express their ideas and concerns.

This data provides the basis for improvement based on students' needs. TQM provides many tools that serve to collect and formulate data. The column chart provides the data from this particular survey. Figures 15 and 16 display the results of two of the questions from this survey. Other charts and graphs that can be explored include: consensogram, control chart, frequency chart, histogram, loss function, pareto chart, radar chart, run chart, and scatter diagram.

Column Chart

The purpose of a column chart is to provide a visual representation of data accumulated. Based on the survey conducted on "the Green Card", five responses were possible. A graph helps clarify responses within each category. The particular chart used in this case is a vertical bar graph that displays the data in parallel columns whose lengths are proportional to the number of responses in each category (Langford, 1994). Continual advances in computer technology make it very simple to produce charts and graphs. This particular chart was made off of a database in Microsoft Excel.

Figure 15 displays the results from question 1 of the survey. Based on this response, it appears that most people are either neutral in regards to the Green Card, or believe that it is an effective tool. Figure 16 displays the results from question 8 of the survey. This question attempted to reveal whether or not student input in the process was valuable to them. Based on the results, it is clear that the majority of students want to maintain a sense of ownership in their learning. So this survey helped the choirs at Sheboygan Falls

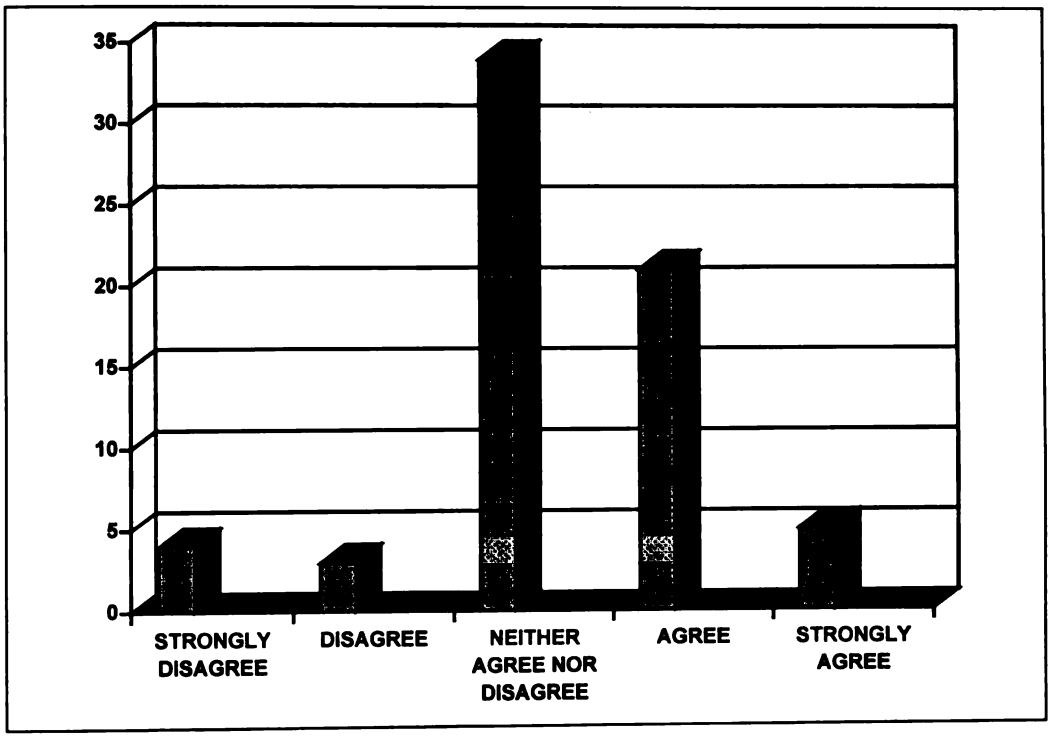

Figure 15 - Question #1

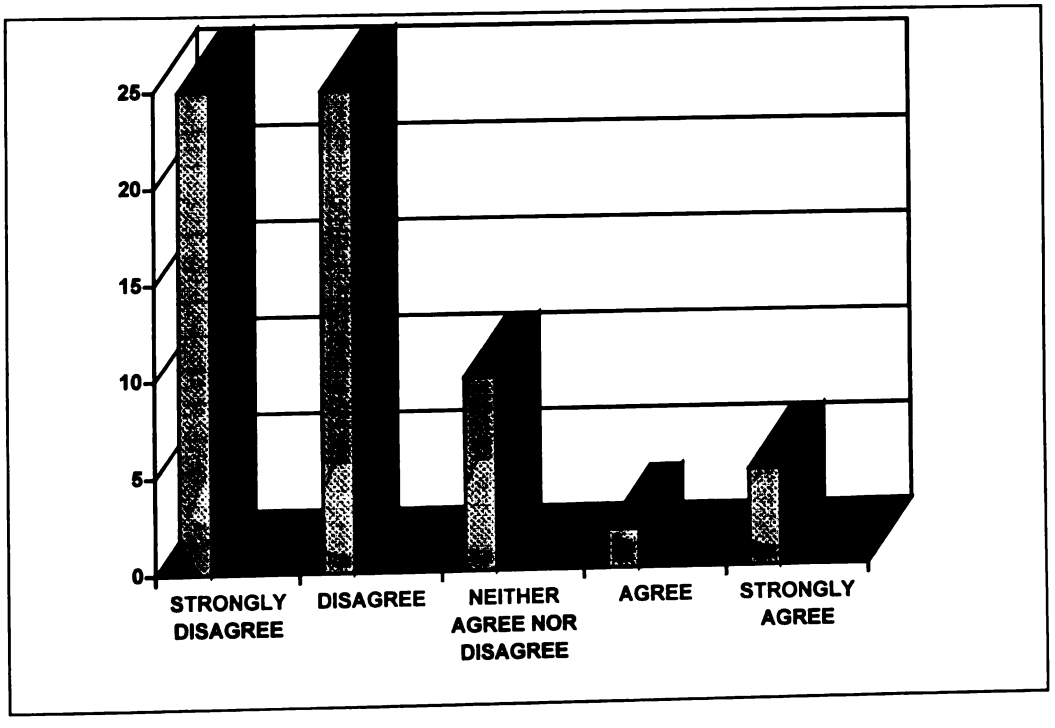

Figure 16 - Question #8

High School learn that perhaps the Green Card is not the most efficient way for students to express their concerns; that few people, however, are actually opposed to its use; and that for the majority of students, they do value a sense of ownership in the learning process.

Competency Matrix

The competency matrix is a charting device modeled after the Capacity/Matrix tool developed by David Langford (1994, p. 92-3). The matrix is the tool by which students record and track their learning. It is the equivalency of the teacher's gradebook. But with this tool, the students have ownership in the measurement of their own learning.

Musical Skill Development		Concept	1st Qtr.	11/20	12/12	1/9
	1	Key Signature				
	2	Time Signature				
	3	Duple Meter				
	4	Triple Meter				
	5	Tonic Pattern				
	6	Dominant Pattern				
	7	Solfege Scale				
	8	Pick-up Notes				
	9	Counting Notes				
	10	Counting Rests				
	11	Staccato				
	12	Legato				
	13	Half-step interval				
	14	Sequence				
	15	Terraced Dynamics				
	16	Consonance				
	17	Dissonance				
	18	Text Painting				
	19	Symbolic Phrase Shaping				
	20	Rondo Form				

Figure 17 - Competency Matrix for Musical Skill Development

According to Langford, "students break down expected results into components for study, tasks to be accomplished, proof of understanding and acquiring knowledge and wisdom" (p. 92).

There are many benefits for using the matrix: (1) it eliminates the need for traditional grading by the teacher, (2) it shows how students' learning has a context, (3) it affords students the opportunity to take an active role in not just their learning, but also charting what they have learned, and (4) it can save students frustrations in understanding what they are going to learn next, as the plan is charted out in advance by them.

Figure 17 is a competency matrix from the 2nd quarter of study at Sheboygan Falls High School. This particular competency is titled, "musical skill development". The concepts to be learned are then listed (there were twenty concepts learned during first quarter) in the next column over to the right. Students then track their progress in the last four columns. Students entered their current level of competency under "1st quarter rating", and then every three weeks they updated their learning of those concepts.

David Langford (1994) provides a step-by-step approach for the matrix process:

1. State the desired result. In this example, "musical skill development" is our result.
2. List the components of the expected result. The components in Figure 17 are the list of twenty musical terms. These terms arose out of the music that was learned during first quarter. This was not a vocabulary list that had no context. Remember, learning must always have a context. Any musical terms that students are expected to define should exist within the music that is being studied and performed at that given time.

3. Each individual charts their own learning. The levels are as simple or as complex as the age and development level with which you are working. For example, under "key signature", this capacity could be broken down into sub-groups such as "C major, D major, e minor, etc." if the students are expected to know the number of sharps and flats for particular key signatures. So this matrix is constantly updated for the students.

4. Teachers and students discuss what is considered a quality standard of acceptance for each level. The blanks in the columns on the right are for the measurement, or rating, that students give themselves. A predetermined rating scale must first be established and agreed upon by the students. Our initial rating scale at Sheboygan Falls High School is shown in Figure 18. As a group, we discovered over time that this rating scale did not completely serve our purposes, so a new one needs to be established. In Langford's (1994) capacity/matrix, Bloom's taxonomy for the cognitive domain serves to chart students progress within a capacity (levels are: knowledge, understanding, application, analysis, synthesis, and appreciation). It is up to the individual classroom to determine how learning will be measured.

Musical Skill Development	
1	Inability to recall the concept
2	Ability to recall the concept, but inability to define the concept
3	Ability to define the concept
4	Ability to define and contextualize the concept
5	Ability to define, contextualize, and perform (where applicable) the concept

Figure 18 - Continuous Rating Scale for Musical Skill Development

5. After a matrix format is in place, the chart is filled in either as levels are met (as in Bloom's taxonomy) or on a periodic basis (as in Figure 17, where students re-rate themselves every three weeks).

6. Each level must be accompanied by a portfolio example of documentation, demonstration, or defense of quality work. Referring to Figure 17, students wrote their definition of musical terms in the loose-leaf section of their portfolio. A simple definition expressed correctly would place a student at a level 3 on the rating scale. A level of four required that the student be able to contextualize the concept (in other words, "where does it occur in the music", or "what song does it specifically occur in and where?"). As students performed their song check-offs, they also demonstrated their ability to perform (where applicable) the terms that they defined -- thus placing them at a level 5.

At first, this process was difficult for the students to grasp, but over time, they became comfortable charting their own progress. If students do not take the time to fill out the matrix, then the process should not be done, as it is merely "busy work" that they seem forced to complete. A quality learning environment must first be established, where students can understand and appreciate that there is more to the performance-based choral music classroom than just singing. Once they are convinced that skill development produces higher quality results, this process will be accepted by the students.

Figure 19 shows an example of a "Vocal Skill Development" competency matrix. Realize that new terms are merely added to the bottom of the "concept column" as needed.

Vocal Skill Development		Concept	1st Qtr.	11/20	12/12	1/9
Breathing	1	Diaphragm Activity				
	2	Inhalation				
	3	Exhalation/Support				
	4	Management				
Others	5	Yawn Sigh				
	6	Fish Lips				
	7	N/S vs. E/W mouth				
	8	Legato Singing Style				
	9	Staccato Singing Style				

Figure 19 - Competency Matrix for Vocal Skill Development

Figure 20 is a full page of various competency matrixes. The first section is an example of the "song check-off" competency. Using the rating scale in Figure 4, students chart their progress on pitches and rhythms for every song they perform during a grading period. Students also record their scores from the songs they perform at solo ensemble. While participation in the festival is not a requirement, students still record their scores because the portfolio also serves as an accurate record book of all the songs and events in which a student participates throughout his/her four years in the choral program. The "reflections" competency refers to the diary-like entries that students write, expressing their interpretations of various songs. Their rating is either an "I" (incomplete), an "O" (okay), a "G" (good), or and "E" (excellent), based on the degree of reflection and time taken to work through their thoughts. The "class participation" capacity is the rating the students enter every three weeks based on their work in class. The rating scale used for this particular competency is listed in Figure 3. Finally, the last items on Figure 20 are the competencies to be measured based on the worksheets that the non-lesson students complete. Their rating is a tally of how many questions they answer correctly out of a

PORTFOLIO	DOCUMENTATION		4/20	5/11	6/1
SONG TITLE:	Pitches	1.1			
Dirait-On	Rhythms	1.2			
Frostiana	Pitches	2.1			
	Rhythms	2.2			
Les Miserables	Pitches	3.1			
	Rhythms	3.2			
The Lord is My Shepherd	Pitches	4.1			
	Rhythms	4.2			
The Handsome Butcher	Pitches	5.1			
	Rhythms	5.2			
Apple, Apple	Pitches	6.1			
	Rhythms	6.2			
Solo Ensemble	Judge's Rating	7			
		8			
		9			
		10			
		11			
REFLECTIONS	(either I, O, G, or E	12			
CLASS PARTICIPATION	Rehearsal	13			
	Attitude	13			
	Discipline	13			
	Performance	13			
	Materials	14			
	Attendance (6/1 only)	14			
WORKSHEET	Identifying Note Names	14			
	Identifying Solfege Syllables	14			
	Half Step vs. Whole Step	14			
	Musical Symbol Identification	14			
	Insertion of Beat Markings	15			

Figure 20 - Various Competency Matrixes

certain number of questions. These ratings are written in fraction form (in other words, 8 out of 10 on a particular section would be 8/10).

An overview of the entire student portfolio at Sheboygan Falls High School documents the following items: (1) a cover sheet with the student's name, folder slot number, and a form for their final grade broken down into percentages (for example, 50% class participation, 30% song check-offs, 20% portfolio/lesson), (2) lists of the rating scales used to chart learning, (3) competency matrixes that document continued progress, (4) an attendance page (students are expected to chart their own attendance in class and in lessons so that they know what needs to be made-up by the end of the quarter), (5) typed or written reflection assignments, (6) completed worksheets for students not in lessons, (7) any other documentation that measures growth in an area (for example, the definitions that served as the measurement for musical skill development concepts), (8) other loose-leaf sheets of paper where students have taken notes in preparation for exams, and (9) miscellaneous items such as concert programs. With the beginning of each quarter, a new set of forms are handed out and placed in the front of the portfolio. The portfolio thus serves as an excellent record book of learning in the choral classroom.

Summary

This chapter has documented a short list of TQM tools that have already been applied to the secondary level, performance-based, choral music classroom. Other tools were mentioned that could be incorporated in the future. Once again, this paper has been meant to stimulate creative thought in the application of more TQM tools, so that quality learning can occur in every facet of a student's formal education, including a performance-based music classroom. The previous pages have merely attempted to outline my first year of work within this system. It is hoped that continued efforts will

lead to improved processes over time. Chapter Five will present a summary of what has worked well, what processes can be improved upon based on my experiences, and future ideas for the implementation of TQM in the secondary level, performance-based, choral music classroom.

Chapter 5

THE FIRST IMPLEMENTATION ATTEMPTS OF TQM -- A REVIEW

The purpose of this paper was to provide an overview of the history of TQM, the learning theories that its adherents espouse, and the specific tools that embrace the problem identification, problem solving, and data collection process. The applications shared in these pages are by no means the most effective way to implement TQM. The nature of the process is such that one continually strives for improvement. In this way then, the specific applications presented from Sheboygan Falls High School are merely guideposts from which creative thought can be generated. It is my hope that the ideas presented will be far surpassed in future years by creative minds seeking to constantly and forever improve the process of instruction in the secondary level, performance-based, choral music classroom. With a basic foundation of its principles presented, I point you to the bibliography for more detailed information on implementing TQM in your classroom. The last pages attempt to summarize what has gone well in the process during the 1997-98 school year, what I plan to do differently next school year based on my attempts from this year, and what can be done in the future to embrace TQM in a more holistic fashion.

Successes

As a first year teacher, seeking input from the students prior to the first day of school helped me to understand the current program and its traditions. Rather than just asking a few questions about the choirs, I infused my learning in TQM to empower the students to brainstorm (brainstorming tool), organize (affinity diagram), and rank-order (nominal group process) the program before I began. It was a great opportunity for me to get to know a group of 7-9 students before the first quarter began. I recommend the use of TQM especially for the new teacher who seeks to gain knowledge on past practices of the program that s/he is taking over.

The TQM process also helped ignite a choral program that did not have a lot of focused energy before my arrival. Students became excited about the opportunity to discuss the program and have input into how things would take form with a new teacher. Students eagerly volunteered to serve on committees. These committees were valuable time savers for me and they helped establish a sense of ownership for the students in the choir. A fundraising committee oversaw not just what types of fund-raisers to do, but they also organized the delivery, the return of the money by the students, and all the paperwork associated with fundraising that most teachers dread having to take the time to do! A publicity committee generated ideas concerning how to promote our choirs and then took action on these ideas, distributing flyers about the town and contacting local newspapers, radio stations, and other community groups. Currently, a costuming committee is contacting members of the choir over the summer to get measurements and discuss outfits for the new year. The group also picked out several outfits and then had

all of the students vote on what outfit they wanted to have for the choirs. In this way, it was the students' decision, not the teacher's verdict in regards to what they would wear. Small decisions such as these go a long way in helping students feel empowered in their learning--they have some choices about the decisions made for the choirs.

I have taken many classes in my teacher education training that emphasize the importance of establishing clear measurement tools for objectives in the performance-based classroom. After all, if our students' grades are based merely on their attendance and effort, aren't we just perpetuating the notion that music is not as important as other subject areas because it does not have real assessment tools? TQM principles have helped guide me in creating a dynamic portfolio system where students are actively involved with charting their progress. I believe that the greatest success of my implementation efforts have occurred in this area. For a school district that has not adopted TQM principles district-wide, it can be difficult to be successful. Seeing that TQM strives to abolish all grading, I set out to determine the best possible way to work within the system and yet satisfy the philosophy in which I adhere.

Specific expectations have been established throughout the year and have been continually improved upon. For instance, the students and myself realized that the rating scales for tonal and rhythmic skill development from the first semester were not an accurate way to measure learning in those areas. The students did not have a better option, so I worked out a new scale for tonal skill development over the holiday vacation. Upon returning, the students were generally happy and enthused about this rating scale. In lessons, students told me that this scale was much better and made more sense to them. Where before, it seemed like busy work to chart their progress with the old scale, this one

made sense and would be an accurate measurement of their learning. With the beginning of a new year, I am not satisfied that my work is the best way to implement TQM principles in regards to measurement, so continued efforts will be made in this area.

Another positive result of the portfolio process is that students rarely complained about their grade, parents only took issue with me regarding their child's grade if it was not explained to them by their son or daughter, and the amount of records I needed to keep were very few. By empowering the students to track their progress, long nights updating grades were not necessary. Parent-teacher conferences were a joy to be a part of, as I was able to show to parents not just their child's grade, but how s/he tracked individual progress in the portfolio. The portfolio also contained worksheets and written reflections that the parents could view. A sense of pride was easily seen on the parent's faces as they viewed the work that their child had done--and this was achieved in a music class where there are typically few accurate and sequenced ways to measure learning.

Pitfalls

As a first year teacher, I believe that TQM was a saving grace in helping me to understand the program that I had just taken over (as mentioned under "successes"). However, incorporating TQM as a new teacher also had its negatives. Students will always see what they can get away with when change occurs. Without establishing very clear expectations first, I sought my student's opinions on matters. Chaos ensued and I had to put my foot down or else no learning would have ever occurred. So by trying to empower my students from the very beginning, things got out of control. It was not until after the first quarter that I could begin to think once again about incorporating TQM

principles. The students needed to get to know me first. They needed to understand what my expectations were in regards to how I expected them to learn and what they would learn. I was asking students to tell me what they wanted to learn without them having a knowledge base from which to work. After witnessing my teaching style for a period of time and getting to know my personality a bit better, they were then able to more accurately give input as to how the system could be improved. In other words, without a system in place that the students understand, how can they be called upon to improve it?

The Green Card, therefore, was a complaint card for most of my first semester of teaching. Students saw it as an opportunity to tell me how poorly I was treating situations and how they would rather have their previous teacher back. These are all situations that a new teacher naturally faces, and TQM principles did not eliminate them. However, as second semester began, and new students joined the choir while others dropped because my expectations were too different for what they wanted, TQM's benefits began to be seen. So I caution the new teacher in his/her attempts to incorporate principles immediately. I suggest establishing one's teaching style first. Afford students the opportunity to get to know the expectations of the teacher, and then allow them to help facilitate the learning process once a system is in place.

In Choral Action Team meetings, quite often I found myself coming up with all the new ideas. It is tough for students to generate thought in regards to their learning because they have never done so before. They have always had someone telling them what to learn and when to learn it by. Once these new ideas were presented, the students became involved with process as I envisioned. Indeed, the goal of TQM is that the teacher and students work together to improve the process. Still though, I was the one that would

establish the "new and improved" process and the students would merely approve or disapprove. In essence then, I am really making decisions with their best efforts in mind, not allowing them to actually make the decisions. The desire that my students will join me in generating new ideas will be a concern as we continue in this system of continuous quality improvement.

Another common trend when identifying problems in the rehearsal setting was blame. TQM proponents urge teachers to stop the process of blaming. Too often, I either allowed blaming to occur, or actually engaged in it as well. It is easy to put the blame on an individual or a group of people as the cause for a problem. The focus must rather be on why their behavior is such a way. Proponents of TQM also support the notion that the system causes over 85% of the problems in the classroom, not the students. So rather than just blaming people for problems, work should be done to identify ways in which the system is causing these individuals to act in such a way. Identify the root cause for a problem and then act accordingly. It is easy to be hasty, put the blame on a person's behavior and decide that s/he is just "not a team player," and live with it. The teacher's role, however, is to find a way for the system to be constantly improved so that everyone can be satisfied.

Future endeavors

The 1998-99 school year at Sheboygan Falls High School will have a set list of goals for the continued implementation of TQM principles. First, I hope to find a way to get everyone involved in the process, not just the members of the Choral Action Team. There will be more surveys and discussions in class that will help students understand the

process they are a part of. In regards to this, the students need to understand what exactly TQM is and how its principles are different than anything else they have encountered in the classroom. The biggest challenge will be to find a way to express this without them feeling as though it is just another lesson to be learned in class. Rather, the hope is that they will become excited as an entire class about the possibilities for future processes.

Beginning next year, the school has established a weekly resource period of forty minutes during which mentoring will occur. The Choral Action Team will now be able to meet on a weekly basis and will comprise more of the students enrolled in the choral program than did last year's group. This increased contact time will allow even greater opportunity for student feedback and decision-making with regard to improvements in classroom processes.

On a more specific level, my desire is for the student-headed committees to be run and operated solely on their own, with the committee chairperson keeping me informed of their work. The touring, costuming, publicity, and fundraising committees are currently in operation, and my hope is for them to embrace TQM tools and processes to a greater extent. Initially, I will facilitate the processes, working with the committee chairperson to help him/her understand the tools. I believe that a high level of enthusiasm will be maintained if students continue to be actively involved in the decision-making for the choirs.

At the end of the previous school year, the Choral Action Team had begun a process by which all of the components of the choral music program were brainstormed and then organized and received appropriate headings (affinity diagram). A nominal group process needs to be done as school begins to determine the most important components of

the program. Once each component category has been ranked, an implementation plan for improvement of each component will be established. The overall plan will most likely consume more than just one school year. Perhaps a separate committee will be set up to create surveys and work with problem identification and problem solving tools.

With regard to student measurement, current rating scales must be constantly reviewed to determine if the structure of instruction and learning requires that the measurement be modified. An additive rating scale for rhythmic skill development needs to be established similar to the tonal skill development additive rating scale in Figure 5. Additional rating scales for dynamics, phrasing, and articulation will be developed as a component of song check-offs. New ways to receive students' feedback will be investigated, as the Green Card only provided limited success (based on the survey response). Finally, my hope is for discipline problems to disappear completely. In order for this to occur, my expectations must be clearly reiterated, the students need to agree with them (the expectations will be modified until complete consensus is achieved), and then the students must set up the consequences for a breech in these expectations. In this way, all conflict should cease to exist between teacher and student.

On a personal growth level, I hope to continue to incorporate more TQM tools, especially becoming increasingly familiar with data collection and charting devices. Accurate visual representation of data is essential to understanding the current system, and there is much training needed yet for me in this area. I also hope to become more active in the field of music education, promoting the incorporation of TQM principles at music workshops and conventions. By sharing the limited research I have conducted on TQM, it may springboard creative thought with regard to its implementation.

In terms of documented research, endless experimental studies can be conducted on specific facets of the incorporation of TQM principles. This study investigated the effects of TQM in the high school level, performance-based, choral music classroom. Future studies can be explored at the middle school choral level, elementary school general music level, and in band and orchestra programs as well. Music classes in school districts that have adopted TQM principles throughout every aspect of the district can be compared with school districts in which the implementation efforts are taking place solely in the classroom setting. An experimental study can be set up to determine students' attitudes and achievement levels under TQM principles as compared to traditional means of learning. Achievement levels can include musical achievement in many different areas—rhythmic, melodic, harmonic, expressive, etc. Developmental concerns can also be examined in regards to whether or not the learning of TQM processes is more receptive at different levels of growth. Finally, in a TQM classroom personality characteristics can be examined among students with regard to their receptiveness towards TQM processes.

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