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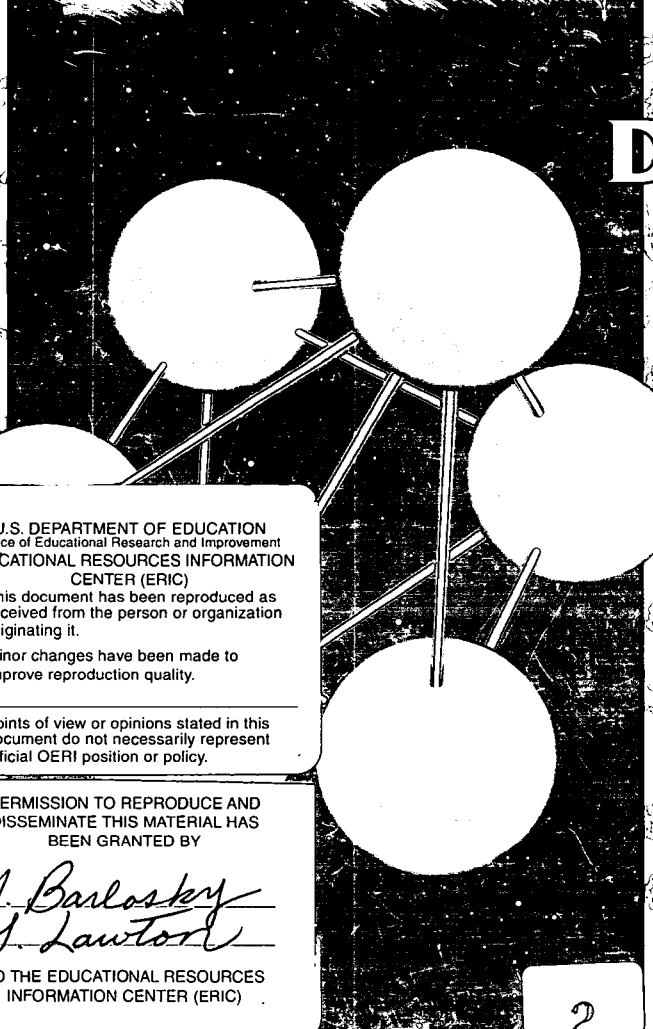
ABSTRACT

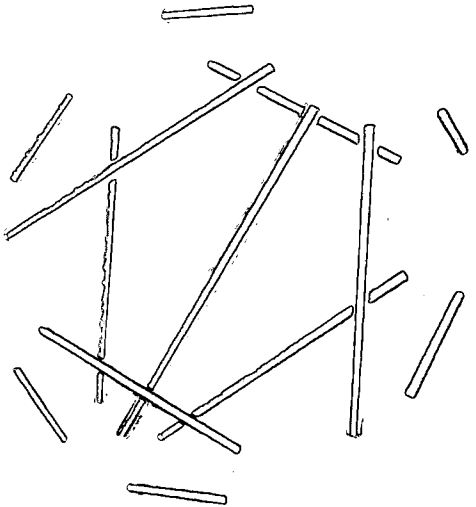
This handbook combines the outcomes of the "Symposium on Quality Schools" (April 14, 15 and June 2, 3, 1994, Toronto, Canada) with a continuing presentation of the quality philosophy. It is designed to guide the development and implementation of quality-driven educational programs. Quality schools are committed to creating enhanced learning environments through purposeful, cooperative actions of all individuals engaged in the educational enterprise. Quality schools stress organizational purpose, leadership commitment, teamwork, learning processes, customers/clients, and management through data. The introduction explains the four components of Deming's quality philosophy: his 14 points, concept of process and system, impact of extrinsic rewards, and importance of knowledge. Chapter 1 presents a quality agenda for education and its leadership, drawing on the Kodak Canada experience. Chapter 2 focuses on customers, suppliers, and process--three key concepts for developing quality schools. Chapter 3 shows the relationship of teamwork to the customer-supplier heuristic, tackling conflict barriers and consensus-building strategies. Chapter 4 discuses added value, quality assurance, and quality school checklist. An Afterword contains advice on transitions to practice, lists 13 references, and give biographical information about authors and presenters. Each chapter contains core questions, key symposium learnings, an implementation checklist, and additional references. (MLH)



DEVELOPING QUALITY SCHOOLS

Barlosky & Lawton

A HANDBOOK



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Martin Barlosky
&
Stephen Lawton

A HANDBOOK

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I first heard the phrase "learning a living" from the late Marshall McLuhan, one of Canada's seminal thinkers. He told me in 1957 that South Korea, Hong Kong, Singapore and India would vault over entire eras of technological development, go from the wooden plough to computerized tools and challenge the established Western industrial countries through better elementary and secondary education. We know now that he was prophetic.

from *The Road Ahead*
Philippe Dean Gigantes

No improvement in the human situation can take place independently of the human will to improve and that confidence in automatic or impersonal improvement is always misplaced.

from *The Modern Century*
Northrop Frye

A conjurer may pull a rabbit out of a hat, but he cannot pull quality out of a hat.

from the Foreword to *The Deming Management Method*
W. Edwards Deming

DEVELOPING QUALITY SCHOOLS

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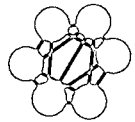

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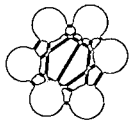


This *Handbook* benefited from the efforts of many persons and organizations. We are grateful to them all for their commitment to the ongoing project of improving quality in education. Kodak Canada Inc. and The Department of Educational Administration of The Ontario Institute for Studies in Education have steadfastly supported the development of the *Handbook* and the *Symposium on Quality Schools* that led to it. The Ontario Ministry of Education and Training, the Ontario Teachers' Federation, and the six school boards that shared and supported early efforts to explore the issue of quality education deserve special thanks.

We thank the many individuals whose teamwork made the *Symposium on Quality Schools* a successful precursor to the *Handbook*. Victor Dingus, Paula Hansen, Lois Jones, Ken Leithwood, Bruce Mathewson, Ellie Nemeth, Edward Sallis, Douglas Stephens, and David Tinnes, who gave excellent presentations at the *Symposium*, allowed us to make extensive use of their work in developing the *Handbook*. Shawn Moore's bibliographical work and organizational skills helped both the *Symposium* and the *Handbook* come to fruition. The incisive questions and the continuing support of Janet Bendon Fabri and Terry Holmes of Kodak Canada Inc. kept us on track. The contributions of the Kodak Canada facilitators, the OISE graduate student reporters, and the Kodak Canada and OISE support staff who worked so hard behind the scenes on both projects were above and beyond the call of duty. Perhaps most importantly, we thank the educators who participated in the *Symposium* and whose insights are reflected in this publication.

If we have omitted anyone who should have received formal acknowledgement, we apologize. In the end, the project to make quality central to educational improvement extends beyond any one individual or any single organization. It is truly a collective enterprise that will result in gains we might now only imagine.

A Welcome to Quality

Mr. Ronald C. Morrison, President
Kodak Canada Inc.

ON BEHALF OF THE MORE THAN 2000 men and women who are Kodak Canada, I welcome you to an exploration of "Quality".

We at Kodak Canada have been working on educational issues for the past year-and-a-half with our colleagues at The Ontario Institute for Studies in Education. I know that months of care and effort have gone into the development of this *Handbook* and the *Symposium on Quality Schools* that preceded it. Kodak Canada is proud to have sponsored both.

Without question, the future success of North America begins with the quality of our educational system. The rest of the world is not waiting for us to debate and define our educational strategies and policies. Therefore, we must be aggressive in formulating the educational expertise that develops the skills, values, and knowledge required to participate in an increasingly competitive global economy.

Kodak Canada's sponsorship of the *Quality Schools* initiative is consistent with our belief that the future belongs to those who are prepared. We are confident that we can and that we will meet the challenge of the global economy. We are particularly pleased to help support the publication of *Developing Quality Schools: A Handbook,* which is designed to guide the development and implementation of quality-driven programs in our school systems.

I know first hand from my experiance at Kodak Canada that a genuine commitment to quality is the beginning of an exciting and productive venture. I wish you every success with this important initiative. It is a pleasure for us at Kodak Canada to be your colleagues in an effort we must all share.

I commend you for taking this step on an exciting journey into the world of quality.

Mr. Ronald C. Morrison

On September 15, 1994, Mr. Morrison was appointed as General Manager, Kodak Park Imaging Manufacturing and Supply and Corporate Vice-President, Eastman Kodak Company, Rochester, New York.

s S. Brown, M.A., Ed.D.
Director of Education, Huron-Perth County Roman Catholic Separate School Board

THOSE OF US WHO WORK IN EDUCATION have always been committed to providing high quality to the communities that we serve. That commitment continues today.

At the present time, however, education is being subjected to public criticism unheard of a few years ago. Much of the public seems to believe that the whole system of education is neither sufficiently accountable nor committed to quality. How can we explain the apparent contradiction between the views of educators and those of the broader community?

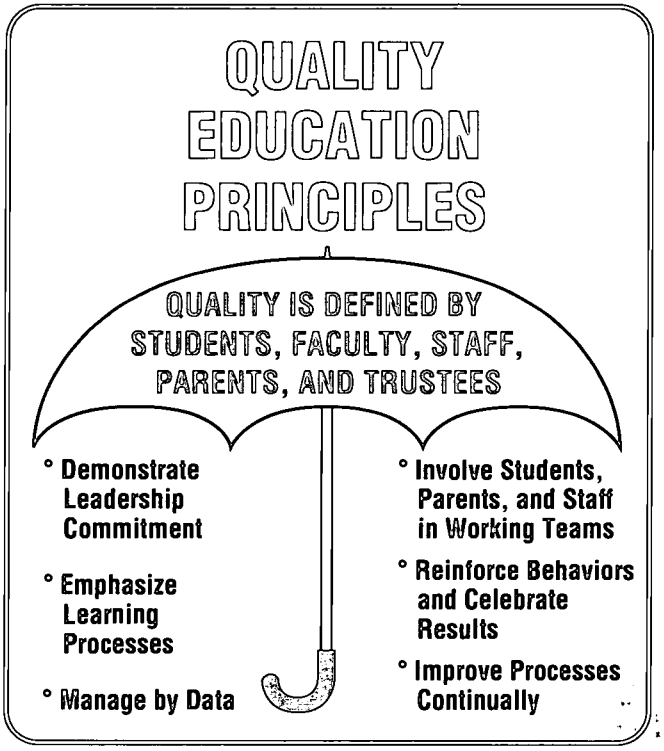
To reconcile this dichotomy, we need to bring people together to develop common understandings. Clearly, the public wants schools which can be seen to develop mature, responsible citizens, able and prepared to cope with the complexities of the twenty-first century. We must work together to ensure that, and settle for nothing less. As a member of the Symposium Planning Committee, I was pleased to work with my fellow educators in the initiation of a continuing project to make quality the focus of the educational system.

For this reason, it is exciting to be part of a joint venture involving the world of business (Kodak Canada Inc.), the academic research community (The Ontario Institute for Studies in Education), and educational practitioners (participating school boards). The educators who participated in the *Symposium on Quality Schools* were pleased to be involved, along with their community partners, in examining the issues, developing a common understanding of what constitutes "Quality" education, and outlining means to achieve this goal.

We are confident that our joint experiences, and the publication produced as a result, *Developing Quality Schools: A Handbook*, will play an important role in moving the educational system closer to the type of quality education which we all desire.

I encourage my colleagues in education to join in this quest to develop schools which we will all recognize as exemplifying genuine quality.

James S. Brown, M.A., Ed.D.



What *Quality Schools* Are

Quality Schools are committed to creating enhanced learning environments through the purposeful and cooperative actions of all individuals engaged in the educational enterprise.

By developing knowledge of the system and processes through which education is delivered, *Quality Schools* are actively engaged in continuous self-improvement and the educational enrichment of the individuals and communities they serve.

The Cover: Six Elements of *Quality Schools*

The cover depicts the six primary elements of *Quality Schools* incorporated in the *Handbook.* The elements are: organizational PURPOSE, LEADERSHIP, TEAMS, PROCESS, CUSTOMERS/CLIENTS, and DATA. Each element contributes to the interactive process through which quality improvements may be understood and developed in educational settings.

The thinking of Dr. W. Edwards Deming forms the conceptual framework for the ideas you will encounter in the *Handbook*. Unfortunately, as Deming himself lamented, his thought has too often been presented as a series of techniques. In actuality his ideas constitute an encompassing pragmatic philosophy which demands a thorough rethinking of what organizations can do and how they can do it best.

One of the founding figures of the Quality Movement, Deming was born on October 14, 1900. After earning a Ph.D. in Physics from Yale University, he went on to a distinguished career that included his formative role in advising the Japanese how to rebuild their post-war economy. In recognition of this work, Deming was awarded the Second Order Medal of the Sacred Treasure by Emperor Hirohito. The Japanese also established the annually awarded "Deming Prize" to mark his contributions to their economic revival.

In the past 15 years, Deming's quality concepts have begun to be applied in North America and Europe. His business and industry consultancies have been numerous and he is credited with the turn-around of the Ford Motor Company which adopted his fundamental premise that "Quality is Job 1". More recently, Deming's quality philosophy, summarized in his "14 Points", has been applied widely in the service sector. Within the last five years, educators have begun to draw upon his work to renew schools, colleges, and universities. Dr. Deming worked tirelessly as an educator and as a consultant beyond his 90th birthday. He died on December 21, 1993.

The Deming Library, a comprehensive edition of video and written materials that teach the Deming quality philosophy, is an invaluable resource for those who wish to further explore his thought. It was also an especially valuable resource in preparing the *Handbook*.

Purpose and Audience

The purpose of this *Handbook* is to provide a resource that will allow all participants in the educational enterprise to understand and to begin the process of quality improvement. The *Handbook* is an "initiating document" intended to help the quality improvement process get under way in your school and in your school system. It is neither exhaustive nor final. Additional information and resources concerning the topics addressed in the *Handbook* are listed at the conclusion of each chapter and as internal references.

While the *Handbook* is directed primarily to the men and women whose vocations are within educational systems, the ideal audience is wider. This audience includes everyone concerned with achieving meaningful and sustained educational improvement.

Using the *Handbook*

The development of *Quality Schools* is not just another educational reform. Rather than offering a prepackaged set of educational initiatives, the *Quality Schools* movement engages practitioners and their external partners in the design, implementation, and monitoring of improvements that demonstrably add value to schools and school systems. It entails a way of thinking as well as a way of doing. To be successful it demands training in both. Accordingly, the *Handbook* is designed to assist readers in understanding and using quality principles so that they may develop cultures of continuous improvement.

The ordering of topics covered by the *Handbook* is significant. Like the *Symposium on Quality Schools* that led to it, the *Handbook* begins with an orientation to the principles through which quality practices may be advanced. In text, graphics, and exercises, it then develops the reader's fluency with key quality concepts by applying them to organizational and educational settings. Those new to the quality movement will benefit by reading the chapters sequentially; those familiar with Deming's development of quality

concepts may wish to read the *Handbook* in accordance with their interests.

The *Handbook* is designed for repeated use by individuals and groups as they define and develop quality in their work settings. Its sections can be recombined or used separately to meet individual and organizational training needs. We think you will find that the *Handbook* bears several re-readings. With each, your understanding of how quality improvements can be designed and implemented will increase. The work of achieving quality, however, only begins with the *Handbook*. It must be given form through the improvement efforts initiated by you and your colleagues.

The Developing Quality Schools Network

The movement towards *Quality Schools* is an ongoing one that exceeds the scope of this publication. In order to provide continuing support for that movement we have established the *Developing Quality Schools (DQS) Network*. The *Network* will facilitate the exchange of ideas and developing practices emerging from the Quality movement as it takes form in school settings. We encourage you to become a part of the *Network*; to share your experiences with us; to contribute your suggestions. Information concerning the *Network* and individual and corporate memberships may be obtained by contacting:

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The Ontario Institute for Studies in Education
252 Bloor Street West
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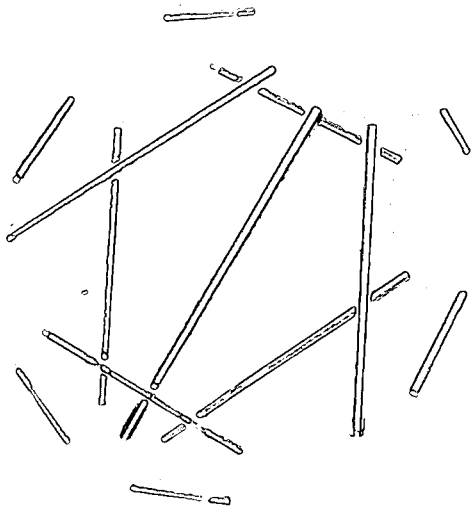


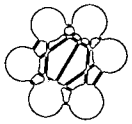
The first step is to
know how to change.

W. Edwards Deming

INTRODUCTION

In this Section:

- *An Invitation to Quality:* ORIENTATION AND BACKGROUND
- *A Point of Departure:* FOUR COMPONENTS OF DEMING'S QUALITY PHILOSOPHY
  1. The 14 Points
  2. The Concept of Process and System
  3. The Impact of Extrinsic Rewards
  4. The Importance of Knowledge
- *Moving On*
- *Core Questions*
- *References and Additional Resources*



WE WELCOME YOUR INTEREST IN QUALITY and your exploration of quality-driven initiatives for educational improvement. The issue of quality is such a basic one that we seldom stop to think about how it shapes our thoughts and our actions. We all strive to realize quality in our personal lives, in our professional work, and in our public and private institutions and corporations. And yet, in discussing quality, we confront a paradox. While the concept seems self-evident and familiar, it can elude definition. We can find it unexpectedly difficult to put quality ideas into practice, especially in the institutional and organizational environments within which we work.

Today, many questions concerning quality are being asked about publicly funded education. Accountability, outcome-based achievement measures, standardized testing, and site-based management are examples of issues emanating from a concern with the wellbeing of our public schools. And while a host of programs promise educational improvement, a consistent framework that might guide and integrate a process of quality achievement has not yet materialized.

The business community also faces issues that arise from a concern with quality. The demands of an increasingly competitive global environment, the need to redefine objectives and operating procedures, and the imperative to adapt to changing societal and client demands are only a few of the many realities business shares with education. Within the business community, the principles associated with Dr. W. Edwards Deming's writings on quality have infused restructuring efforts with purpose and have provided a process to support quality improvements.

Kodak Canada is one corporation that has committed itself to redefining its operations in accordance with quality objectives. When Kodak Canada suggested a partnership to explore the implications of quality management for education, we were quick to respond in the affirmative. We felt that the Kodak experience would provide a valuable resource for developing applications of quality initiatives within educational environments. We also agreed with other educators that Deming's quality principles would add value to coexisting but as yet unconnected educational reforms.

> Without such a framework, teacher participation, team-teaching, site-based management, and cooperative learning, for example, remain individual elements lacking the cohesiveness necessary to transform our schools. (Blankstein, 1992, 71)

Through an informed encounter with Deming's thought, we felt that educators could transform an educational envi-

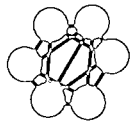
ronment of continual change into one of continuous improvement.

In order to plan how educators and business people together could explore the implications of the quality orientation for Canadian schools, we formed a committee consisting of educational system, Kodak Canada, and OISE representatives. All members of the committee shared a wish to develop quality principles and practices truly compatible with the lived world of educators and their students. We felt that we could only achieve this compatibility by drawing heavily upon the views and the insights of front-line practitioners.

Accordingly, we created a four-day *Symposium on Quality Schools* held on April 14 and 15 and on June 2 and 3, 1994, at the Kodak Canada conference facilities in Toronto. The *Symposium* signalled an invitational process through which individuals concerned with educational improvement would join to learn more about the quality philosophy and to actively explore its potential applications within their work environments.

The *Symposium's* four intensive days consisted of presentations by leading corporate and educational experts. Each presentation was followed by small-group working sessions in which participants discussed the material presented and developed pragmatic ideas about how quality initiatives might be implemented. In the course of the *Symposium*, the attending teachers, principals, directors of education, trustees, federation/union officials, and government staff officials successfully charted a course for making all schools *Quality Schools.*

This publication combines the outcomes of the *Symposium* with a continuing presentation of the quality philosophy. The *Handbook* presents a comprehensive framework for the formulation and the introduction of quality-driven practices that will work in schools and educational organizations. It is our hope that it will speak to educators in an *active* and in an *activating* voice. By sharing its contents with you, we would provide an opportunity to re-think educational practices and to give them a consistent orientation towards quality goals.



›int of Departure:
COMPONENTS OF DEMING'S
ITY PHILOSOPHY

AS A POINT OF DEPARTURE, we will begin with an introduction to four foundational components of the quality philosophy presented by Dr. Deming:

1. the **14 points**,
2. the concepts of **process** and **system**,
3. the impact of **extrinsic rewards**, and
4. the importance of **knowledge**.

Like every aspect of the Deming system, these components are inter-related and mutually reinforcing. In the chapters that follow, the symbiotic nature of the elements in the Deming system will become clear as we develop a framework for understanding, designing, and implementing quality educational practices.

1. The 14 Points

Let's begin at the beginning with a review of Deming's 14 points. The 14 points will recur in many forms in the various chapters of the *Handbook*; they provide the guiding orientations for the quality perspective it presents. The Associated Press graphic that appeared in newspaper memorials marking Dr. Deming's death at 93 years of age in December, 1993, is a useful presentation of these fundamental organizational principles.

Deming's Way

W. Edwards Deming's teachings about business practices, which were exalted in Japan but ignored for years in his native United States, could be reduced to what he called the "14 Points for Management":

1. Create constancy of purpose.
2. Adopt the new philosophy.
3. Cease dependence on inspection to achieve quality.
4. Cease doing business on the basis of price tag alone.
5. Improve constantly and forever the system of production and service.
6. Institute training on the job.
7. Institute leadership.
8. Drive out fear so that everyone may work effectively.
9. Break down barriers between departments.
10. Eliminate slogans, exhortations and targets.
11. Eliminate numerical quotas.
12. Allow pride in workmanship.

AP Photo

13. Institute a program of self-improvement.
14. Put everybody in the company to work to accomplish the transformation.

SOURCE: AP

The 14 points can be restated to bring out their potential applications to educational environments. The following version of the 14 points is derived from *The Deming Library*, a series of video presentations that teach Dr. Deming's approach to organizational improvement. The sample applications are derived from the work of Dr. Anne D. Forester.

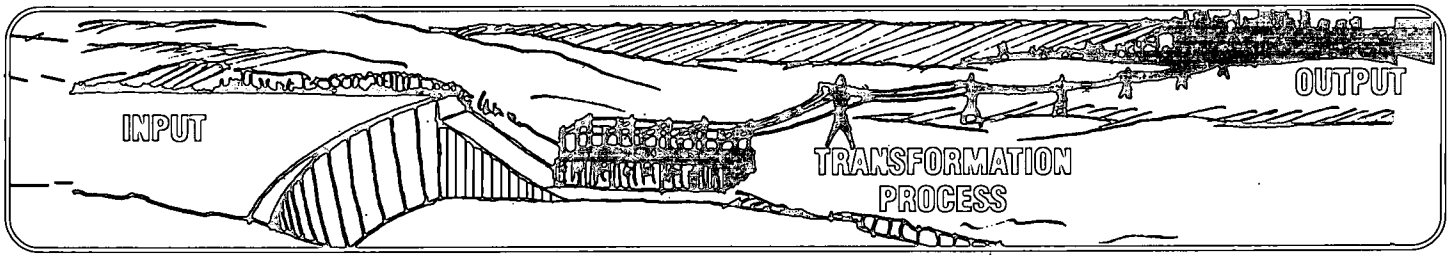
THE 14 POINTS	SAMPLE EDUCATIONAL APPLICATIONS
1. Define purpose at the macro (i.e., system) level and at the micro (e.g., classroom) level in clear, unambiguous language.	Enhance learning for *all* students and make education relevant to their lives both in school and beyond.
2. Everyone, from top to bottom, within the organization must learn the various aspects of the quality philosophy and how to apply it in their work settings.	Shift focus from fixed curricula to a focus on enhanced learning opportunities and practices. Affirm that students are effective learners, build upon their strengths, and create a process that supports life-long learning.
3. The purpose of inspection and monitoring (e.g., testing, system audits) is to ensure that the process is improved; it is not to reward or punish individual performance.	Use process-oriented evaluation to enhance rather than to interrupt learning. Build evaluation into the teaching/learning process between teachers and students, students and peers, and students and their work so that students can develop self-improvement skills and learning independence.
4. Make those expenditures that support purpose and avoid cost-saving measures that are in the long run counter-productive and hence more costly. Make long-term relationships with suppliers (e.g., teachers of earlier grade levels, external service providers, parents) and work with them to improve their inputs.	Foster learning by drawing upon the teamwork of dedicated staff and parents, and upon services available in the local community.

THE 14 POINTS	SAMPLE EDUCATIONAL APPLICATIONS
5. Improve constantly and forever the system through which education is supported and delivered.	Improve the teaching/learning process by observing what is productive for students and by monitoring which processes encourage students to excel.
6. Institute job-related training at all organizational levels.	Provide in-house training that emphasizes all staff working collaboratively to achieve shared purposes and goals.
7. Teach and institute effective leadership styles.	Create self-directing teams of teachers, administrators, and staff to achieve learning objectives and to monitor progress towards their achievement.
8. Drive out the fear associated with performance reviews and create trust so that everyone is willing to take the informed risks associated with learning, innovation, and system improvement.	Eliminate fear of failure, reprisals, ridicule, and embarrassment among students and staff. Everyone should know that learning is the common objective of the classroom, the school, and the system.
9. Optimize the efforts of cross-functional teams to achieve the articulated goals of the educational organization.	Break down barriers between disciplines by encouraging writing, reading, and numeracy development across the curriculum. Encourage students to learn cooperatively by working in teams.
10. Eliminate exhortations, slogans, and targets; improve individual performance by making improvements in the system.	Invite students to discuss the rationale and to assist in developing the process for doing and evaluating quality work, view standards as expectations of key "customers" of the educational system.

THE 14 POINTS	SAMPLE EDUCATIONAL APPLICATIONS
11. Eliminate numerical quotas for success. Instead learn and institute methods for system improvement. Learn the capabilities of the process and how to improve them.	Replace learning objectives that suggest limited goals for learning and develop new ways of exploring, extracting, analyzing, and presenting information and knowledge. Instill curiosity rather than set acceptable limits.
12. Remove barriers that rob people of pride in workmanship; foster pride by encouraging trust.	Create and optimize learning environments through principal and teacher collaboration. Encourage students to develop and to take pride in their work by removing curricular and time constraints.
13. Encourage education and self-improvement for everyone whether the engagement chosen is job-related or not.	Encourage administrators, teachers, and staff to become co-learners and give active support to the idea that all learning can lead to intellectual vibrancy, to personal growth, and to system improvement.
14. Invite broad participation in accomplishing the transformation to a quality agenda.	Encourage and provide the means for *everyone*, including support staff, teachers, administrators, superintendents, directors and trustees, to contribute meaningfully to the quality transformation of education.

The 14 points are fundamentally inter-related. Taken together, they provide a synoptic presentation of the quality philosophy. They form the context within which the individual *Handbook* chapters and their respective points of emphasis are placed. And they underline the significance of improving process in order to achieve sustainable and continuing organizational improvement.

A PROCESS LINKS INPUTS AND OUPUTS; A SYSTEM CONJOINS MULTIPLE PROCESSES



2. Process and System

In discussing quality improvements, Deming consistently emphasized the importance of process and system design as the means to reduce variation. The reduction of variation is the means through which practice can be made to cohere with organizational purpose. But variation can result from one of two causes and confusing the two can have serious consequences.

This is why Deming was so concerned that we learn to distinguish between the *special causes* and the *common causes* of variation. Special causes can be attributed to the actions of an individual in an organizational setting; common causes are artifacts of the system that can only be eliminated by changes in process. The rewards given and the reprimands meted out to organizational participants are often triggered by common causes over which they have no control. These rewards and reprimands are dysfunctional: they look for change in all the wrong places.

Deming reminds us that *over 95% of the problems we encounter in organizations are the result of common causes or problems relating to system design*. While the ultimate responsibility for these problems rests with management, their solution must involve everyone. Those who lead organizations must create opportunities for all participants to contribute to a continuous process of system improvement. In the normative professional organizations that are educational institutions, this emphasis upon participation becomes a critical consideration. But to secure this participation the traditional role played by extrinsic rewards must be reassessed.

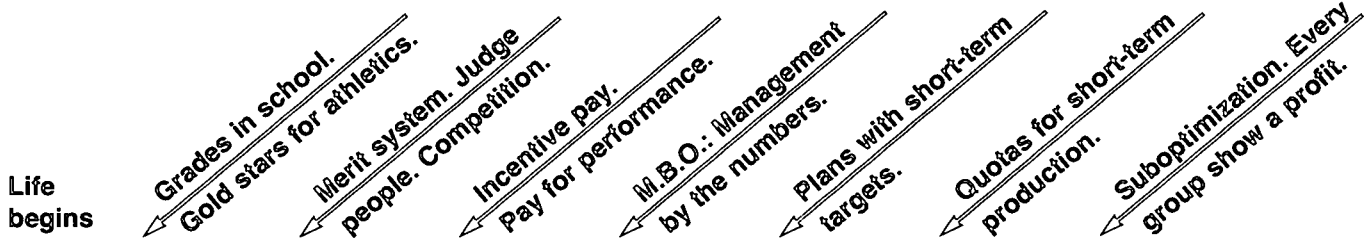
3. Extrinsic Rewards

Dr. Deming consistently called attention to the negative role played by traditional reward systems. As you might imagine from a reading of the 14 points, Deming spoke forcefully against those aspects of organizations that simultaneously diminished the individual and inhibited cooperative efforts. He felt that extrinsic reward systems combined with a short-term, punitive monitoring of individual performance were inherently destructive of the "cooperative individualism" which he viewed as central to the realization of quality.

The graphic reproduced on the next page provides a longitudinal picture of how extrinsic rewards impact upon the typical individual life history. Rather than being a means to improvement, the administration of extrinsic rewards reflects much of what we consistently do wrong within organizations. Deming argued that these wrongs (e.g., grades, merit pay, management by numbers) combine to create a distorted image of the person that has the perverse effect of lowering self-esteem and obstructing collective productivity. As we shall see in Chapter 1, much of the work of leadership in quality organizations consists of fostering a sense of intrinsic motivation through shared vision, purpose, and commitment.

Dr. Deming would often ask participants in his four-day seminars if anyone intentionally tried to do a bad job. Of course the answer was no. Individuals, even under trying circumstances, usually commit themselves to doing their best. But as Deming repeatedly reminded his students, doing your best will not result in increased effectiveness or professional pride if you are working within a poorly designed system. Deming insisted that "profound knowledge" of systems was required in order to achieve the constant improvement noted in the 14 points and to avoid the pratfalls that result from organizational tampering.

FORCES OF DESTRUCTION



These forces create fear, self-defense, competition, humiliation. Competition for highest grades in school. Play to win, not for fun. Learning and joy in learning are smothered. Extrinsic motivation (a day's pay for a day's work) crowds out intrinsic motivation, self-esteem, dignity, joy in work.

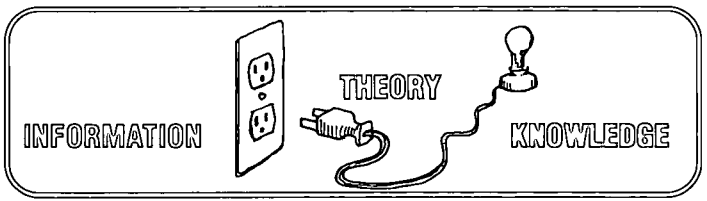
Intrinsic motivation, self-esteem, dignity, joy in work, joy in learning, high at the beginning of life, are crushed by the forces of destruction shown at the top.

From The Deming Library "Discussion Guide" Vols. XIII-XVI

4. Knowledge

Tampering occurs when we begin to alter specific elements of organizational life without a profound understanding of how these elements inter-relate. The result of tampering may lead to an increase in the very problem that the intervention was meant to resolve. An example is a policy designed to stop cross-border shoppers by increasing the level of surveillance and penalty. As we all know, such measures simply lead to a more ingenious set of behaviours on the part of cross-border shopping and to the offering of increased incentives by businesses that benefit from their trade. A parallel example in education is attempting to increase standards by increasing the passing mark from 60% to 70%. This seemingly sensible change may, however, result in two undesirable outcomes: an increase in drop-out rates and grade inflation. These examples remind us that *policies designed to control special causes cannot obviate systemic or common causes of variation.*

In order to understand how system variables, not individual behaviours, are central to implementing quality improvements, Dr. Deming stressed the difference between *information* and *knowledge*. Although it is important,



information by itself cannot lead to the improvement of complex systems. For Deming, *theory* is the integrative medium through which information can be converted into useful knowledge about how a system can be improved. A pragmatic theory of knowledge when amplified by an understanding of human psychology, an appreciation of the importance of systems, and a grasp of the theory of variation can form a foundation for lasting organizational improvement.

While Deming supplies the conceptual framework and many of the ingredients needed to pursue quality initiatives, he realized that each organization would have to approach quality on its own terms. Each system is unique in purpose; it also presents its own array of strengths and weaknesses. *But all systems can be improved.* The

purpose of this *Handbook* is to provide insight into the process needed to pursue quality as a goal within your organization. The development of the knowledge you will need to make improvement a reality is work that must be completed by you and your organizational colleagues.

Moving On

As you read the first chapter, which begins with Bruce Mathewson's telling of *The Kodak Canada Experience: Quality Process; Quality Leadership,* keep in mind the concepts covered above. The Kodak Canada experience provides a concrete example of how the quality philosophy can be applied to achieve organizational improvement. It also provides a base from which we can build applications of quality concepts appropriate to educational settings.

In order to optimize this exploration of quality concepts, we invite you to think actively about how the material in the *Handbook* speaks to your experience within your current work environment. Think about how you might develop the knowledge needed to define and create lasting quality improvements within your educational organization. The task of the four *Handbook* chapters will be to assist you with this thinking and with the doing that will emerge from it.

1. What do you normally mean by "quality" when you use it to describe a product or a service? Why do you think Deming's first quality principle concerns constancy of purpose? What is the relationship between purpose and quality?
2. Using the 14 points as an inventory checklist, in which areas are you and your organization strong? In which areas of practice do you and your organization diverge from Deming's principles? As you respond to this question, try to focus on specific individual and organizational practices.
3. How have extrinsic rewards been used to motivate you and how have you used them to motivate others? How is your work and your work environment affected by whether your motivation is intrinsic or extrinsic?
4. How does change come about in your school and school system? Under what conditions will people change? What do you think holds people back from changing? What specific things would you do within your organization to create a positive environment for quality-driven improvement?
5. How does your organization develop knowledge of process and system? How does your organization use that knowledge? How might your organization enhance the creation and use of knowledge that would result in improvement?

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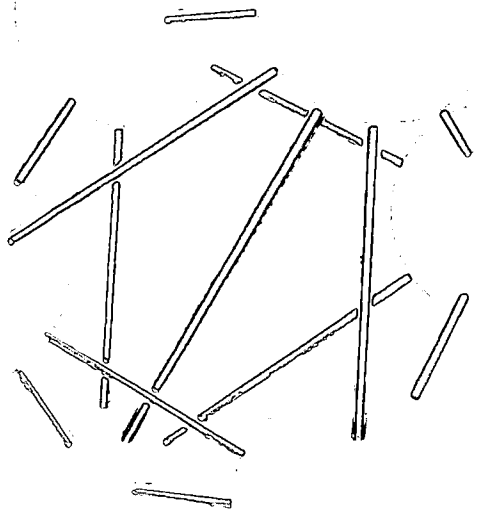


A QUALITY AGENDA FOR EDUCATION AND ITS LEADERSHIP

Defining and Advancing Quality within Educational Settings

Best efforts
are essential.
Unfortunately, best
efforts alone will not
accomplish the purpose.
Everyone is already
doing his best.
Best efforts,
to be effective, require
guidance to move in
the right direction.

W. Edwards Deming

CHAPTER ONE

CHAPTER ONE 2

A QUALITY AGENDA FOR EDUCATION AND ITS LEADERSHIP

Defining and Advancing Quality within Educational Settings

In this Section:

- *The Kodak Canada Experience: Quality Process; Quality Leadership:* Creating quality initiatives for organizational improvement — how Kodak Canada is doing it
- *Quality Through Learning, Data, and Leadership:* Linking learning, data, and leadership to define quality as an orienting goal for educational improvement
- *Quality Leadership: Enhancing Organizational Learning and Focusing Organizational Purpose:* Combining learning and purpose to form a quality leadership profile
- *Core Questions*
- *Key Symposium Learnings*
- *Implementation Checklist*
- *References and Additional Resources*

by Bruce Mathewson, Director of Quality, Kodak Canada Inc.

TAKE YOURSELF BACK TO THE MID-1960S and think of the phrases and images that come to mind when you hear the words, "Made in Japan". "Cheap, junk, low-tech, copies" — these are often our responses. But what if we ask the same question today? "Expensive, quality, high-tech, innovative" will probably be among our responses. Quite a change! In the North American automobile industry we have also seen major changes. In the mid-1960s, the primary concern in buying a car was, "Will it start in the cold weather?" Today, one of the chief issues is wind noise. This is the result of a demonstrable change in quality.

Let us now examine this phenomenon to understand why these changes have occurred and to present an overview of Kodak Canada's approach to this quality revolution.

Several decades ago manufacturing companies had hierarchical, multi-layered management structures. Workers on the bottom end of the organizational chart were considered extensions of the production machines. They were told what to do and how to do it. They were expected to do the jobs assigned to them without question. Inspection operators had the responsibility for catching errors and production operators were blamed for the errors made. The culture was one of "risk minimization". There was no reward for developing a better way to do the job and workers were seldom, if ever, consulted for their ideas and opinions about possible improvements.

The reasons for this type of organization can be traced to several influences. Frederick Taylor's work on "scientific management" prescribed the separation of the planning from the doing of work, and the breaking down of work into small repetitive tasks. The influence of the military style of organization carried over into industry as former military personnel moved into the business environment. Also, schools taught and reflected a rigid form of hierarchy and authority. This type of organization may have been functional in an era when there was a strong post-war pent-up demand for goods, regardless of the quality, but it did little to promote quality in products and services. As long as there was a captive market waiting in line to buy, the issue of quantity superseded the issue of quality. The primary concerns were "How much can you produce and how fast can you produce it?", rather than "How good is your product?"

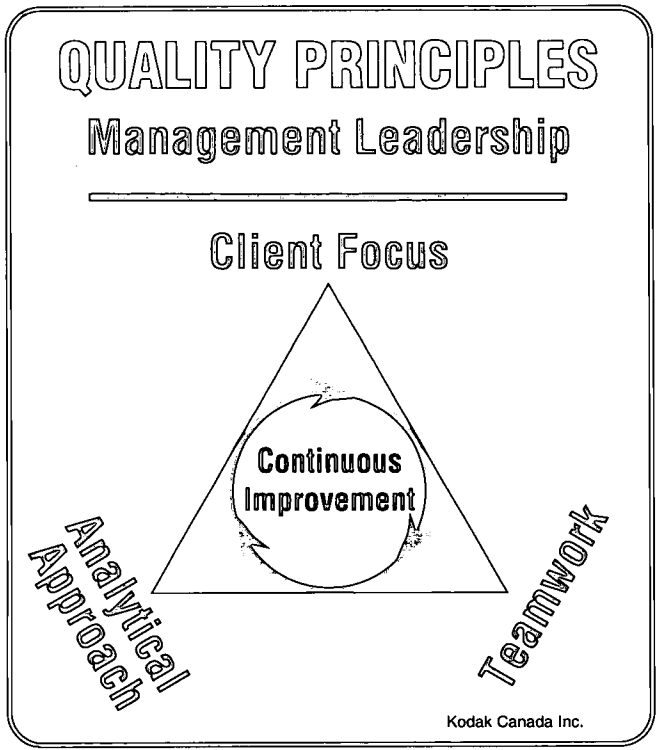
Things began to change in the 1970s. Customers started demanding quality in the goods they were purchasing, and the Japanese began fuelling and fulfilling that demand as they learned how to make high-quality goods at lower costs. Also, employees began demanding increased job satisfaction by being involved in decisions affecting them and their jobs.

In the early 1950s, Japan invited two significant people to assist them in rebuilding their war-torn industrial base: Dr. W. Edwards Deming and Dr. Joseph M. Juran. Deming, a statistician, taught the Japanese that everything that is produced is the result of a process, and that to improve the products requires the improvement of the process. To do this requires an understanding of the processes and the variability within the processes (both "common cause" and "special cause" variation). Processes need to be brought into control to have predictable outcomes and then be modified to improve the outcomes/products. Deming also developed and taught his now famous 14 points.

Juran gave added emphasis to the human side of quality and to the "how" of quality. He taught his Juran Trilogy of Quality Improvement, Quality Planning, Quality Control, and his own ten steps to quality.

The key elements of the Japanese approach, which combine aspects of Deming's and Juran's teachings, to form total quality management are:

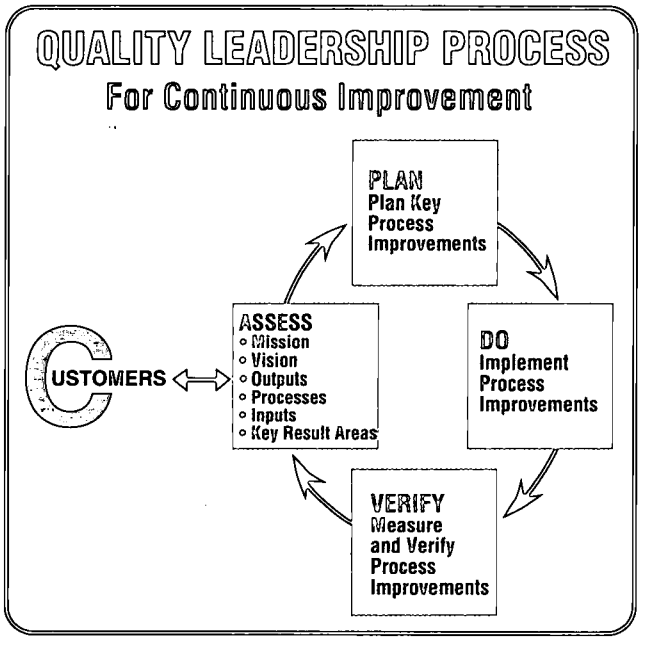
- redefinition of **quality** from "meeting specifications" to "satisfying the customer"
- focus on **process,** understanding the process and the variability, and building quality into the products throughout the process rather than "inspecting out" bad quality at the end of the process
- focus on satisfying **clients/customers** internal and external to the organization
- **continuous improvement** of the processes and of the people who effect them
- **participation** of employees through **teamwork,** empowerment, communication, and the removal of barriers between management and workers, and between staff and line people



- **analytical approach** wherein measurement of key attributes and variables is common practice, the display of **data** keeps people informed, and decisions are based on data collected, and

- **leadership** – a changed role for management and supervision that empowers workers to run their part of the business, and allows them to take responsibility for quality and productivity.

The experience at Kodak Canada Inc. closely parallels the North American situation. Competitive products and services caused us to take note of the new approaches to running businesses. We adopted the corporate *Quality Leadership Process (QLP)* and have educated everyone about the process to enable them to work within their departments or on cross-functional teams to drive improvement throughout the company — in manufacturing, marketing, and support groups. The process for customer-focused continuous improvement starts with the needs of the **CUSTOMER/CLIENT,** and then proceeds through a cycle of **ASSESS, PLAN, DO, VERIFY.** All of the quality elements described above are integral to the complete *Quality Leadership Process.*

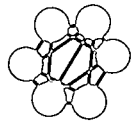


Kodak Canada Inc.

By applying *QLP* in an organized, intentional way, we are transforming the company into a leaner, more flexible, customer-focused organization. Product and service quality has improved and costs have been reduced. Employees are better informed about the entire business and are actively involved in helping the company to continue to improve. We are better able to be a viable contributor to the world-wide Eastman Kodak Company.

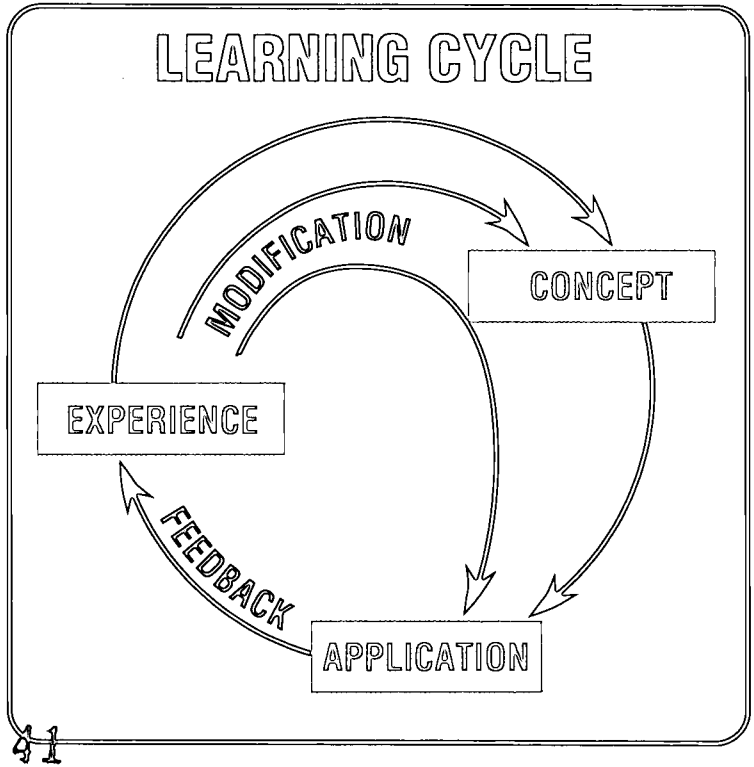
Kodak Canada has a commitment to the communities in which we operate. Due to the internal success of *QLP,* we have begun sharing the process within the health-care community in Canada and have seen successes in various hospitals. It is a natural extension to offer our experience to the educational sector. We rely upon our schools to deliver the quality people whom we hire as employees. Helping our schools to become "quality" schools helps our community, our country, and our company.

Kodak Canada Inc. is proud to have sponsored the *Symposium on Quality Schools* and to be a partner with The Ontario Institute for Studies in Education in producing this *Handbook.* Our hope is that these efforts will stimulate educators to join us on the exciting and satisfying quality journey to excellence.



IN ORDER TO UNDERSTAND THE ROLE OF LEADERSHIP in the quality process, we must begin with how we learn. As you can see from the 14 points and from Bruce Mathewson's description of the *Quality Leadership Process,* learning is the key to improvement in our professional lives. If we can enhance the conditions necessary for learning within our organizations, we can begin to make "continuous improvement" a reality. But before we can enhance learning opportunities, we must understand how learning occurs both within individuals and within organizations.

We learn about most things through a relatively straightforward process. The sequential elements of this process are *experiencing, conceptualization, application,* and *modification.* When we encounter an unfamiliar object or event in our experience, we develop a conceptual model of its structure and its meaning. Then we apply the model through acting. Feedback from the application allows us to modify our conceptual models and to apply them in new ways. That is, after we refine our experience through conceptualization, we ground and modify our concepts through doing. We understand something to the



AN EXERCISE IN LEARNING

Take 30 seconds to memorize the following symbols that represent the letters "A" through "I." When the 30 seconds are up, close the *Handbook* and on a separate piece of paper write the letters "A" through "I" in alphabetical order with the corresponding symbol next to each letter. Return to the *Handbook* when you are finished to check your success at recalling the correct symbol for each letter.

E =
I =
A =
G =
F =
D =
C =
B =
H =

(upon completion, see p. 29)

degree that we are able to use it to achieve purposeful ends. We function implicitly as scientists who sequentially encounter objects and events, analytically understand the forces that shape them, and then apply our findings to achieve desired outcomes.

Deming's distinction between *information* and *knowledge* is central to the process of learning, especially in learning how to improve organizational processes. Because we gather information one piece at a time, it is often difficult to understand how individual pieces of information interact to form an encompassing system. However, without an understanding of the system within which information is embedded, we can only make imperfect use of even good information. Although we may understand a piece of information, we may well draw the wrong conclusions about how it affects the system. These wrong conclusions lead to the tampering described above rather than to the predictable achievement of our goals. An example of such tampering is contained in the anecdote "Making Small Problems Big".

We can illustrate the difference between information and the power of systemic knowledge by inviting you to complete the exercise on this page.

Today's problems come from yesterday's solutions.
Peter Senge

In Mr. Kipling's fifth-grade science class, five kids were behind in their work. Mr. Kipling contacted their parents and found they were willing to work with the kids. He sent home the textbooks with the children, along with special notes on what to cover. The kids progressed significantly in their work. As the year ended, Mr. Kipling reminded them to bring back the books. Three of them forgot.

Mr. Kipling had a thousand things to do and left the next week to spend the summer in Canada.

When school started again in the fall and it was time to hand out the science books, they didn't have enough. Mr. Kipling's former students had since moved on to middle school in another building and Mr. Kipling was unable to recover all the books.

So, the school fixed the problem forever. It created a policy to apply to all cases: books could not be taken home for extended use.

§

Jennifer finished first grade at an okay, but not so great, level. Her parents were educators and well aware of how important it was for Jennifer to keep up at this stage of her education. They wanted to work with Jennifer over the summer to help improve her reading skills, and they wanted to request Mr. Short for second grade. They knew Mr. Short's teaching style would be effective for Jennifer's learning style.

So, they called the school and asked to borrow some reading books.

The person at the school said she was sorry, but the school had a policy of not lending books for home use.

Jennifer's parents offered to pay for any books they did not return. The person said she would have to ask, since she didn't have the authority to interpret or change the policy.

They then asked about Mr. Short and were told that the school also had a policy that grouped kids in classes according to ability. The person said, "You can't have the books *and* Mr. Short: if you borrow the books, Jennifer will advance in her reading skills and be in the top reading group. And Mr. Short doesn't have the top reading group."

Their request for a teacher would have been okay, they were told, if Jennifer remained at her current, not-so-good reading level.

So the school's policies told them they couldn't use a book to help their daughter advance. And if they did, they would be punished by another policy.

§

Jennifer's parents were upset. They called the principal and complained. And then they complained to the superintendent.

That got action. The principal called them the following week to tell them it would be okay. They could have the books *and* Mr. Short.

Jennifer's dad asked how the school had rectified their concerns. The principal proudly explained that they had figured out a way to make it work. They simply moved all the kids so that Mr. Short had the top reading group.

And then lots of parents, kids and teachers got mad.

§

Special, one-time problems got big-time solutions. And those big-time solutions created bigger-time problems.

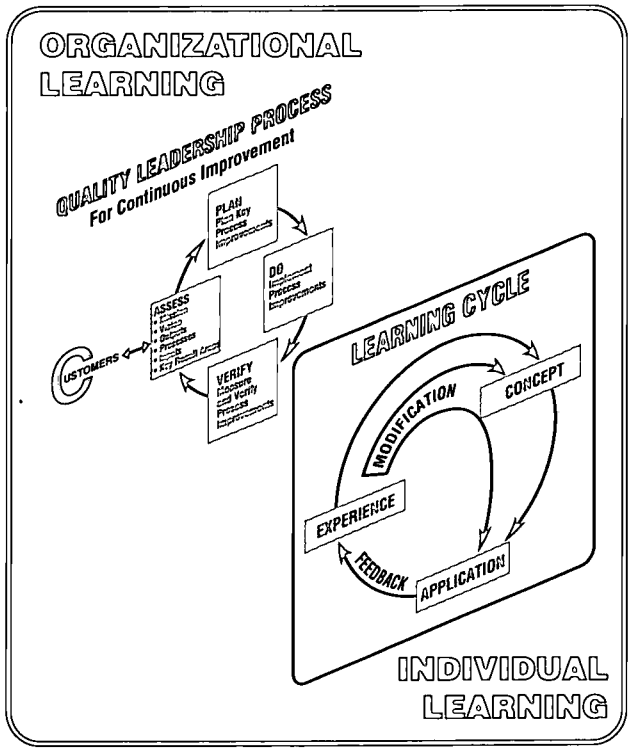
When we have a system model that organizes individual bits of information, learning and insight are advanced. We understand how things work and how individual occurrences are interlinked. Once we have developed a conceptual model of the system, we can move more effectively to create the knowledge needed to implement desired change.

But there is one more hitch. Conceptual models are imperfect. In fact, Deming reminded his students that all conceptual models of organizational realities are *wrong!* He would add, however, that some models *work* better than others. Our task, then, is to develop workable system models that will advance the goal of improvement. The building and verification of system models will be covered in detail in Chapters 2 and 4 of the *Handbook*. For now, it is enough to remember that we don't have to delay the quality improvement process until we create a perfect model of the system. Perfect system models don't exist! We must, however, verify both our modelling and our improvement efforts through the systematic collection of data. Much as in the learning model given above, we must verify our concepts and their applications through sound feedback. Only then will we know that we are able to direct our improvement efforts purposefully.

THE SYSTEM ANSWER

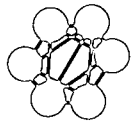
How did you do in completing the exercise on page 26? Even if you did well you probably encountered a stressful test of memory as you worked to recall the individual symbol that corresponded to each letter. Had you understood the system within which the code symbols are embedded, you would have had an easier time of it. Take a look and see why.

A	B	C
D	E	F
G	H	I



Data or the systematic tracking of change is the key to understanding the adequacy of our systems models and the effects of our actions. A phrase often heard in organizations that have adopted quality processes is, "In God we trust; all others bring data!" In other words, the verification of system modelling and successful intervention must be grounded in data gathered from systematic observation. In order to make this verification possible, we must translate ideas into measurable outcomes and develop suitable tracking procedures. While the monitoring of quality improvements will be covered in Chapter 4, we should keep in mind that our models of systems *and* the interventions we make to create quality improvements must be supported by data. The constant reference to data will allow us to continuously refine our process improvements and system outcomes, and to avoid self-deception.

The *Quality Leadership Process* (Assess-Plan-Do-Verify) adopted by Kodak Canada is a mirroring at the organizational level of the learning process that occurs in individuals. We are familiar with this process from our immediate experience. Whether we are learning to change a flat tire, to drive an automobile, or to embark on a complex journey, the process remains constant. We routinely assess, plan, do, and verify. We also modify our



actions in accordance with continuous feedback. It is through this process of continuous adjustment that we improve our ability to effectively achieve our goals. By enhancing our learning, we improve the probability that we will reach our goals more effectively.

The centrality of learning to organizational improvement has led to the now rich literature concerning learning organizations. Such organizations develop and enrich the opportunities to learn from collective actions and the feedback or data that emerges from them. It was no surprise, then, that learning and its role within organizations were prominent themes when Dr. Kenneth Leithwood addressed the topic of "Total Quality Leadership" during the *Symposium on Quality Schools.* Total quality leaders are leaders who can effect purposeful institutional transformation through the enhancement of learning at all organizational levels.

Quality Leadership:
Enhancing Organizational Learning and Focusing Organizational Purpose

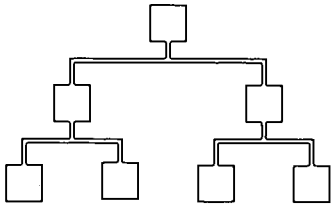
LEADERSHIP FOR QUALITY SYSTEMS LOOKS DIFFERENT and works differently than leadership in traditional, hierarchical organizations. The transformation to a quality organization involves a general change in the structure and function of work. That is, the work being done is somewhat different and it is being done in different ways. This is especially so for the work associated with leadership. In order to understand why quality leadership must differ fundamentally from traditional leadership roles, let's go back to a previous point.

We noted in the Introduction that over 95% of the problems encountered in organizations are the result of common causes or problems relating to system design. That was the bad news. The good news is that improvements in system design have an overwhelming impact upon the effectiveness of organizational participants. And there is more good news. While organizations may be the source of system error, they also embody the knowledge needed to generate system improvement. Once "surfaced" and focused, the implicit knowledge embedded in organizations can fuel the process of continuous improvement called for in the 14 points.

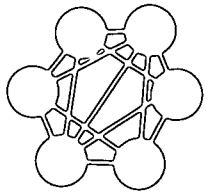
The ability to surface embedded knowledge is critical to initiating the process of quality improvement. But, as Bruce Mathewson noted, this surfacing is inhibited by many existing organizational constraints. The old hierarchical organization of work that located thinking at the top of the organization and doing at the bottom militates against this process. Similar blockages are created by "siloing" or the structural segmentation of organizational subunits and departments. This siloing results in self-interested domains rather than in the cooperative networks needed to advance a common purpose. How then can we move from old styles of organization that inhibit organizational learning to new styles that make it a primary organizational process?

A thorough re-thinking of leadership and the organizational work that leadership can and should perform is a pivotal part of the answer to this question. This re-thinking entails a reconsideration of how we commonly understand both organizations and their leadership. In explaining how our understanding of organizations affects our definition of leadership, Ken Leithwood made reference to the book *Images of Organization* by Gareth Morgan. He focused on Morgan's distinction between thinking of "organizations *as* brains" and thinking of "organizations as entities *with* brains."

HIERARCHICAL vs INTERACTIVE MODELS OF ORGANIZATION



Hierarchical Organization



Interactive Organization

The image of organizations as entities with brains implies that the cognitive functions are at the top of the organization and that knowledge resides exclusively in a structure singularly equipped to develop intelligence. The brain functions as the executive which issues commands to the appendages whose only function is to obey. This thinking is reflected in the typical organizational chart in which all lines of responsibility trace ascending and converging paths to the chief executive officer. These charts make it clear that knowledge flows down and obedience flows up: those at the top know best, those at the bottom know least. The connection between thinking and doing is ruptured.

When we think of organizations *as* brains, we develop a significantly different conceptual model. The basis for this difference is a *distributional* rather than a *specialized* understanding of the capacity for intelligence and learning. Researchers, for example, have found that the human brain distributes the capacity for intelligence throughout its structures. This is why a person who suffers brain damage from a stroke may restore lost functions by utilizing other parts of the brain. The distribution rather than the specialized concentration of learning capabilities appears to enhance survival, adjustment, and improvement.

If we think of organizations as networks of distributional intelligence, we de-emphasize hierarchy and re-value the potential contributions of the total system. We begin to repair the rupture between thinking and doing. The de-emphasis of hierarchy, in turn, calls for both a distribution and a redefinition of leadership functions. By interpreting the function of educational administration as *learning maximization* rather than as *risk minimization*, we can begin to build a leadership profile commensurate with continuous improvement rather than with constrained obedience. Effective leadership, then, must be reinterpreted as the ability to maximize and focus learning at all organizational levels.

In place of the old command model that defined leadership as ensuring conformity, compliance, and control, leadership must be reconfigured to reflect functions central to quality considerations. In order to become the catalyst needed to surface and focus knowledge embedded in the system, organizational leaders must begin to work in new ways. Stephen Murgatroyd and Colin Morgan (1993, 60) have given positive expression to this change in leadership functions. From a quality perspective, they note:

> there is the need to see leadership as a systematic basis for facilitating the work of others (empowerment) so that they can achieve challenging goals (performance) that meet or exceed the expectations of stakeholders (strategy).

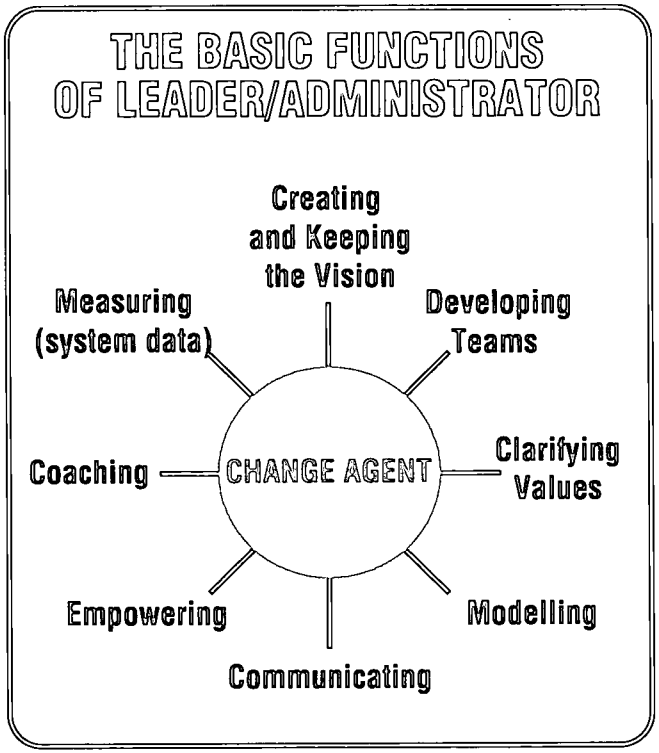
In drawing upon the latent expertise and insight embedded within organizations, educational leaders release the capacities and the latent talents of organizational participants. Rather than managing people through mechanisms of compliance, those in administrative positions must begin to manage a process which itself is made visible through the shared insights of individuals at every organizational level.

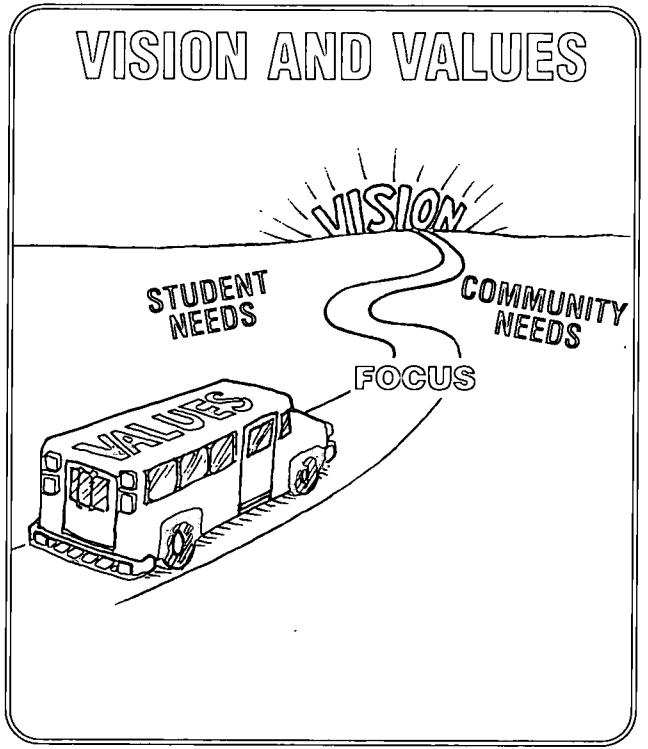
To develop useful knowledge of system elements, leaders must draw upon the learnings of those closest to primary processes, key clients, and core constituent groups. Through effective communication and trust-building leaders can begin to understand, coordinate, and utilize the experiential knowledge of organizational participants. Leaders listen, encourage, coach, train, support, and articulate values and purposes, in order to generate a cooperative culture which supports quality improvements. They build teams, enhance communication, assist in con-

flict resolution, foster prudent risk-taking, track system data, build a tolerance for mistakes, and maximize learning opportunities.

In all of these activities leaders must maintain the purposeful focus of the organization. That is, they must bring the many talents present within an organization to support the achievement of common goals. This coordination of talents is begun through the collaborative building of a vision or statement of purposes and goals appropriate to the system. A vision statement should balance the ideal with the practicable. In creating a vision of what could be, the statement should not ignore what has been. Stated positively, the process of developing a vision statement should recognize and honour existing organizational practices and features of value. The articulation of the vision should engage the imagination of organizational participants by suggesting what is possible and it should invite their subscription by building upon what is practicable. It should challenge individual and organizational capabilities, and chart a path towards the ends it articulates.

In practical terms, the vision should be rendered as a concise statement of collective purpose that is straightforward and without empty clichés. The statement itself should emerge from





extensive consultation with organizational participants who should have every opportunity to help shape and communicate it. In a very real sense, the vision statement must belong to everyone in the organization. It must emerge from a process of genuine listening and careful guidance. The creation and circulation of a vision statement can signal either the first step in a developing practice of collaborative leadership or it can create a cynical resistance to change which may never be overcome in the course of a given leader's tenure. As in all other quality improvements, it depends on the process used and the commitment of leadership to a changed and changing view of what an organization can become.

Many of the elements of leadership in quality organizations are consistent with the attributes and functions of transformational leaders (Bass & Avolio, 1994; Leithwood & Steinbach, 1993; Leithwood, 1992; Bass, 1985). In fact, we may consider the characteristic attributes of transformational leadership as constituting the necessary foundation for the realization of total quality leadership. The elements of transformational leadership most pertinent to total quality leadership include:

- the articulation of a **vision** or statement of organizational purpose,

- the development of **cooperation** in working towards **common goals**,
- the **challenge** to all organizational participants to achieve **high performance expectations**,
- the modelling of **values** and behaviors consistent with organizational aims and ambitions,
- the encouragement of everyone to **re-examine** existing work patterns and procedures, and
- the provision of personal and professional **support** for individual staff members as they seek to contribute to the realization of organizational goals.

Leaders in quality organizations share the transformational leader's task of building a vision-based organizational culture which fosters the development of cooperative working patterns. Like transformational leaders, they seek to develop an organizational climate in which individuals are motivated by personal challenge and commitment rather than by extrinsic rewards. But leaders in quality organizations add the following three elements to those associated with transformational leadership:

- the definition of quality as meeting the needs of internal and external **customers** or **clients,**
- the shift from individual efforts to **teamwork,** and
- the development of effective **process models** and the means to **monitor** their utility through the collection of **data**.

These key elements are the respective subjects of the three remaining *Handbook* chapters. Our next chapter, which focuses on the role of the customer or client in determining organizational process and system design, will be perhaps the most challenging element of the quality process to translate to educational settings.

The model of *Total Quality Leadership* involves a reorientation of leadership roles at all organizational levels. We can illustrate this by examining how existing teaching practices would be transformed by applying quality principles.

THE BOSS TEACHER

Decides what will be taught and how it will be learned.

Keeps strict control of all aspects of the classroom.

Decides on the rules and how to enforce them.

Keeps a strong focus on the curriculum to shape lessons. Is more concerned with the "what" of learning than the "how."

Relies heavily on Cazden's IRE model — teacher Initiation, student Response, teacher Evaluation.

Tries to have all students work on the same job at the same pace.

Has students work individually.

Is the chief information giver and initiator of jobs, themes, or projects.

Relies on outside motivation — grades, praise — to urge students to work hard.

Sees education as serious business that needs to be shaped by a knowledgeable leader — the teacher.

Generally feels that students must be closely supervised to ensure that they will do the work.

Relies heavily on tests, work sheets, and exams to evaluate students' progress.

Sees record-keeping and evaluation as being the teacher's job.

Holds the power in the classroom.

Focuses on the end product of learning.

Manages the curriculum.

Anne D. Forester, Ph.D., June 1991
Derived from Dr. William Glassner's 1990 article on the work of Dr. W. Edwards Deming. *Phi Delta Kappan*, February 1990

THE LEAD TEACHER

Sets the framework for learning but leaves room for genuine options.

Encourages students to make choices about their learning.

Discusses reasons for rules and asks for students' input to formulate and enforce these rules.

Observes learners, their needs and interests to foster learning that fulfills students' needs as well as curriculum requirements.

Models the skills to be learned and uses experimental, hands-on work.

Engages students in discussions about the relevance and quality of work undertaken in class. Makes information sharing reciprocal.

Offers choices that fit the work to students' interests, abilities, maturity and experience.

Supports the uses of teamwork and cooperative learning.

Encourages students to share information and to initiate projects.

Develops students' inner motivation to excel. Trusts them to work to the best of their abilities.

Sees learning as exciting, fun and arising from student needs and curiosity stimulated by interesting work.

Allows students to work in their own ways and at their own pace.

Uses informal observation and ongoing anecdotal records to evaluate students' progress and to enrich information derived from exams.

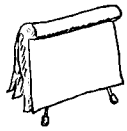
Has students keep many of the records and uses students' self-evaluations to augment teacher observation.

Empowers students to work freely on academic tasks while observing social rules that have been established cooperatively.

Focuses on the process of learning.

Empowers people.

1. Which aspects of the Kodak Canada experience described by Bruce Mathewson do you think apply to educational settings? How might the *Quality Leadership Process* be applied to improve support service, classroom, and administrative work situations in your school or school system?
2. To what changes would a *distributional* rather than a *specialized* understanding of intelligence lead within your organization? How would you integrate these changes in an organizational diagram? Can you develop sample functions that would illustrate how work might be done differently?
3. How is learning supported now by the structures and the assignment of functions within your organizations? How might your organization be restructured to enhance and focus the learning needed to advance continuous improvement?
4. What steps might your organization take to move from a culture of *risk minimization* to a culture of *learning maximization*? Can you develop an implementation process through which these steps might be taken?
5. How would you describe the critical factors of effective educational leadership? Can you translate these factors into specific practices that are applicable to leadership functions at various organizational levels? How are these practices different than those that now exist?



Key Symposium Learnings

- *quality is continuous learning improvement for life*
- *we must first become the change we seek*
- *be actively forgiving of where we were*
- *all changes must be supported by data*
- *what can be is more important than what is*
- *quality demands an integrated approach to problems*
- *everyone is a leader*
- *you can't solve a problem at the same level of thinking that created it*
- *staff development = school development*
- *we need to see the problems before we can create the solutions*
- *we need to connect vision to content & process*
- *build quality in*
- *attitudes need to change before schools will change*
- *people need to feel secure & confident to change*
- *continuous improvement = continuous building of knowledge*
- *reality must reflect vision*
- *now is the time to start*

- ❑ A collaboratively developed definition of what "Quality" means to your organization, its staff, its community, and key constituent groups
- ❑ A clear and concise vision statement that incorporates institutional purposes, goals, and values, and which charts a path to continuous improvement at all school and school system levels
- ❑ A strategy for putting the vision statement into practice, including a working understanding of the quality process by the senior administration and their commitment to establishing a culture of continuous improvement through learning maximization and prudent risk-taking
- ❑ An understanding of the critical factors in "Quality Leadership" and a commitment to distributing leadership, learning, and responsibility throughout the school and school system
- ❑ A survey of the practices in place now that either fit the quality framework or which can support quality-oriented initiatives
- ❑ An action plan for continuous improvement designating both general improvement initiatives and specific improvement targets that will be undertaken
- ❑ An ongoing program through which all staff are learning about the "what," "why," and "how" of quality improvements and their implications for school structure and the way things can be done
- ❑ Establishment of a resource center which contains literature and support material concerning *Quality Schools* development
- ❑ Linkages with other private and public sector organizations in the immediate community that are working to implement quality management practices; investigation of how other schools and educational organizations have pursued quality improvements
- ❑ An assessment process to determine where and how well movement is being made to realize quality improvements

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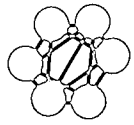

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CHAPTER TWO

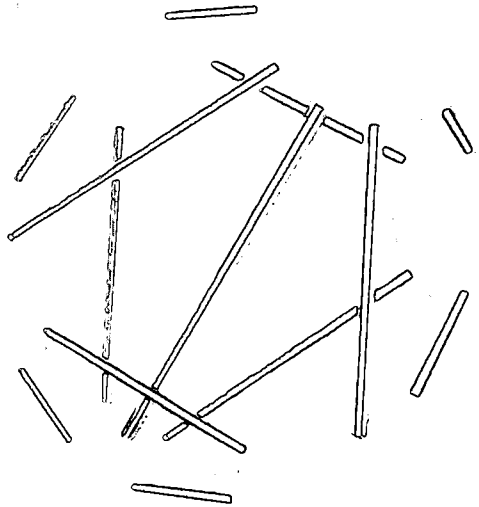
CUSTOMERS, SUPPLIERS, AND PROCESS

Three Key Concepts for Developing Quality Schools

Ways of doing business with vendors and with customers that were good enough in the past must now be revised to meet new requirements of quality and productivity.

...any substantial improvement must come from a change in the system...

W. Edwards Deming



CHAPTER TWO

CUSTOMERS, SUPPLIERS, AND PROCESS

Three Key Concepts for Developing Quality Schools

In this Section:

- *Customers, Suppliers, and Experts*: understanding three terms central to quality improvement and their applications within educational settings
- *Understanding and Diagramming Customer-Driven Processes and Systems*: learning how to perceive and depict systems as a series of inter-related processes
- *Building Relationships with Customers and Suppliers*: developing means for working with suppliers and for listening to, anticipating, and acting upon customer/client needs and aspirations
- *Core Questions*
- *Key Symposium Learnings*
- *Implementation Checklist*
- *References and Additional Resources*

WE ARE ALL CUSTOMERS; we are all suppliers. If we were totally self-sufficient and needed nothing from our social and physical environments, we would not know what being a customer or a supplier could possibly mean. Customer-supplier relationships would simply not exist. But we are not self-sufficient. At the most basic level, our survival is dependent upon the complex set of relationships we develop with the world of which we are a part.

As we move through a lifetime, we draw extensively upon our human and physical environments in order to sustain and enrich our capabilities and our knowledge. In turn, we contribute to both so that they may continue to provide for our needs and the needs of others. We take from and we give back; we reap and we sow; we consume and we provide. Stated another way, we routinely act as customers and suppliers in the many interactions that constitute our personal and professional lives.

Before exploring their applications within educational organizations, we will begin with a general examination of the twin concepts "customer" and "supplier". The two terms are twinned by their reciprocal relationship: we cannot define and discuss one without invoking the other. The supplier seeks to provide what the customer needs; the customer makes use of what the supplier provides. The two are dynamically inter-related by the processes that join them.

The processes which add value to products or services bring customers and suppliers into a potentially infinite series of inter-relationships. In receiving a product or service, the customer benefits from the value added by the supplier. But in order to add value, the supplier has antecedently acted as a customer by drawing upon materials, technology, and information created or developed by others. Similarly, the customer who benefits from the value added by the supplier will act as a future supplier for yet another customer. If we look at the educational process from the macro level of a lifetime or from the micro level of a classroom interaction, we can abstract multiple and sequential manifestations of alternating customer-supplier relationships.

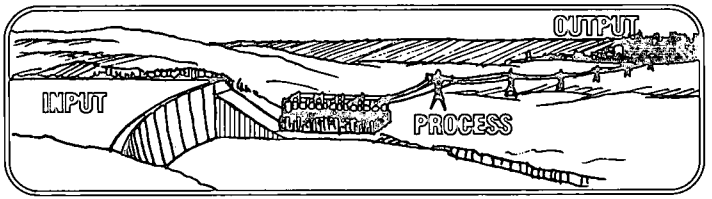
By using the words "customer" and "supplier" we do not, however, presume to reduce the complexities of life to the polarities of exchange relationships. Rather, we use both terms as heuristic devices: that is, as conceptual conventions or functional metaphors whose application allows us to gain understanding and knowledge — in this case of

the dynamics of organizational processes. Their application affords insight into the process interactions which shape organizational practice and thereby provides opportunities to make meaningful organizational change. By using these concepts as tools for analysis, we can begin to generate quality-oriented organizational improvements.

The customer-supplier heuristic necessarily reflects the fluid nature of social transactions. That is, an individual is never exhaustively defined as either a customer or a supplier. The customer in one setting is the supplier in another and *vice versa.* The student who is the customer or client in one classroom may act as the supplier when he presents a paper for discussion in another. The principal who is the supplier of information concerning student attendance patterns to his/her superintendent is also the customer who receives collated information about classroom attendance from his/her secretary.

By applying the customer-supplier heuristic to ordinary conversation, we can see how a process can be redescribed so that we may find opportunities to improve or add value to it. In a dyadic conversation, we act as a customer when we listen and seek to understand our partner's words. We act as a supplier when we contribute to the conversation by exploring the implications of our partner's articulations or by phrasing new thoughts. By separating these roles we may gain insight into how the conversation works and how it may be enhanced. For example, we might alter particular phrasings if we learn from our partner that they obscure our intended meaning. When we increase mutual understanding by making such adjustments, we can say that we have *added value* to the conversation. As a supplier we have responded to the needs of our customer in order to achieve a common purpose. Similar applications of the customer-supplier heuristic may be made to the interactions and processes that constitute organizations.

Like "inputs" and "outputs", "suppliers" and "customers" are linked by purposeful processes. In the Introduction we used the following graphic to illustrate how inputs and outputs are mediated by a transformative process.



Schematically, this mediating relationship may be expressed as follows:

INPUT ⇨ TRANSFORMATIONAL PROCESS ⇨ OUTPUT

Let's use this schematic to see how a process brings together inputs and outputs. The transformation made possible by a pencil sharpener, for example, requires the input of a dull or new pencil. The output is a sharpened pencil ready for use. The transformative process adds value to the input by creating a usable or enhanced output. We can extend this form of analysis to all organic, mechanical, and social processes. To the right are some examples. By using this diagrammatic technique, we can develop insight into how a process both shapes and is shaped by inputs and outputs. We will also see that every process presents an opportunity to add value to what enters it as an input.

EXAMPLES OF TRANSFORMATIONAL PROCESSES

new pencil	pencil sharpener	pencil with fine point
photographic film	developing & printing	pictures
soiled laundry	washing & drying	clean laundry
flower seeds	planting, watering, nurturing	flowers
people	teaching & learning	education/ knowledge

Try applying this analytical sequence to educational settings by diagramming how you transform inputs into outputs of increased value in your daily work. Use this format to diagram specific processes that show how you add value to "inputs".

If we add a dimension to the graphic reproduced above, we can show how customers and suppliers are also interrelated through the medium of process.

The term "supplier" in this graphic is used to indicate the source of inputs; the term "customer" is used to indicate the receiver of the value added to the inputs through transformational processes. As the graphic illustrates, the relationship between customer and supplier as well as the expectations that each has of the other are shaped by the process that connects them. The process in turn is shaped by the desired output and conditioned by the quality of available inputs.

We can apply this graphic to explore how organizations function within a context whose limits are formed by the supplier and the customer. Begin by making a sheet of paper that looks like this:

Organization	Supplier	Input	Process	Output	Customer

Working individually or in groups, fill in the appropriate columns for the following systems: a laundromat, a restaurant, an automobile service station, a hospital, a radio station, and a university. Complete the entries for each organization by *beginning with the output, moving next to the customer, then to the input, and then to the supplier.* List several entries for each heading. Finish the exercise by listing some of the processes used by the organization to achieve its outputs. For now, don't worry about defining the inter-relationship of various process elements; just list them. Take your time and be as comprehensive as possible.

In completing this exercise, you have gained practice in describing organizations and their operating contexts in terms of suppliers, inputs, process, outputs, and customers. When you depicted the university in this fashion you might have produced something like the following set of lists:

Organization	Supplier	Input	Process	Output	Customer
university	*professors*	*knowledge*	*student recruiting*	*credentials*	*parents*
	administrators	*buildings & grounds*	*admissions*	*knowledge*	*industrial research & development*
	support staff	*student services*	*planning & organization*	*learning*	*employers*
	donors/ benefactors	*housing*	*registration*	*character*	*society*
	board of governors	*special facilities*	*teaching & learning*	*experience*	*professions*
	learners		*assessing learning*	*prospective employees*	

Rather than reading these entries as vertical lists, try reading them horizontally or across in order to see how they might inter-relate. Develop a sense of how each vertical set of elements exists in relationship to the block of elements next to it.

We have an in-built tendency rooted in our language training to read horizontally from left to right. This tendency is reinforced by our commonsense understanding of how things happen in organizations. We are accustomed to thinking about organizational activity in the sequence: inputs, process, and outputs. In terms of production, this sequencing is chronologically correct. That is, inputs come first and outputs come last; suppliers precede process and process precedes customers. But this chronological sequencing may obscure matters of great importance.

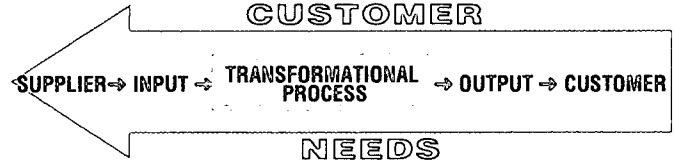
Because outputs are chronologically the last item, we tend to regard them as the only possible results of an existing system of production. We think of outputs as obvious and needing little consideration. For example, we take it for granted that the object of schools is to produce graduates. But there are dangers when we operate within such fixed and often unconsidered presuppositions. When we remove outputs from debate and reformulation, we presume a final knowledge of what we can and should do. Once we fix and finalize our outputs, we may think that our only task is to produce more of them with greater speed and efficiency.

We are all familiar with the parabolic example of the buggy whip factory that accepted the obvious tautological conclusion that its business was to make buggy-whips. Unfortunately, when horses were no longer the primary means of powering vehicles, the factory went out of business. But things might have been different had the managers of the buggy-whip factory understood their business as the making of vehicle acceleration devices. Such a

reframing of objectives might well have allowed its engineering department to think about the acceleration control technologies required by the nascent internal combustion engine. Rather than going out of business, the factory might have become a producer of the carburetors and, later still, the fuel injection systems needed to regulate new forms of horsepower.

When we fall into fixed ways of thinking about what we do and how we do it within organizations, suppliers and customers are usually thought of after the fact and in a secondary manner. We develop purchasing departments to deal with the former and marketing departments to entice the latter. Neither supplier nor customer is integral to a process that appears either unalterable or without need of change. When we remove the customer from the determination of outputs, we may — like the buggy-whip factory — continuously improve a product that has declining extrinsic value. If we do not pay attention to the emerging needs of customers, continuous improvement will not, by itself, spare us the fate of corporate failure. When we assume that suppliers are interchangeable, that process is fixed, that outcomes are known, and that we will always have a customer for our product, our concern with quality atrophies. Our organizational survival is endangered.

By asking you to complete the columns in an order starting with the output and the customer, we were suggesting that there is an alternate and useful way to understand organizations. This complementary alternative involves reversing the way we normally read process. Applied to our diagrammatic graphic, it suggests that we may gain understanding by reading it *from right to left.*



This reading, like the *Quality Leadership Process* used by Kodak Canada, begins with the customer. The perception of customer needs determines the outputs, drives the process, specifies the needed inputs, and conditions the selection of suitable suppliers. A very important benefit of this reading is that it allows *customer needs to operationally define quality.* Like the 14 points, this concept is easily

phrased but its implications for organizations are profound and often difficult to put into practice. It is easier to say than it is to do. There are many obstacles that stand in the way of allowing customer needs to play a determinant role in what organizations do. A primary obstacle is formed by our understanding of "expertise" and the privileged status we assign to it.

"Expertise" is a concept that we often use, but which we seldom think about systematically. Typically we regard expertise as an attribute or property lodged in certain individuals who have developed special knowledge of a defined set of phenomena. It is a commodity that most of us do not possess and which we pay experts handsomely to share with us. We regard ourselves as speaking in a passive and an interrogative voice, while expertise speaks in the active and the imperative.

This understanding of expertise contains elements of truth, but it is also misleading. While experts can often draw upon extensive experience to provide insight into the structure of a problem, they can seldom tell us what to do or why we should do what they suggest. They can provide a range of information, conceptual orientations, and usable techniques, but it is the individuals within an organization who must decide which of these offerings will advance the purposes and goals *they* seek to accomplish. Perhaps more importantly, the value of expertise is dependent upon our motivation and our ability to make use of it. To become valuable, expertise must speak to those who would use it in an invitational and inclusive voice. It must be open to learning from those whom it would advise.

Within the field of education, a substantial body of research-based expertise co-exists with a perceived inability to effect practical school improvement. Rather than advancing improvement, educational research appears to have lost touch with school environments and the daily lives of administrators, teachers, and students. The research itself is often phrased in an elusive argot and built upon generalizations which overextend implications of modest data derived from anomalous situations. But more significantly, much educational expertise reflects the agendas of scholars rather than the interests of the customer. When customers are considered at all, they tend to be considered imperiously and from a distance.

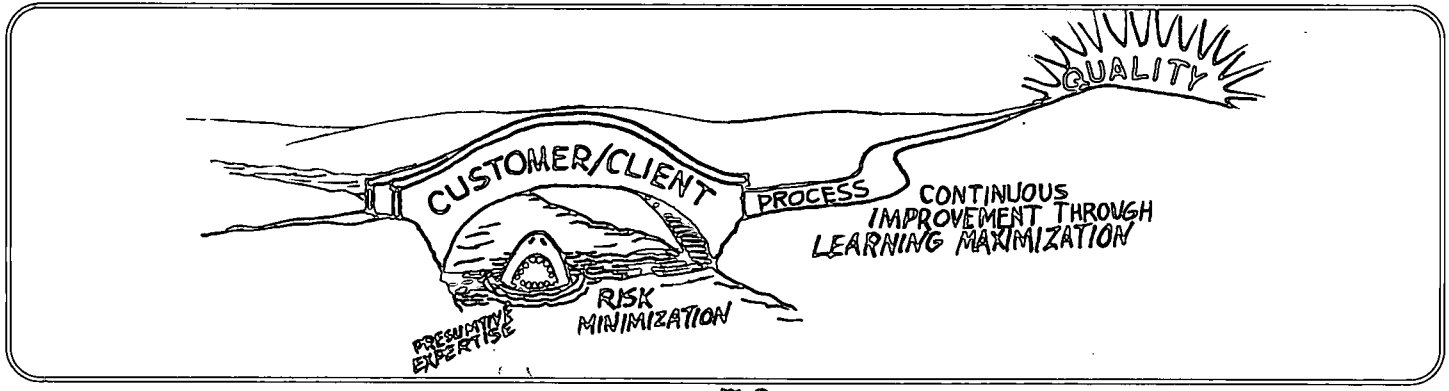
As educators we have an occupational tendency to confuse expertise with a presumptive sense of knowing what is best. Whether the setting is the classroom, the school, the school system, the school board chambers, teacher training institutions, or graduate schools of education, we often claim a prescriptive expertise that would tell our customers and clients what their needs *should* be. When we do this, we forget to listen and we block the mutual learning that can occur within the context of our immediate circumstances. The issue becomes how to expertly change the behaviours and aspirations of intransigent client groups rather than how we might utilize their inputs to make improvements in process and outputs. As we defend our habitual way of doing things and our view of what educational outcomes should be, we risk becoming part of the problem rather than part of the solution.

But there is an alternate understanding of expertise that can advance the agenda for the customer-oriented improvement initiatives characteristic of quality schools. We can approach this understanding by thinking of expertise as a process rather than as an attribute, a property, or a commodity. Rather than looking to expertise for prefabricated solutions to specific problems, we can see it as a collaborative process that must draw upon the experience of those closest to primary organizational processes and the needs of organizational clients.

In this context, expertise becomes a catalyst that enables organizational participants to contribute to the process of institutional transformation. A collaborative form of expertise enlists the efforts of organizational members in the transformative process while providing methods and tools for change. It has empowerment rather than submissiveness as its goal. It would release the knowledge embedded in organizations and make all organizational members participants in an outcome- and customer-oriented process of continuous improvement.

THE CONCEPT OF "CUSTOMER", THEN, IS THE BRIDGE that allows us to operationally define quality in our organizational values, purposes, and goals. By developing processes designed to meet customer needs and aspirations, we can avoid the temptations to lapse into a presumptive expertise that would minimize risk. As the customer becomes integral to our purposes, our planning, and our actions at every organizational level within schools and school systems, we maximize opportunities for learning and continuous improvement.

Like other elements of the quality process, "customer" at first seems a simple and matter-of-fact concept. But, as we have seen, when we deepen our appreciation of the customer, we are led to re-think the processes commonly associated with educational practice. And lest you think educators have an especially difficult time in addressing the concepts of customer and quality, you should know that the definition of these intertwined concepts has been equally challenging for businesses. In moving to a customer orientation, Kodak Canada has painstakingly

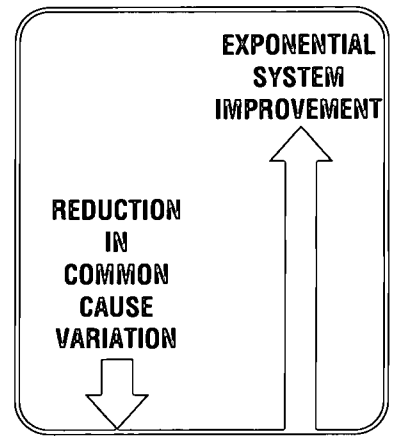


re-defined its products, services, operating procedures, and structure. In putting the customer first, Kodak Canada developed an understanding of quality that required the re-design of organizational processes.

In the first section of this chapter we learned that the quality philosophy demands a transformation of the way we typically think of organizations. When we reframe organizational thinking within the quality perspective, we learn how organizations can meet the needs of the customer through the design and introduction of appropriate processes. Process design and modification become the cornerstones of organizational improvement.

By recalling our previous discussions of *special* and *common* causes of variation, you will understand why process is such a predominant consideration in achieving quality. Variation indicates that a process has failed to realize the maximum potential value of which it is ideally capable. It is also indicative of the degree to which purpose and process diverge. The reduction of variation that results from increasing the coherence between intention and action allows organizations to become more effectively purposeful. The systematic reduction of variation through the progressive elimination of its special and common causes increases the value added in every process and sub-process.

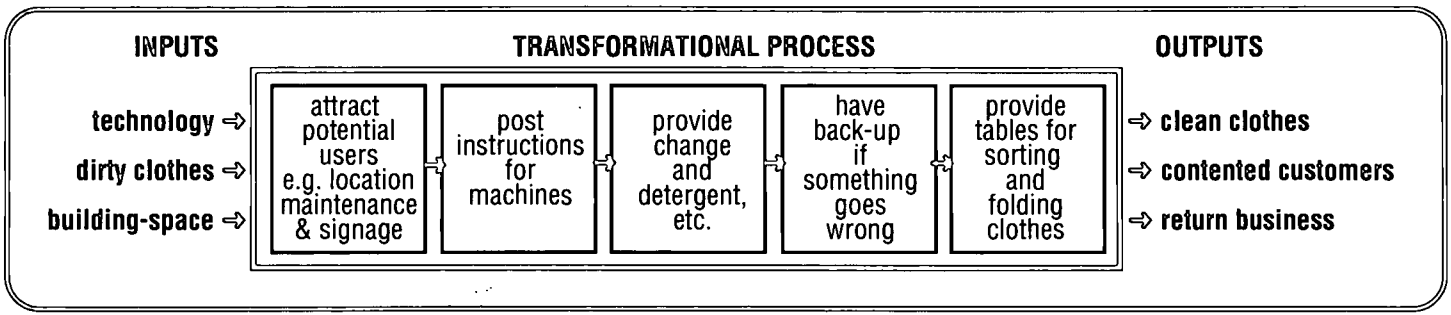
As we noted above, Deming stated that over 95% of variation is the result of common causes. This means that over 95% of the dysfunctional elements within organizations result from insufficiencies in system design or in the core processes which constitute organizational activity. Therefore, the improvement initiatives that will have the largest pay-off involve the re-design of existing system procedures. A correction in process or the introduction of a better process will have exponential ramifications throughout the organization. An understanding of process, then, is central to both the initial design of effective systems and their ongoing enhancement through continuous improvement.

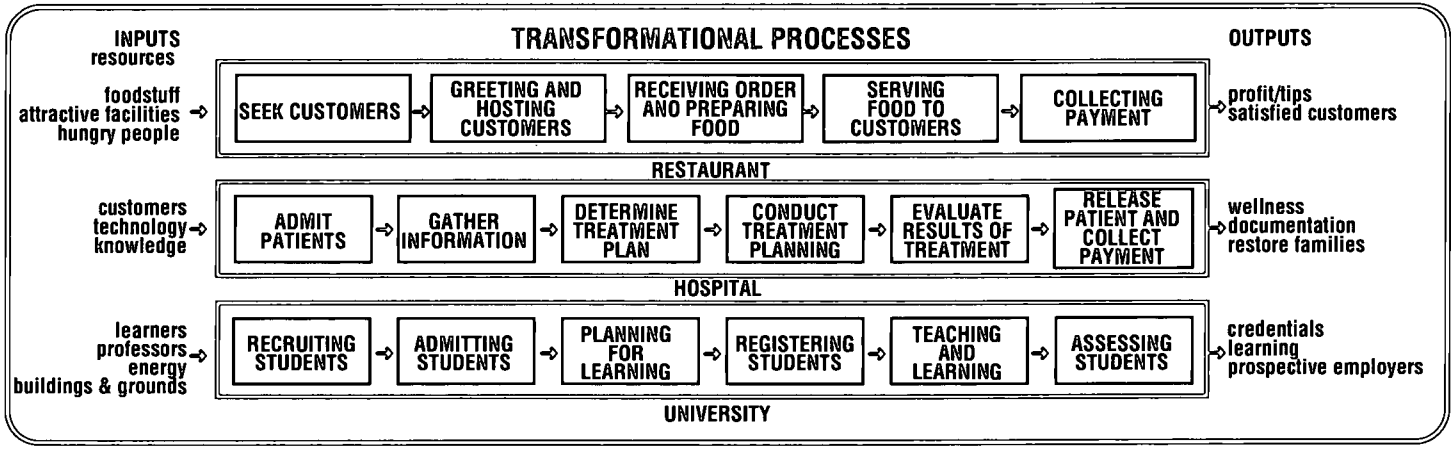


In previous exercises, we did not concentrate upon how to represent the interactive processes that structure what organizations do. Before we advance to mapping systems, however, we must develop the skills needed to render such detailed process descriptions. These descriptions may be presented in the form of concise diagrams which trace the sequential flow of processes and sub-processes. Such process-flow diagrams are an integral part of the comprehensive system maps that will make opportunities for improvement visible.

In order to practice constructing process-flow diagrams, let's go back to three of the previous sample organizations for which we made supplier, input, process, output, and customer lists. On a separate sheet of paper draw a process-flow diagram for a restaurant, a hospital, and a university, using the format provided below which has been completed for a laundromat. To do this, begin to interlink the elements that you have listed previously beneath the "transformational process" heading.

See how your process-flow diagrams compare with those we developed. Remember, if yours don't match, they may be better! On the other hand, feel free to develop your diagrams by incorporating what you may feel are improved ways of representing organizational process.



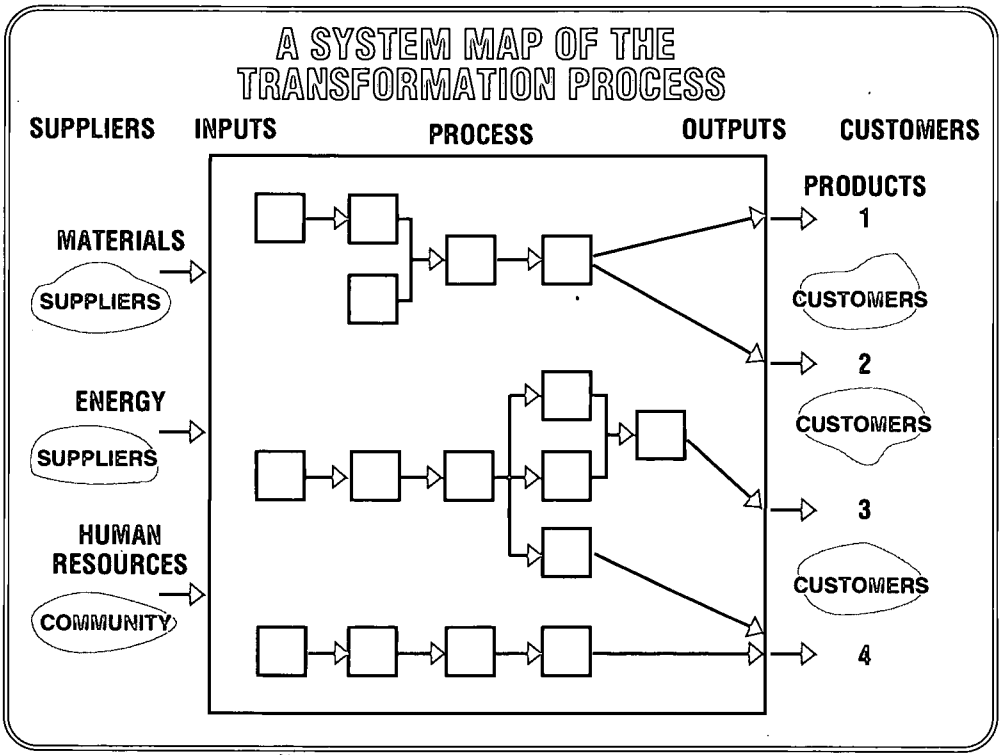


Process-flow diagrams can show any degree of detail that is desired by repeating the process of breaking the contents of each block into its constituent sub-processes. You might want to develop a greater degree of detail with the diagram of the university in order to see how educational processes might be rendered more precisely. In doing this, try your hand at showing diagrammatically how processes may interconnect in multiple ways with other processes and how sub-processes are related to primary processes. Keep your work, as it will be useful when we map the university as a complete system later in this chapter.

We are now ready to create a comprehensive system map by combining the knowledge gained up to this point. In building a picture of a system, we include all of the key elements we have dealt with so far: suppliers, inputs, process, outputs, and customers. A system map is simply a graphic representation of the interactive elements that

combine to shape a complete system. While it often represents the elements in linear sequence, we should not forget that in organizations everything happens all at once and that there are multiple levels of interaction. You will also want to bear in mind the significance of the reverse arrow that signifies the determinative importance of customer needs and aspirations.

Before beginning the following exercise that calls for the development of a system map, take some time to review the graphic on the right that illustrates what a moderately complex system map may look like. Feel free to borrow or modify its structural aspects as you complete the exercise.



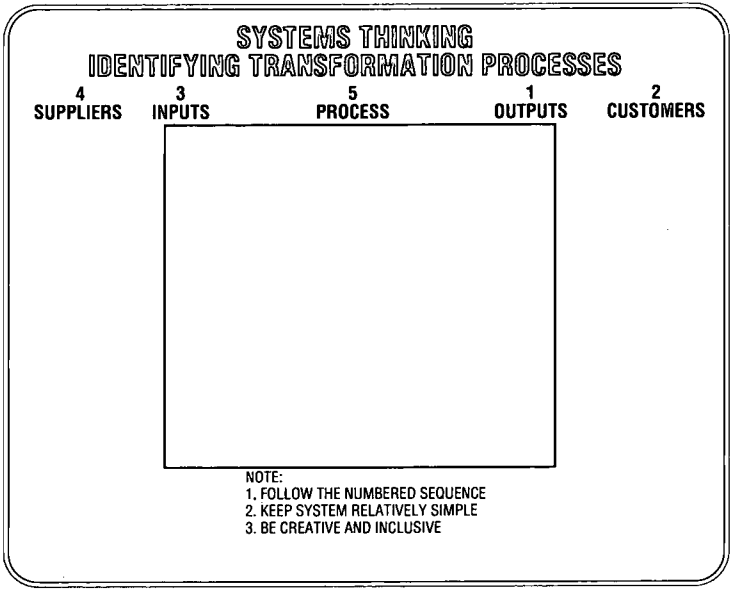
System Mapping Exercise: Vending Soft Drinks

Situation:

Construct a diagrammatic map for a system which provides soft drinks at a local high school sporting event. The system includes soft drinks served in cups with ice only. Naturally, drinks can be sold without ice. Cups of ice are sold at a discount to recover costs only. The soft drink vendor supplies all materials: ice, cups, soft drinks, dispensing machines; also, the vendor sets up the machines and prepares for the dispensing for each event. The vendor receives payment which includes a fixed fee plus a percentage of sales.

Instructions:

Please identify and draw the "system" including the outputs, customers, inputs, suppliers, and processes *in that order.* You may wish to use extra paper to "draft" the system before finishing the drawing. Keep in mind that you are drawing a relatively simple system that includes several different outputs and inputs. Construct your diagram using the format to the right.



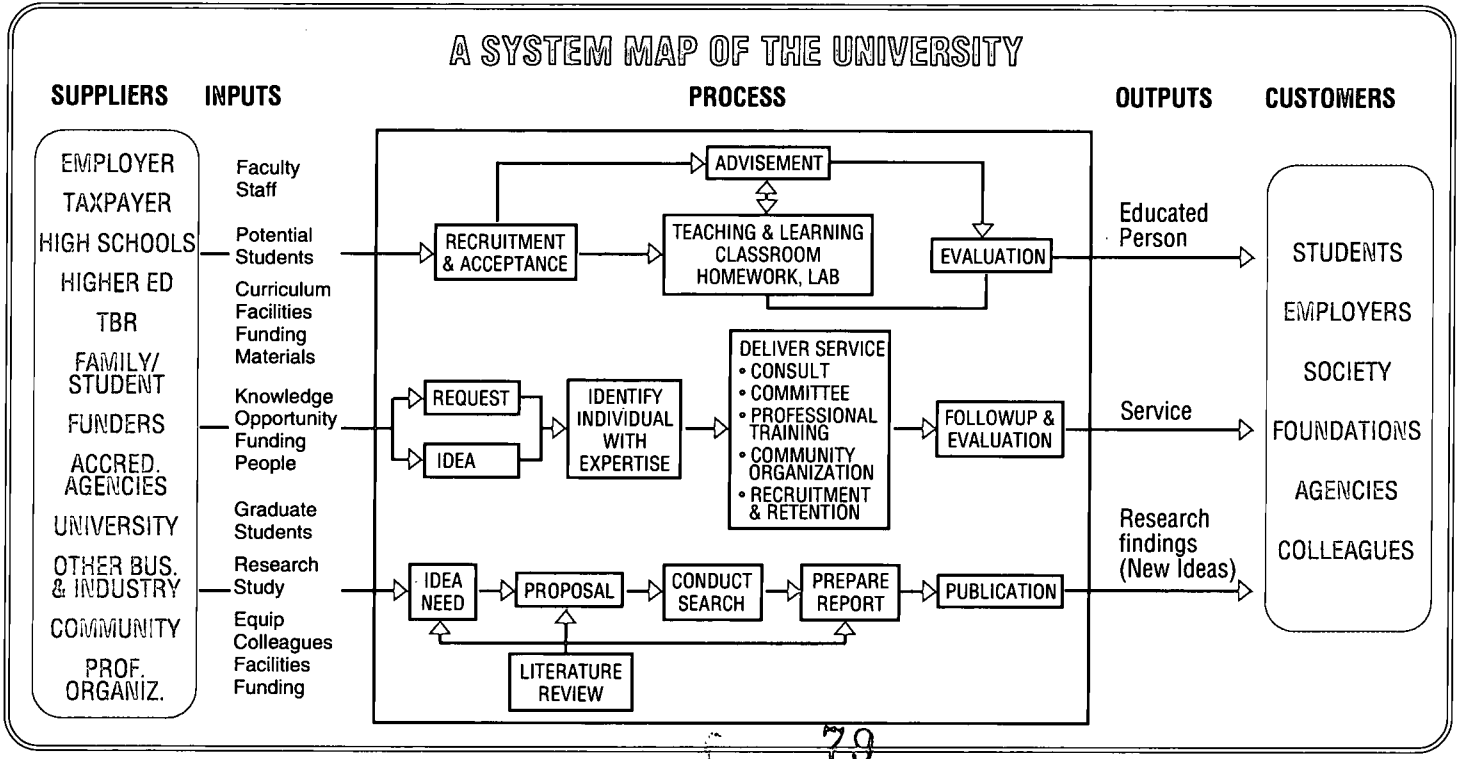
If you are working in groups, various groups should present their system maps for the "Vending Soft Drinks" exercise and discuss why their maps look as they do. After the individual group presentations, you may wish to work together to collaboratively construct a system map or model. When you are finished, make sure that you pause to take note of how the collaborative map compares to the efforts of individual groups. Take special note of where you have realized potential improvements through system re-design. Notice how your learning from each other has enabled you to eliminate areas of common cause variation and to add value.

You are now becoming conversant with how to represent organizational realities as system maps or models. Remember Deming's caution that all system models are wrong, but that some are more workable than others? This is a reminder that perfectionism should not preempt our efforts to develop knowledge through modelling systems. Once we have a model, we can work collaboratively to improve it. We know that the reduction of variation through corrections in our model will lead to marked improvements in organizational processes and outputs.

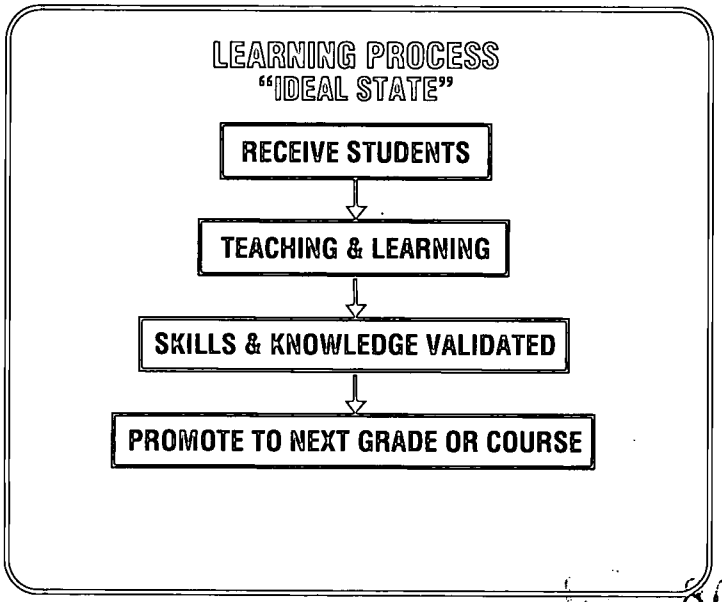
It is now time to move your developing modelling skills into matters central to education. Let's make use of the work that you have done previously in developing a more detailed process-flow diagram appropriate to the university. On a separate sheet of paper and using the format we have provided for system mapping, construct a comprehensive model of the university as a system. You need not go into sub-process detail, but try to capture the key organizational processes that make the university a distinctive institution.

How does your model compare with ours (shown on page 64)? Where is your model more comprehensive and useful? Where does it need adjustment?

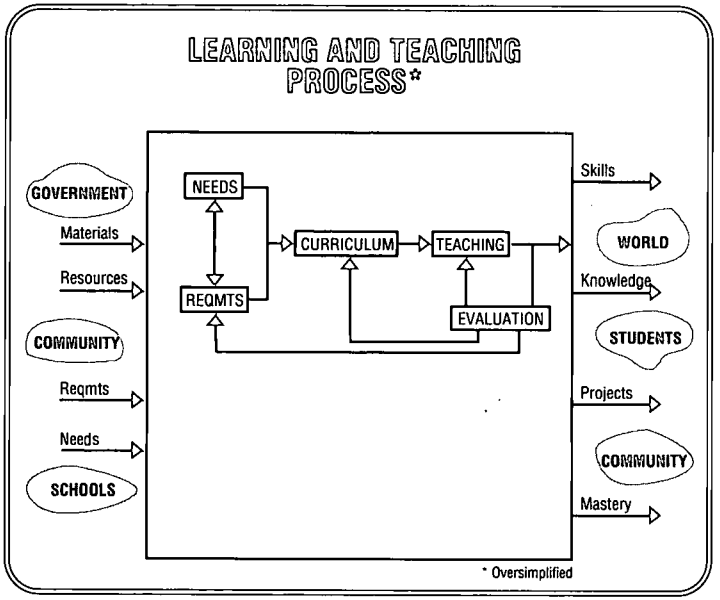
Again, if you have the opportunity to work in groups, compare your model with those made by others. Collectively build in potential improvements that will ensure added value through the reduction of common cause variation. You might want to select one primary process and diagram the sub-processes and the relationships that interlink them. In making this elaboration, choose a primary process that you regard as central to organizational purpose.


A SYSTEM MAP OF THE UNIVERSITY
SUPPLIERS
INPUTS
PROCESS
OUTPUTS
CUSTOMERS
EMPLOYER
TAXPAYER
HIGH SCHOOLS
HIGHER ED
TBR
FAMILY/ STUDENT
FUNDERS
ACCRED. AGENCIES
UNIVERSITY
OTHER BUS. & INDUSTRY
COMMUNITY
PROF. ORGANIZ.
Faculty
Staff
Potential Students
Curriculum
Facilities
Funding
Materials
Knowledge
Opportunity
Funding
People
Graduate Students
Research Study
Equip
Colleagues
Facilities
Funding
ADVISEMENT
RECRUITMENT & ACCEPTANCE
TEACHING & LEARNING CLASSROOM HOMEWORK, LAB
EVALUATION
REQUEST
IDEA
IDENTIFY INDIVIDUAL WITH EXPERTISE
DELIVER SERVICE
• CONSULT
• COMMITTEE
• PROFESSIONAL TRAINING
• COMMUNITY ORGANIZATION
• RECRUITMENT & RETENTION
FOLLOWUP & EVALUATION
IDEA NEED
PROPOSAL
CONDUCT SEARCH
PREPARE REPORT
PUBLICATION
LITERATURE REVIEW
Educated Person
Service
Research findings (New Ideas)
STUDENTS
EMPLOYERS
SOCIETY
FOUNDATIONS
AGENCIES
COLLEAGUES

One primary process that is common to the university and to all other educational institutions is the learning and teaching process. In its ideal state this process may be diagrammed as follows:



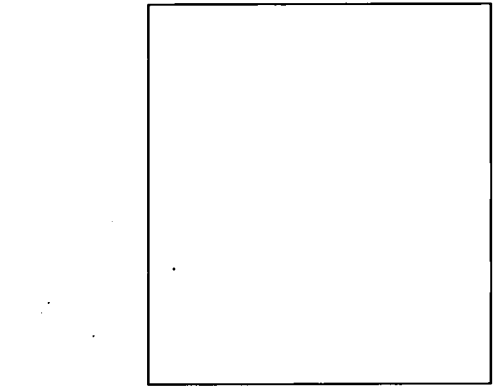
When we place it a more realistic context, our developing representation of the teaching and learning process might begin to look more like this:



This highly simplified map or model of the learning/teaching process is only intended to get you started. In groups or singly, elaborate and change it to reflect your experience as a practitioner. Build in those sub-processes necessary for learning and teaching to reach their maximum levels. If you have the opportunity to compare models and to learn from colleagues, we encourage you to do it. And as in previous exercises, the opportunity to build a collaborative model will prove the value of teamwork.

Now for the modelling task you have probably been anticipating. We invite you to use the skills you have been accumulating to build a comprehensive system model of your school or, if you are a superintendent, director, or trustee, your school system. Continue to use the format we have employed and build in the interlinkages between system and process elements that seem most significant to you. You might want to incorporate aspects of your learning-teaching model and to accent those processes that are closest to your work. Keep your initial attempt and all subsequent attempts at this project for your personal records. As you return to this task through time you will see how your modelling capabilities develop in grasp, sophistication, and elegance.

OUR SCHOOL SYSTEM...A PICTURE



We suggest that the system model you produce can be regarded as the opening remark in a conversation of continuous improvement to be initiated with your working colleagues. Together you can elaborate, alter, and enhance your system model to reflect present realities and potential improvements. You can collaboratively develop the expertise required to make sustainable reductions in variation so that you may maximize learning opportunities and realize gains that can transform your school and its relationship to its clients.

In Chapter 3 of the *Handbook*, we will explore the significance of collaboration or teamwork for the design and implementation of system improvements. But before we move on to teamwork, let's examine some of the ways that we might incorporate the interests of the customer and the supplier in determining what work schools and school systems should be doing and how they should be doing it. In examining this issue, we will find that cultivating the interest and the involvement of customers and suppliers is central to the making of *Quality Schools*.

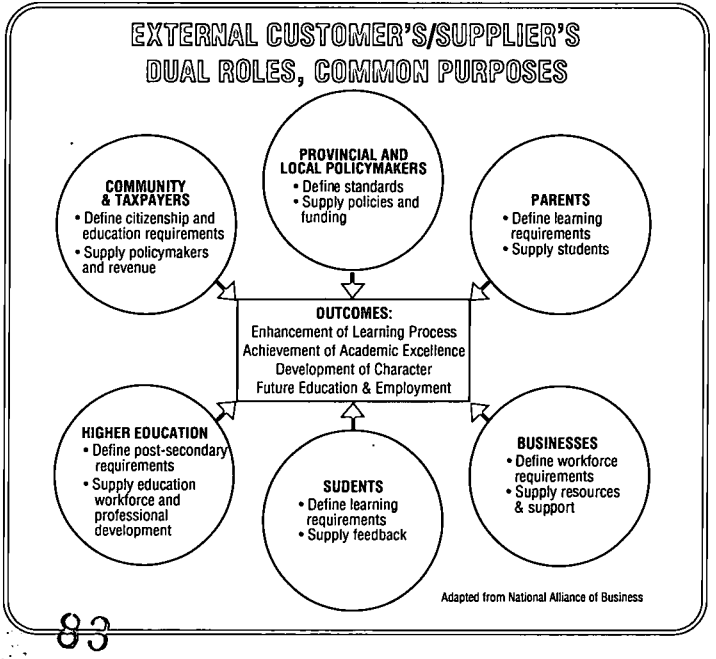
Building Relationships with Customers and Suppliers

"SURVIVAL IS NOT COMPULSORY". This rivettingly simple statement by W. Edwards Deming is a reminder that organizational existence is never guaranteed. It is something for which we must work. Like improvement, survival must result from our intentional efforts.

If organizations do not assiduously build relationships with customers and suppliers and if they fail to adopt a program of continuous improvement, they are undercutting their chances for survival in an increasingly competitive world. This simple fact of life applies to all organizations whether they are public or private, competitive or monopolistic, leading-edge or middle-of-the-road. As we move towards the twenty-first century, it is becoming more clear with each passing day that the continuity of any organization — whether it be the nation-state, the corner store, or the family — can never be taken for granted.

By understanding the dynamics of the customer-supplier relationship, organizations can generate the knowledge needed to ensure their survival and success. By making the customer central in defining collective vision, purpose, and goals, and by developing long-term relationships with suppliers, organizations can build a process of continuous improvement suited to their particular circumstances.

We have suggested previously that the customer-supplier dynamic applies to operations within organizations as well as to an organization's external relationships. In the next



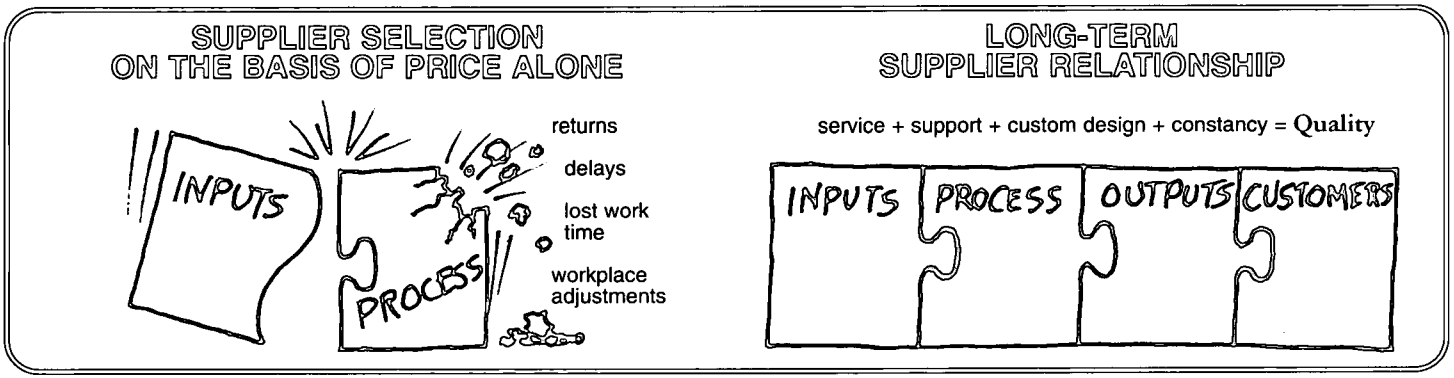
chapter we will explore how *internal* customer-supplier relationships can result in the teamwork needed to collaboratively define and cooperatively achieve shared organizational objectives. We will now concentrate on how the relationship between schools and *external* customers and suppliers can be enhanced and how this relationship can form the foundation for the continuous improvement process.

Throughout the following discussion, remember that while the roles of customer and supplier are discussed separately, they are often enacted by the same individual, agency, or institution. That is, the same body may act as both a customer and a supplier depending upon the process involved. In the case of education, the dual enacting of customer and supplier roles is united in a common set of purposes: the enhancement of the learning process, the achievement of academic excellence, the development of individual character, and the focusing of ambitions for future education and employment. The roles of customer and supplier are equally important in defining and reaching these goals.

External customers receive the value added by the organization to the inputs it receives from external suppliers. As you have probably indicated in mapping your school or system, external suppliers provide inputs in the form of materials, services, and technology. They also provide personnel which, in the case of schools, includes teachers, administrators, students, and staff. The publishers of textbooks, the manufacturers of classroom and office furniture, the vendors of learning technologies, training institutions, universities, communities, families, government agencies, and other societal institutions are examples of external suppliers to educational systems.

As Deming indicates in Point 4 of the 14 Points, organizations can maximize improvement efforts by giving special attention to their external suppliers. Deming reminds us that the building of long-term relationships with suppliers is a key factor in organizational improvement. The building of such relationships means that suppliers cannot be regarded as interchangeable and that we should not do business on the basis of price tag alone. Dictating supplier relationships by mere expediency and economy can saddle the work of continuous improvement with needless problems. Experience teaches us that you get what you pay for.

Through establishing long-term working relationships with suppliers, school systems can play an active role in secur-

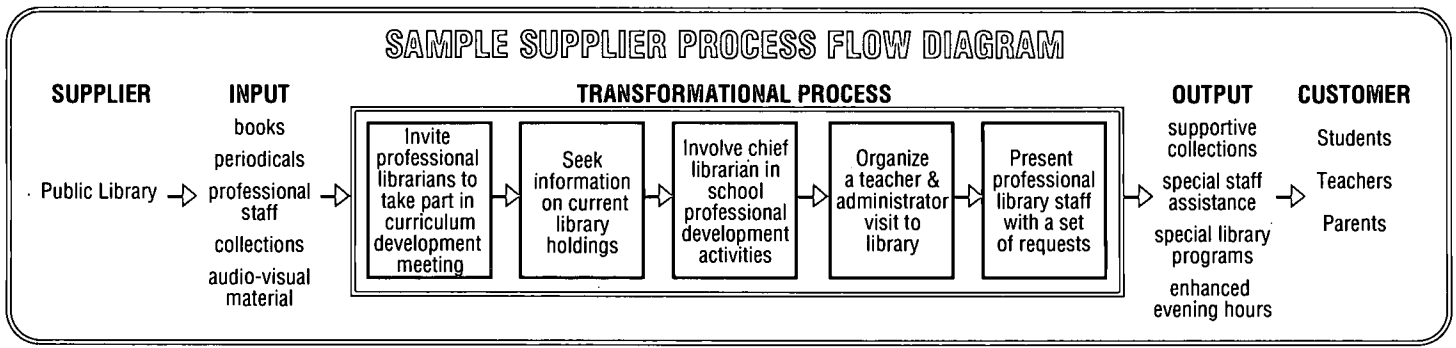


ing products designed to meet particular system needs rather than buying generic off-the-shelf products. Whether the supplier is a company providing audio-visual technology, a local public library, or a vendor of textbooks, substantial gains can be make in securing the best and most suitable inputs. For example, audio-visual technology may be configured to meet specific administrative and teaching needs in a user-friendly manner, a local library may build collections in selected areas of curricular concentration, and classroom materials may be designed to support independent learning. In addition to these benefits, the loyalty of long-term suppliers results in the provision of service and support relationships that frequently exceed what might normally be available.

When we come to the human inputs that impact upon educational systems, the potential gains are even larger. Imagine the benefits of working with a regional university to develop an undergraduate teacher education program that would bridge the gap between theory and the realities of current pedagogical practice. Think of how school

systems could benefit by ensuring that graduate programs in educational administration include an extended internship that would give degree candidates a thorough grounding in practical leadership skills. Such supplier relationships would seem commonsensical, yet few seem to exist.

For example, what prevents schools from introducing a one-week orientation program and periodic training updates for school custodians in how they can play a part in reducing student violence? Why is it that we have so few peer mentorship and tutorial programs that would assist students moving to new schools or new grades? And why, given the extensive literature that supports the central role played by family life in academic achievement, do we proceed so cautiously in involving parents as partners in the education of their children? The list of unactualized improvements seems endless. Perhaps the reason they remain unarticulated and unactualized is because they are

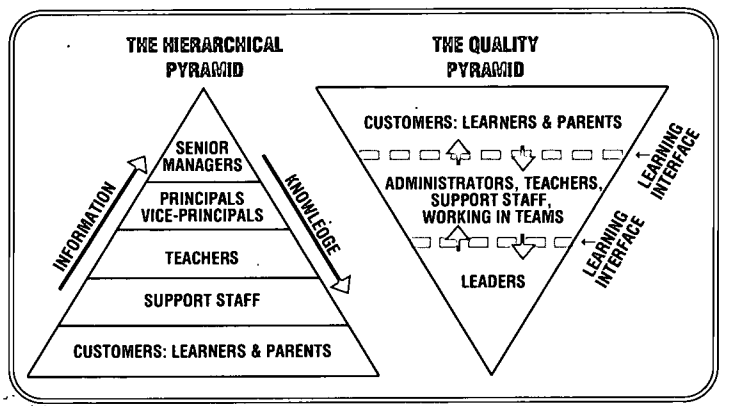


unseen. That is, they are not perceived as possible, practicable, or desirable when we fail to consider the potential of suppliers to add value to system inputs.

Using the skills you have developed in the previous section of this chapter, diagram some of the processes that could be implemented to involve suppliers in the process of continuous improvement. For example, you might want to diagram a process through which teachers would work closely with teachers in the immediately preceding grade level to ensure that both learning skills and content are consonant with their requirements. You could develop several process approaches to how parents could be invited to share in the education of their children. Or you might invent new ways that schools could approach potential donors of equipment in order to convince them that they should give state-of-the-art technology rather than discards. You might also look at how individuals normally regarded as customers might be enlisted as suppliers. For example, you could diagram how students could be made partners in establishing learning objectives, learning-teaching methodologies, and a climate supportive of academic achievement.

This, like all other system design efforts, is an excellent exercise to work on in small groups and to complete through an open discussion of your work. In completing these supplier-oriented process diagrams, you are supplementing the design of the system model that you have completed for your schoool. You are designing-in value by taking advantage of previously hidden opportunities revealed by applying the customer-supplier heuristic.

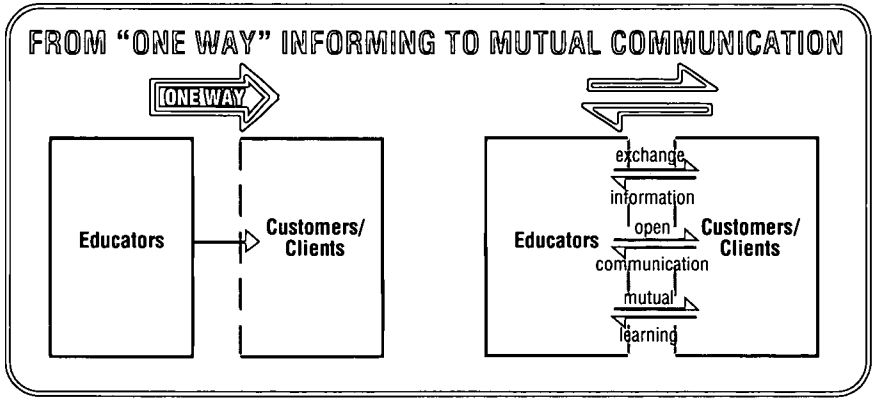
Now we will turn our attention to the external customer side of the quality improvement process. While schools



have many customers, the two primary customer constituencies are parents and students. They most actively draw upon the services provided by schools. The term "student" is used broadly to designate all individuals who make use of the school to enhance their knowledge. It includes adult day and evening students, part-time students, and avocational course-takers.

As you are by now well aware, quality principles often involve a reversal of our traditional thought patterns. This is especially the case when quality is defined in terms of customer or client needs and aspirations. As we noted in our discussions of expertise, educators often regard themselves as teachers or information providers. In following the 14 points, we can see that it is equally important for educators to become learners. Rather than providing information, they must learn to seek and process it in order to develop the knowledge needed for the quality transformation Deming advocates. If schools really are to become learning organizations as well as teaching institutions, they must maximize their learning relationships with customers and clients.

There is one historical and structural factor which may make it especially difficult for educators to adopt and to activate the attitudes required to transform schools into learning organizations. Schools have traditionally "enjoyed" what Edgar Z. Friedenberg (1975) calls a "con-



script clientele". That is, students below the age of majority are required by law to subscribe to the educational services offered by the school — regardless of the quality of services provided. This relationship, which is becoming

undone through the availability of private, home school, and learning technology alternatives, has led to a peculiar complacency and self-certainty among some educators. It has led us to the conundrum stated by Murgatroyd and Morgan (1993, 101):

> The major source of expertise about customer satisfaction in the school system (i.e., the customers) is not being used to generate ideas for constant improvement.

Murgatroyd and Morgan (1993, 101) continue their thought to remind us that

> Only by enquiring in a structured way, listening to the responses of the customers, understanding their needs and their point of view and gathering their suggestions, can customer expectations be fully met and exceeded.

In his book *Total Quality Management for Schools,* Leo Bradley provides a synopsis of what is entailed in the movement to a customer orientation. As he suggests, the movement involves a change in mindset and a willingness to develop tools that will allow us to listen to customer aspirations and to proactively anticipate client needs. As Bradley (1993, 75) says,

> Consumer research holds much promise for schools. It would not require more money. It basically calls for a new mindset about how to communicate with the public, which is: first, assume the public has good information for you; second, base decisions on that information; third, switch the emphasis from giving the public information about what you think is important to gathering information about what they think is important, and be open to this public opinion; fourth, move from persuasion to perception; fifth, move from periodic to continual communication with consumers.

Bradley's program of customer or client research would allow schools and school systems to match their capabilities with the articulated needs of clients. With an established base of information, educators would be able to respond to immediate customer needs and to anticipate emerging client aspirations. They could reshape schools by re-designing the content and the delivery of education to effectively meet the needs of the customer groups who are now voicing skepticism about what schools do.

Like the previous exercise in which we developed processes for involving suppliers in quality improvements, let's now do the same for customers. Through creating process diagrams, show how your school or your school system

have many customers, the two primary customer constituencies are parents and students. They most actively draw upon the services provided by schools. The term "student" is used broadly to designate all individuals who make use of the school to enhance their knowledge. It includes adult day and evening students, part-time students, and avocational course-takers.

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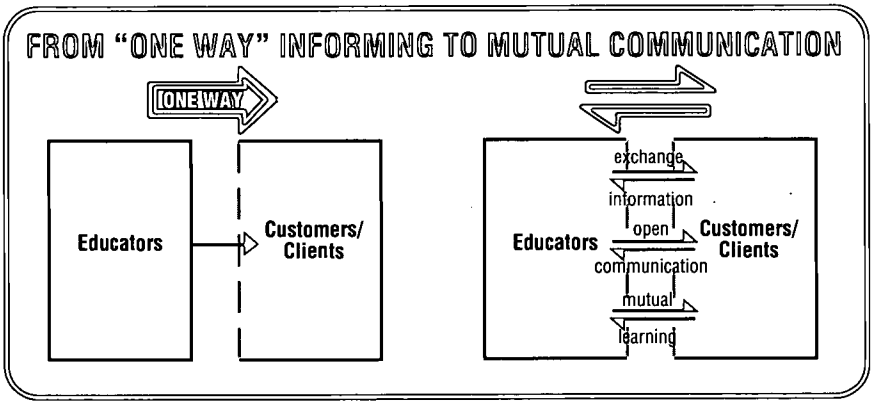

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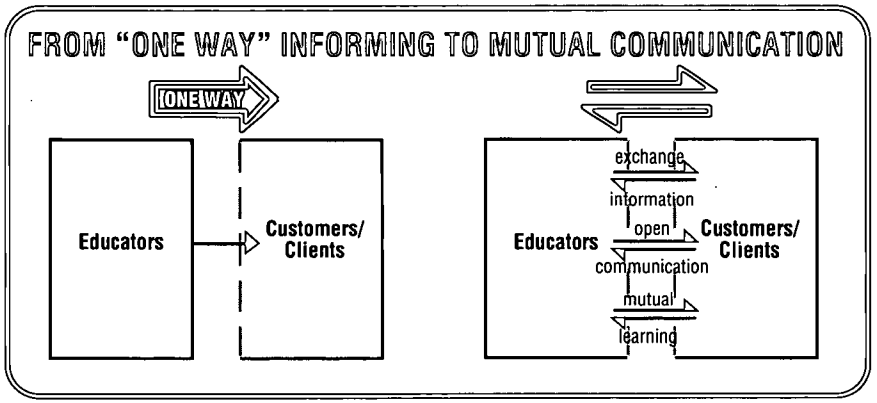
have many customers, the two primary customer constituencies are parents and students. They most actively draw upon the services provided by schools. The term "student" is used broadly to designate all individuals who make use of the school to enhance their knowledge. It includes adult day and evening students, part-time students, and avocational course-takers.

As you are by now well aware, quality principles often involve a reversal of our traditional thought patterns. This is especially the case when quality is defined in terms of customer or client needs and aspirations. As we noted in our discussions of expertise, educators often regard themselves as teachers or information providers. In following the 14 points, we can see that it is equally important for educators to become learners. Rather than providing information, they must learn to seek and process it in order to develop the knowledge needed for the quality transformation Deming advocates. If schools really are to become learning organizations as well as teaching institutions, they must maximize their learning relationships with customers and clients.

There is one historical and structural factor which may make it especially difficult for educators to adopt and to activate the attitudes required to transform schools into learning organizations. Schools have traditionally "enjoyed" what Edgar Z. Friedenberg (1975) calls a "con-



script clientele". That is, students below the age of majority are required by law to subscribe to the educational services offered by the school — regardless of the quality of services provided. This relationship, which is becoming

undone through the availability of private, home school, and learning technology alternatives, has led to a peculiar complacency and self-certainty among some educators. It has led us to the conundrum stated by Murgatroyd and Morgan (1993, 101):

> The major source of expertise about customer satisfaction in the school system (i.e., the customers) is not being used to generate ideas for constant improvement.

Murgatroyd and Morgan (1993, 101) continue their thought to remind us that

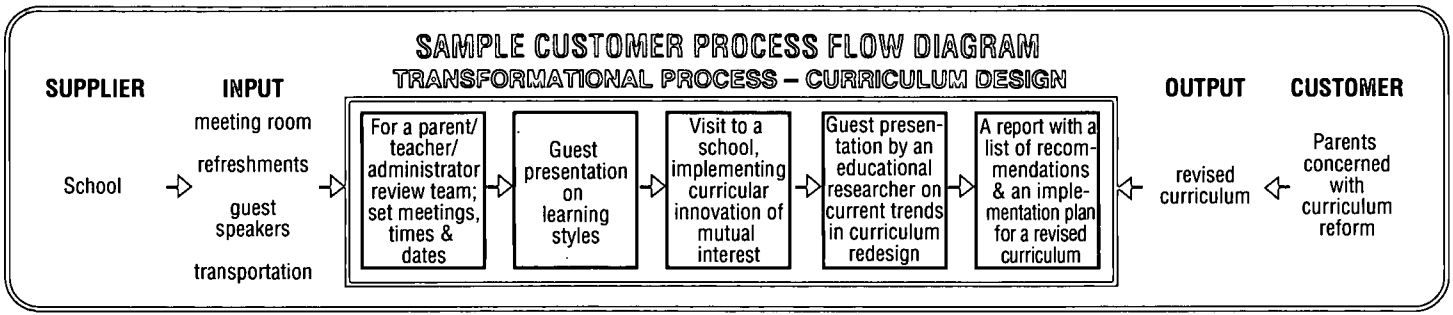
> Only by enquiring in a structured way, listening to the responses of the customers, understanding their needs and their point of view and gathering their suggestions, can customer expectations be fully met and exceeded.

In his book *Total Quality Management for Schools,* Leo Bradley provides a synopsis of what is entailed in the movement to a customer orientation. As he suggests, the movement involves a change in mindset and a willingness to develop tools that will allow us to listen to customer aspirations and to proactively anticipate client needs. As Bradley (1993, 75) says,

> Consumer research holds much promise for schools. It would not require more money. It basically calls for a new mindset about how to communicate with the public, which is: first, assume the public has good information for you; second, base decisions on that information; third, switch the emphasis from giving the public information about what you think is important to gathering information about what they think is important, and be open to this public opinion; fourth, move from persuasion to perception; fifth, move from periodic to continual communication with consumers.

Bradley's program of customer or client research would allow schools and school systems to match their capabilities with the articulated needs of clients. With an established base of information, educators would be able to respond to immediate customer needs and to anticipate emerging client aspirations. They could reshape schools by re-designing the content and the delivery of education to effectively meet the needs of the customer groups who are now voicing skepticism about what schools do.

Like the previous exercise in which we developed processes for involving suppliers in quality improvements, let's now do the same for customers. Through creating process diagrams, show how your school or your school system



could become engaged in a continuing process of consumer research and how it would make use of the learnings from these efforts. While you may wish to begin by diagramming processes that are closest to your working situation, you should expand your thinking to the system level. Elements you might want to consider are: how to determine in which matters customer input would be sought, the mechanisms and methods for securing this information, and how this information would be processed to create knowledge useful for system improvement. It will be important to include how you will report back to your client groups on what is found and how it will be used. You may also wish to show how the skill, experience, and talents of educators can be applied to address client concerns. And finally, you may diagram how clients themselves can be invited to take part in the improvements that address their needs.

Again, work with your colleagues in completing this exercise. Working together to explore how you can develop an outward-looking, client-centered perspective will help you to incorporate the customer's voice in school planning and development processes. In the next chapter we will explore how working together in teams can increase the value of all efforts to realize organizational improvement.

Clara Barton School, Part I: Putting the Customer First

Clara Barton School is an inner city pre-K through grade 6 elementary school in Rochester, New York. Beginning in 1991, it has successfully implemented a series of structural and pedagogical innovations that have improved academic performance, decreased disciplinary problems, and created a positive learning environment. As a result of its accomplishments, it has been awarded recognition as a Community Alliance School. During the third day of the *Symposium on Quality Schools*, participants were presented with a profile of the school and a history of its quality improvement efforts.

The 1987 Collective Agreement signed with the Rochester Teachers' Association established school-based planning as an implementation priority. In 1991 Clara Barton's School-Based Planning Team, which had been subsequently established as the primary vehicle for school governance, assembled an Initiative team to examine possible options for school restructuring.

In developing an ambitious agenda for educational improvement, the team put the needs of the customer first. Student needs became the driving force behind the re-design of existing institutional structures and pedagogical practices. Working closely with the "Institute for Research and Reform in Education", which is associated with "Public-Private Ventures", an American non-profit research organization, the team drew extensively upon educational research to address perceived school problems and to articulate desired goals.

The parents, paraprofessionals, teachers, and administrators who made up the team began this process by developing a student path through an ideal school day. The team members envisioned the elements that would support and maximize student learning. The parent and the community members made sure that the "ideal" path was grounded in the often difficult realities of inner-city living. In looking at the list of "What features need to change?" that emerged from team discussions and extensive meetings with constituent groups, you will notice that every item reflects a customer-supplier focus.

CLARA BARTON SCHOOL INITIATIVE NEEDS ASSESSMENT

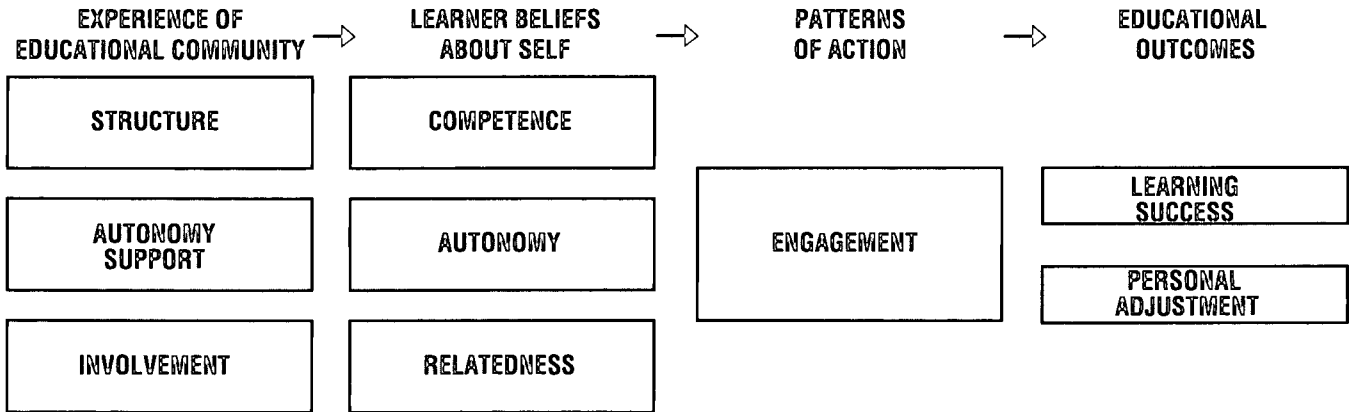
What features need to change?:

- children need to arrive at school ready to learn
- children must have physical needs met
- every child needs more adult support and guidance to engage in learning
- parents may need support in becoming more effective partners in their child's education
- teachers and parents need to work together as partners in children's education
- parents need to be brought into school in a positive way
- individual learning styles need to be recognized and met in a positive way
- climate of positive interaction and caring for all members of school community needs to be established
- teachers need to implement teaching techniques that will maximize motivation and increase learning
- teachers need more time to work with students
- teachers need help with discipline problems
- teachers and paraprofessionals need to work together as a teaching team
- children need to be treated with respect
- all students need to have access to all special programs (open participation)
- area businesses need to be brought into school as educational partners
- services provided by Montgomery Center, the library, and Boys and Girls Clubs need to be integrated into the school
- museum and gallery programs should be integrated into the curriculum
- talents of all staff should be utilized

CLARA BARTON SCHOOL, PART I

The mission to improve Clara Barton School by engaging every student in the learning process was shaped by three central student needs: the need for competency or capability to meet learning challenges, the need for autonomy or a voice in what would occur in school, and the need for relatedness or being connected meaningfully to others.

As a result of its mission to optimize student engagement, the school was broken into four semi-autonomous clusters within which most students would spend their entire elementary career. Two-person teacher teams were assigned to each classroom and each class would stay with the same teaching team for a two-year period.



Breakfasts and lunches were served in the teaching room rather than in a common cafeteria. Clusters would hold special breakfasts to which parents were invited. Outside suppliers of teaching resources, including volunteers associated with Eastman Kodak's "21st Century Learning Challenge", were integrated into classroom lessons, field-trips, and out-of-school learning opportunities.

In the next chapter, we will look more closely at how Clara Barton's staff actualized their mission through the utilization of teamwork. But before leaving the issue of the customer, let's apply the design process used at Clara Barton to your school or your school system. Using the skills you have learned, build a system map including process-flow diagrams of how your school or system would look and work if it were guided by the needs of its primary customers. Begin by deciding who your primary customers are, then develop a process for determining their respective needs. After developing a set of tentative customer needs and institutional goals, proceed by noting where change from present practice is called for. Translate the proposed changes into process-flow diagrams that eventuate in the goals, mission, and values that will be the outcomes in your system model. Remember that the needs and characteristics of your school and your community may lead you to very different reforms from those implemented at Clara Barton.

By comparing your customer-driven system map or model with the model you have previously created of your existing school or school system, you will see opportunities for quality initiatives. By working closely with your colleagues, you will be able to develop refined and practicable innovations that can lead to concrete and sustainable educational improvements in your immediate working environment.

A Note on the Supplier Side:

In its quality transformation, Clara Barton School successfully enlisted a range of atypical suppliers. Through the "Partners in Reading" program, it received tutorial assistance from University of Rochester students. Engineers volunteered time to provide math and science classroom demonstrations through Eastman Kodak's "21st Century Learning Challenge". A mentoring program with the University of Rochester's Medical Center allowed students to shadow working researchers. Local community centers, businesses, galleries, and museums were also enlisted as suppliers of novel learning opportunities. In building your customer-driven system model, try to incorporate how your school could enlist untapped suppliers in achieving its educational goals.

1. What are your organization's primary customer/client and key constituency groups? What practices are now in place in your school and school system to define customer/client groups, and to learn about their needs? How could these practices be either improved or introduced?
2. What factors do you think prevent educators from thinking in terms of "customer" and "client?" Which of these factors are legitimate? Why? Which interfere with improvement? How would you overcome these obstacles?
3. Designate key areas in which your school and/or school system could enhance or move towards a customer/client orientation. How would this movement change current structures and practices at the classroom, the school, and the school system levels?
4. Has your school and school system developed a process for cultivating long-term relationships with suppliers of goods, services, and personnel? What prevents this from occurring? What would you do to secure an improved relationship with the internal and external suppliers you work with directly?
5. Do the staff in your school and school system think of their work as consisting of inter-related processes? What do you think obscures this perspective? What knowledge do the people in your organization need to begin thinking in process terms? How would you deliver this knowledge to people working at different organizational levels?

Key Symposium Learnings

- *make sure we know who <u>all</u> our customers are & what they need*
- *include all customer groups in planning, doing, & assessing*
- *use multiple strategies for hearing & satisfying customers*
- *all models are wrong but some are useful*
- *move from evaluating & correcting to managing the method & preventing*
- *continuous improvement through system re-design to meet changing needs*
- *it's not what we don't know, it's what we know that just ain't so that causes our problems*
- *treat people as what they could be rather than as what you think they are*
- *people can change the process*
- *find hidden suppliers & "grow" their inputs*
- *true partnerships between education & customers & suppliers*
- *reduce the variation that is hidden in processes & free up resources*
- *changes to one part of a system have impacts in others*
- *look for the purpose & the value in every transaction*
- *don't only look for outcomes; look for the reasons why*
- *everyone can contribute to improvement & quality*
- *measure results in observable outcomes*
- *don't leave anyone out*

- ❑ A firm understanding of who are the school's and the school system's primary, secondary, and tertiary customers, and key constituent groups
- ❑ Active modelling by senior administrators of listening to, valuing, and acting upon customer/client and constituent group needs and aspirations
- ❑ Knowledge of what is most valued by customers and constituent groups in the services now provided
- ❑ Identification of key organizational processes and systems through which customer/client and constituent group needs are heard and met (e.g., telephone contact, reception, scheduling, course delivery, constituent group participation, communication media)
- ❑ An action plan that operationalizes how the organization will prioritize customer/client concerns and how it will generate improvement initiatives based upon customer/client needs
- ❑ Measures in place to ensure that communication with customers/clients and constituent groups is mutual, open, and inviting
- ❑ Commitment to locating and developing long-term relationships with suppliers of hard inputs (e.g., furniture, texts, learning materials and technology, audio-visual services), learning-associated services (e.g., public libraries, colleges, universities), and student support services (e.g., community clinics, social services, job placement agencies)
- ❑ Identification of organizational processes and programs which may be improved by the active involvement of external suppliers
- ❑ Establishing educational programs at all organizational levels through which staff can develop the knowledge needed to understand and improve the processes through which services are designed, delivered, and improved
- ❑ An assessment process to determine how the organization is doing in terms of anticipating, listening to, and responding to customer/client and constituent group needs and aspirations

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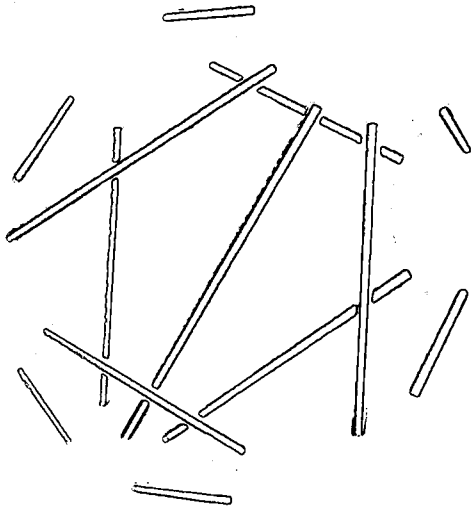
CHAPTER THREE

TEAMS AND TEAMWORK

The Means to Quality Culture



People as they work together, feeling secure in the job, reinforce their knowledge and efforts. Their combined output, when they work together, is more than the sum of their separate abilities.

W. Edwards Deming

CHAPTER THREE

TEAMS AND TEAMWORK
The Means to Quality Culture

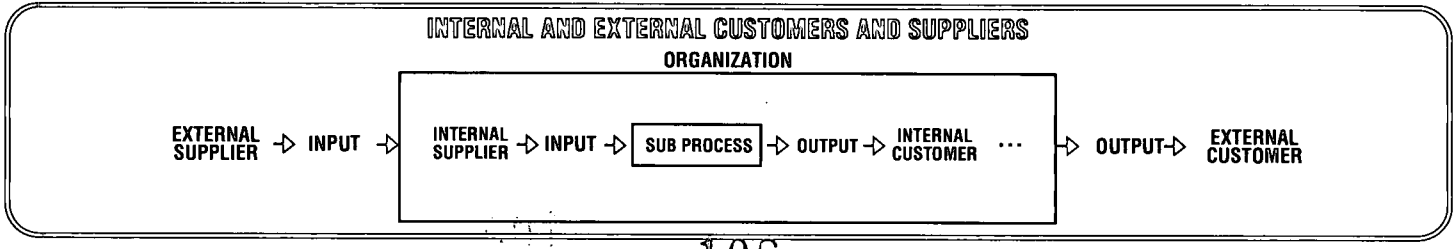
In this Section:

- *From Internal Customers and Suppliers to Teams:* transforming internal customer-supplier relationships into multi-dimensional teams
- *Defining and Developing Teams:* understanding two distinctive organizational roles for teams and the four stages of team development
- *Teams and Their Work: A Process Analysis Tool Kit:* introducing tools teams may use to understand and improve organizational processes
- *Core Questions*
- *Key Symposium Learnings*
- *Implementation Checklist*
- *References and Additional Resources*

WE NOTED PREVIOUSLY THAT THE CUSTOMER-SUPPLIER HEURISTIC can be applied within organizations as well as to external providers and consumers. That is, we can analyze the transactions that structure organizational processes as a series of relationships between *internal* suppliers and *internal* customers. As in the external relationship, the internal customer and supplier are brought together by a shared process; but now that process is located within rather than outside the organization. Internal suppliers are the individuals within the organization who come immediately before the linking process and customers are the individuals who immediately follow it. The internal customer benefits from the value added through the process; the internal supplier provides the inputs to which this value is added.

Internal customers and suppliers can be individuals or collectives. An instance of the former may be a teacher with special training providing professional development to his/her colleagues, while the latter may be illustrated by the board office's purchasing department supplying budget information to trustees. When we enlarge the sphere of the system to encompass all educational institutions, we may expand the notion of collective customer-supplier relationships to include the services provided by a university faculty of education to an elementary school in its region.

As in our previous analysis, the application of an internal variant of the customer-supplier heuristic can make previously unseen process improvement opportunities visible. More importantly, it can disclose how the value added by organizational processes may be increased by restructuring



The March, 1994 edition of *Management Review, Human Relations Forum* published the following item that speaks about teamwork and the kind of leadership that is appropriate to team situations. If you agree that Pat Riley's remarks can be translated to educational settings, try grounding his insights in processes that apply to your immediate work environment and the roles that you play in it. While Riley has achieved the highest accomplishments possible in the intensely competitive National Basketball Association, remember that the road to quality starts with the first step, however small it may be.

Now, from New York Knicks Coach Pat Riley:

Recently, Pat Riley filled a one-hour slot on the Charlie Rose show to the brim with his colourful insights into building team solidarity:

Teamwork is the essence of life in business, in sports, and in family. The dynamics of teamwork break down into an acronym: It's Togetherness and Equality and Attitude and Meshing, We, Organization, and Roles and being Kindred spirits for one another. It doesn't happen overnight. I don't whip it into anybody. I always ask the team, "What is it going to take for us to become a together team? Do we have to win to come together? Or do we have to come together to win? I think you have to become a together team to win it all.

I think there has to be a common denominator when it comes to coaching. It's really about a kind of decorum; it's about dignity, it's about integrity, it's about trust, it's about respect. Coaching is a process in which you interact with players to try to get them to do something in order to achieve a result. And the only way that process can work is if there is incredible trust there and a fine sense of one's obligation to a player. Players will not let you coach them, really coach them, unless they trust you.

Leadership is defining reality, it's telling the truth to the players. You don't get it out of books. You don't have somebody tell you about it so you can tell them. It's just that players will inspire you to inspire them. They will! And if you know your players well enough, they're going to do something to get you to try to inspire them, or to interact with them in a way to get a result.

TQM goes to the symphony

A company president has been given tickets for the performance of Schubert's Unfinished Symphony. He couldn't attend, so he passed them to his Total Quality Management consultant. The next morning the president asked him if he had enjoyed the concert. The consultant handed him a memorandum which read:

For considerable periods, the four oboe players had nothing to do. The number should be reduced and their work spread over the whole orchestra, thus eliminating peaks of activity.

All of the 12 violins were playing identical notes. This seemed to be unnecessary duplication, and the staff of this section should be cut drastically.

No useful purpose is served by duplicating with horns the passage that had already been played by the strings. If all such redundant passages were eliminated, the concert could be reduced from two hours to twenty minutes.

If Schubert had attend to these matters, he would probably have been able to finish his symphony after all.

Those unfamiliar with W. Edwards Deming's teaching often poke fun at what they see as quality management's over-emphasis on efficiency and the reduction of labour. As it turns out, the quality management principles espoused by Dr. Deming have little to do with the humorous caricature presented to the left. In fact, Deming advocated the 14 points because he felt that their application would lead to: increased industry, employment, and prosperity; a greater satisfaction in work; and a general enhancement of the human condition.

But the misunderstanding of Deming's principles is not confined to outsiders. Many vendors of "Total Quality Management" — a term that evoked ambivalence in Deming — also distort Deming's viewpoint. They miss his emphasis on the long term, his appreciation of the intrinsic value of human effort, and his fundamental optimism.

More seriously still, those who apply Total Quality Management uncritically to education disregard Deming's abiding respect for the irreducible quality of human learning. Unfortunately, Deming's profound respect for the knowledge which shapes human social and cultural institutions is either ignored or trivialized. The "old management" priorities of short-term gain, extrinsic reward, hierarchical control, and doing business on the basis of price tag alone all too often are allowed to replace Deming's insistence on the value of their opposites.

internal customer-supplier relationships themselves. One of the most significant of these restructuring possibilities involves the transformation of discrete sequences of internal supplier-customer-supplier exchanges into patterns of horizontal and vertical interdepartmental teams. But before discussing teams and teamwork, we will review the origins of how we have come to understand the organization of work.

Conceiving of work exclusively in linear, sequential, and repetitive work patterns is in large part an artifact of the assembly-line process that was perfected by Henry Ford in 1913. Ford's genius enabled him to accomplish an exceedingly complex manufacturing task by breaking it down into a consecutive process of discrete operations each of which could be completed by a relatively low-skilled worker. He transferred the expertise previously vested in individual artisans and craftspeople to an efficient and predictable manufacturing process.

Ford's assembly-line process, however, was built around the separation of design from production functions. His mission was to increase the output volume of a predesigned product at the lowest possible cost. The efficiency gains of the assembly-line and its unskilled labourers resulted in his ability to manufacture a stable product of acceptable quality at a very saleable price. Ford understood that money was to be made if he could produce a product cheaply enough while providing a wage for workers that would make its purchase possible. Ford's process worked and worked well — for a while. But we all know the fate of the North American automobile industry; a fate that would be reversed through the consultancy of W. Edwards Deming both at the Ford Motor Company and later at General Motors.

Henry Ford's assembly line illustrates that when process is regarded as fixed or constant, internal customer-supplier relationships may be effectively organized in a linear, sequential, and repetitive fashion. This routinization of work through a mechanistic ordering of process seeks to maximize efficiencies by rigidly defining the assignments of a workforce that has no role in innovation. The management and organizational models that typify this allocation of work are those of Fredrick Taylor's "scientific management" discussed by Bruce Mathewson in the first chapter.

Such top-down models assume that management possesses the knowledge necessary to determine what should be done and how it should be done. As Bruce Mathewson reminded us in Chapter 1, Taylor separated the planning from the doing of work and tried to maximize efficiencies by defining and controlling the smallest details of worker activity. Workers were regarded as un-thinking drones, while management retained all higher conceptual functions. Innovation was located at the top of organizations, repetition at the bottom. The middle managers were essentially foremen who made sure that workers adhered to pre-defined processes for executing their duties. The organizational culture that supports this arrangement of work is one of conformity, control, and compliance.

The early development of educational administration as a defined field of expertise and professional practice, reflected an attempt to apply a similar organizational model to the school. When Taylor published *The Principles of Scientific Management* in 1911, a movement in American education that paralleled his perspective was well underway. The work of Edward Thorndike and Leonard Ayres prepared the way for Frank Spaulding, Franklin Bobbit and a host of others who developed what Raymond Callahan (1962) called "the cult of efficiency" in education. This "cult" was characterized by managerial authority, a relatively low-skilled and low-paid work force, and a preoccupation with efficiency that overrode more substantive considerations.

But the utility of centralized managerial authority in education could not be sustained; nor could rigidly hierarchical work patterns that excluded the teaching workforce from participation in decision-making. With the professionalization of teaching, the increasing pace of societal change, the growth in knowledge, and the progressive democratization of social institutions, the defining characteristics of schools changed.

Today we recognize that the contemporary school is a somewhat atypical organization. In order to distinguish schools from organizations where managerial control, hierarchical structures, and routinized work patterns might be more appropriate, we refer to them as "professional normative" organizations. This means that the workforce in schools consists almost entirely of highly skilled and highly trained individuals who work within well-established professional norms and understandings.

Counting F's: An Exploration of Teamwork, Process, and Data

For the purpose of this exercise, regard the letter "F" as defective. Your task is to find the total number of "F's" in production unit constituted by the paragraph to the right so that they may be eliminated.

Step 1

Working alone, go through the paragraph one time counting the "F's." Allow yourself two or three minutes to complete this task. When you complete your first reading, immediately record the number of "F's" counted on a separate piece of paper.

THE NECESSITY OF TRAINING FARM HANDS FOR FIRST-CLASS FARMS IN THE FATHERLY HANDLING OF FARM LIVESTOCK IS FOREMOST IN THE MINDS OF FARM OWNERS. SINCE THE FOREFATHERS OF THE FARM OWNERS TRAINED THE FARM HANDS FOR FIRST-CLASS FARMS IN THE FATHERLY HANDLING OF FARM LIVESTOCK, THE FARM OWNERS FEEL THEY SHOULD CARRY ON WITH THE FAMILY TRADITION OF TRAINING FARM HANDS OF FIRST-CLASS FARMS IN THE FATHERLY HANDLING OF FARM LIVESTOCK BECAUSE THEY BELIEVE IT IS THE BASIS OF GOOD FUNDAMENTAL FARM MANAGEMENT.

Step 2

Again working alone, go through the paragraph a second time re-counting the "F's." And, again, record your total immediately. Have you arrived at the same number as in your first count?

Step 3

Now partner with one or more individuals who have also completed two solo readings and recorded their results. First compare your respective results for the first two countings. Are you in agreement or do you have different totals? Now count the "F's" together. Record your total. Turn to page 96 for a discussion of the exercise and its implications for teamwork, the understanding of the significance of process, and the collection and use of data.

COUNTING F'S

Trial #1	Trial #2	Trial #3

Because of the almost uniform distribution of professional workers throughout its organizational processes, schools are inherently antagonistic to Tayloristic management principles. In schools, highly skilled professionals, rather than low-skill workers, carry out the essential functions of the organization. This can result in situations that are far less common in industry. For example, the individuals who teach in schools may well have degrees, diplomas, certificates, and experience that make them the equals or superiors of those who act as their administrative managers. They are also the individuals who have the closest daily contact with the organization's primary external customers: students and parents. More than any other organizational worker, they epitomize what the school is to key clients and constituency groups.

Yet schools continue to organize work in patterns that reflect those of the early industrial factory and the assembly-line system. Administrators are still located in the top of a highly structured and stratified organizational pyramid that declines in authority as one reaches the lower levels which are composed largely of classroom teachers. Despite their professional status, training, and experience, those who add significant value to student learning are positioned so that they are the least able to contribute to the design and implementation of organizational improvement.

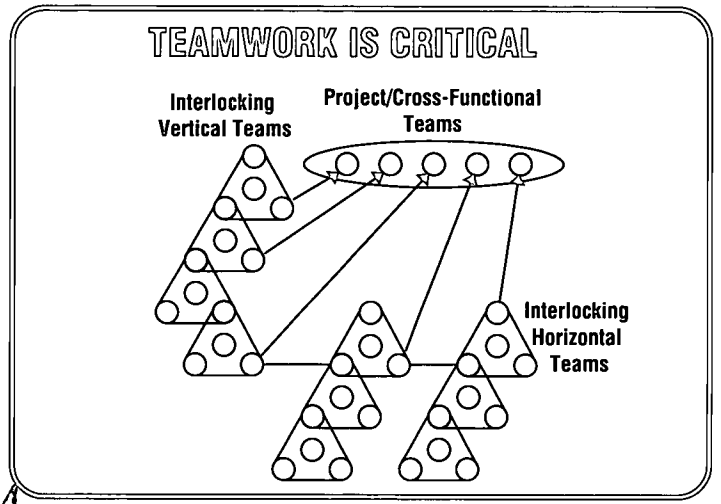
For many teachers, "improvements" seem to emanate without consultation from governmental and board or district offices. The resulting patchwork of sometimes contradictory educational innovations seems designed to placate the immediate unease of an electorate increasingly frustrated with the conduct of schools and the treatment of educational issues. But this attempt to work within short-term perspectives without systematically securing input from practitioners and clients fosters tampering rather than repair. It can result in unending change rather than in continuous improvement. Top-down innovations addressing symptoms rather than causes typically end in the satisfaction of few, a lack of documented system improvement, and in the expenditure of significant resources.

While the school remains tied to the top-heavy hierarchical, bureaucratic, and centralized systems of the past, business and industry have led the way to a fundamental restructuring of work. It is in industry that we see evidence of significant management downsizing and the intro-

duction of quality circles that involve workers in the design and re-design of organizational processes and procedures. It is in business that we hear not only about customer satisfaction but about customer delight! As we have seen in examining the restructuring experience of Kodak Canada, organizations are pointedly aware that they must put the interests of the customer first in order to survive. They know that they must restructure so that the expertise and talents of front-line workers can fuel the continuous improvement needed to secure a viable share of an increasingly discriminating market for their products and services.

It can seem especially ironic that business and industry — and not schools — are the targets of the new literature on learning organizations. The eager appropriation of learning technology by corporations suggests that educators have ignored a source of organizational renewal endemic to the institutions in which they work. But while we as educators may have to look to business and industry to understand how our own technologies may improve organizations, we retain the implicit structures and the resident expertise needed to make equally good use of this knowledge.

Through the development of vertical and horizontal teams, we too can begin to correct the disadvantages stemming from top-down decision-making and out-dated work patterns. We can repatriate the learning technologies that have been used advantageously by corporations to restructure and to create new forms of practice. We can empower the professionals whose knowledge can drive forward



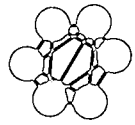
Counting "F's": What We Can Learn About Teamwork, Process, and Data

This is what happened when Victor Dingus of the Eastman Chemical Corporation presented the "Counting F's" exercise to the educators attending the *Symposium on Quality Schools*.

Solo counts were reported — often hesitatingly — in the following clusters: 26, 27, 28, 32, 33, 34, 36, 37, 38. How's that for variance given that everyone who participated in the exercise required no training in how to recognize an "F" or in how to count!

When the participants worked in teams of two and three, they uniformly reported a count of 36 "F's" — the correct answer. Did you have a similar experience? Even if your solo counts were correct, let's examine how we may understand the variation that typically occurs when this exercise is done in large groups.

When variation occurs, we must always ask if it is due to *common causes* or *special causes*. That is, does it result from the system or from individual performance? In the "Counting F's" exercise we certainly began with trained individuals who were responsible for a seemingly straightforward task. We could easily justify the assignment of objective performance ratings to each participant based on his/her degree of variation from the correct answer. We could even make evaluative generalizations from these performance ratings, prizing those who were most accurate and disparaging those who were furthest from the answer. Think of how often we do this when we assign valuations to students for their performance in test situations. In doing so, however, we can mistake common cause variation as robust data for the ranking of individuals. And, along the way, we forget that adjustments in process and system can make it possible for everyone to get the right answer!



How would you have felt and how would your self-image have been affected had *you* been openly chastised and de-valued for reporting a count of 27? Compare this to the feeling you have when you achieve the right answer by working in a team. Unfortunately in a system that is designed to produce a limited number of "winners," too many individuals will be led to believe they are inadequate because of situational factors over which they have little or no control. Through understanding process and by distinguishing between common and special causes of variation, we can chart a path to quality by creating systems that ensure inclusiveness and which maximize everyone's learning.

As the "Counting F's" exercise demonstrates, the introduction of teams and teamwork provides an effective tool for improving performance through process. Whether the improvement is reflected in getting the right answer or learning how we can enhance achievement through system change, teamwork multiplies the value of individual effort. Educators working together in teams and guided by quality principles can generate the knowledge and expertise to build and sustain both individual accomplishment and school success.

meaningful and sustainable efforts for continuous improvement in our schools. And we can redefine the purpose of leadership and release it from its often dysfunctional location at the apex of the organizational chart.

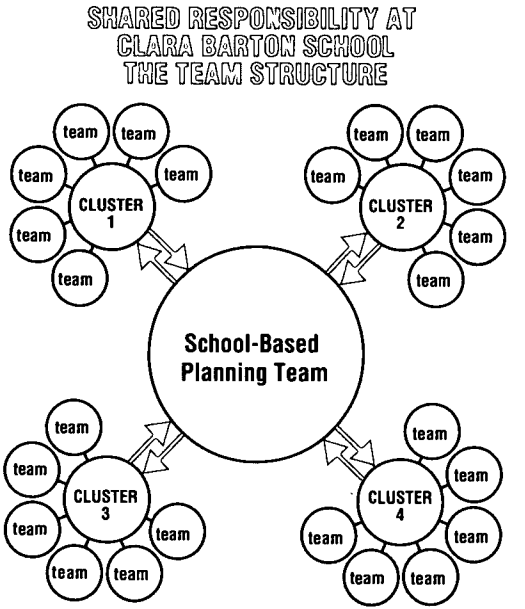
Teams and teamwork can initiate a dynamic change in organizational culture. Through the dilligent development and support of teams, the culture of risk minimization which emphsizes conformity, control, and compliance can move gradually to a quality culture of learning maximization. In this transition, the emphasis upon conformity, control, and compliance is exchanged for a valuation of prudent risk-taking, the monitoring of improvement interventions, and the learning that results from continuing analysis of process. The improvement of process is shaped by the expertise of those closest to key processes and by the participation of member of key constituent groups.

This cultural transformation must begin by first understanding how we may reshape the linear, sequential ordering of internal customers and suppliers into multidimensional networks of cross-functional teams. It is through the formation of teams, and empowering them to research and develop organizational improvement, that we can focus our efforts to meet customer needs while restoring the status of our vocation and the value of our schools.

When the Clara Barton School Initiative Team had determined its mission, goals, and vision, the school made several uses of teamwork to ensure effective implementation of educational reform. The most immediate application of teamwork is reflected in the structural organization of the school.

At the center is the School-Based Planning Team. Branching from it are the four clusters which correspond with the four structural wings of the school. And branching from the cluster are the two-person teaching teams that are placed in each classroom. As one of the *Symposium* presenters from the school remarked, the organization of the school represents teams, within teams, within teams.

And all of the Clara Barton presenters were adamant in claiming that the reason why sweeping school innovation has been so successful at their school is because it started from the bottom-up not from the top-down. Lois Jones, the Vice-Principal, and Paula Hansen and Ellie Nemeth, the two teachers who gave



Symposium presentations on the school's development, shared this view. They all felt that innovation was successful because it emerged through empowered teams of school, staff, and parents. It was not the imposed invention of a removed central or government office. As we have mentioned above, this bottom-up reform momentum was made possible by the decentralization that had resulted in school-based management. This move to decentralize is now continuing within the school as clusters are being given budget and other responsibilities that would normally be exercised by the school's administration.

And Mistakes Will Be Made

We have mentioned throughout the *Handbook*, that an atmosphere of learning maximization is different from one of risk minimization. When learning is central to organizational process there must be support for the prudent taking of risks and the occurrences of error that would be intolerable if risk minimization were paramount. When risks are taken mistakes happen. And when mistakes happen, we can learn.

When Clara Barton School was implementing the use of teams and collaborative decision-making, it failed to include the cafeteria staff in either. Given that the restructured system came to involve significant changes in cafeteria staff work, this was a major omission. The transition from the cafeteria to the classroom as the place where breakfasts and lunches would be served, required the participation and the "buying-in" of the food service staff. By failing to include them at the initiation of the process, the implementation of a useful reform was hindered.

Can you think of similar instances where failure to include a group in consultations or decision-making processes became an obstruction to school improvement? As you begin to develop educational reforms, try to ensure that you include representatives of all significant suppliers as well as core customer groups in the deliberative process if they cannot be included in the design team itself.

TEAMS MAY BE USEFULLY DESCRIBED as developing in stages. Bruce Tuckman's (1965) four stages of team development are often used for descriptive purposes. The stages are: "*forming, storming, norming, and performing*". We will borrow Tuckman's developmental categories in examining the issues and problems that teams may expect to encounter on the road to becoming effective working groups.

We can set the context for understanding the role that teams can play within schools by recalling our previous discussions of hierarchy, leadership, and expertise. In accordance with these discussions, we may view the organizational role of teams in one of two ways. The first sees teams as vehicles for implementing pre-existing agendas for improvement. The second shares the view that teams can be used as a means to implementation, but it entails a far broader set of functions. In this view, teams become the organizational sub-units where potential improvements are defined and where prospective interventions are researched and developed.

The difference between the two understandings is significant. The former circumscribes what teams do; it places them at the service of a pre-existent agenda. Teams do not ask the "what" and "why" questions, rather they are confined to issues of "how to". This use of teams is characteristic of traditional organizations where thinking happens at the top and doing happens at the bottom. That is, teams become tools for implementing an agenda developed by management, the thinking part of the organization. Their use enhances but stays within the specialized intelligence model of organizations as "entities with brains".

The latter understanding of teams, emphasizes their active role in developing organizational knowledge and improvement strategies. Within this framework, teams become the means to make distributive intelligence an organizational reality; they allow organizations to act "as brains". Within their mandate, teams are given the latitude to explore and critically examine what their organization is doing and why it is doing it. In designing innovations, they are encouraged to evaluate existing processes and to see which are redundant, which need improvement, and which are working well.

For quality school development, the second understanding of teams is of greater consequence. The very existence of

teams with comprehensive "what, why, and how" mandates and broad-based organizational participation expresses a commitment to organizational transformation. Teams defined in this way become the vehicles for surfacing the hidden talents and knowledge embedded in organizations. Within schools, their establishment transforms the fixed boundaries between teachers, subject departments, and administrative units into highly permeable membranes which invite and support mutual learning. It is this type of broadly constituted and empowered team that we shall trace through Tuckman's developmental stages.

Forming

> The goals of your team's first meetings are built around three themes: building relationships between team members, learning about the quality movement, and starting to work towards the desired improvement. (Scholtes, 1988, 4-15)

As the name of this stage implies, it is the initiating stage of the team. It is the stage in which individuals struggle with what it will mean to become a team member and how they can work together to accomplish their mandate. This stage can be especially difficult if individuals are accustomed to working autonomously within a hierarchical structure where expectations and lines of responsibility have been fixed.

A typical source of team-building problems in both corporate and school settings involves the process of "de-siloing". Like most corporations, the typical school is a highly segmented organization. That is, schools may contain many organizational sub-units or "silos" which are defined by fixed and normally impermeable boundaries. Each sub-unit or silo may possess distinctive norms, values, and goals. The process of teaming, especially when a team includes individuals from diverse organizational sectors, necessitates an opening of these fixed boundaries.

When a team is assembled, many of the established norms and group supports of the individual participants are suspended. Individuals have been removed from the silos which normally condition what they do and how they do it. The team members, then, are in a new and undefined situation that requires them to work collaboratively with other individuals who may only nominally be their "colleagues".

10 Steps to Help Make the First Team Meeting a Success

Because the first and early meetings of the team are so important, we will review guidelines that can be used for their preparation and structure. Many of these guidelines can be usefully applied to the conduct of future meetings as well.

1. Well before the first meeting, the individuals selected for the team should receive a description of the team's mandate, a list of the others who will be team members, the reasons that they have been selected for the team, and background information on the team's task(s) and mandate. If a team leader has been designated beforehand, each member should be informed of the selection and the reasons for it. If a facilitator will be present, this should be announced before the meeting. The material for the first meeting should contain an agenda and, of course, the date, time, and place of the meeting should be clearly stated. Sufficient time should be allotted for the meeting; 2 to 3 hours is usually appropriate for the first team session.
2. Provide adequate time and a format for team members to introduce themselves to each other. Informal time before the meeting should be provided for the exchange of greetings and conversation. But when the meeting is convened, each member should give a formal self-introduction which might include professional background information that relates to the team task, why he/she was selected for the team, and what he/she hopes to contribute. The team leader or facilitator can assist this process by adding pertinent background information to these self-introductions.
3. The team task and mandate should be elaborated by either the team leader or the individual who has assembled the team. The task and mandate as well as the operating parameters of the team should be made explicit. These include: budgetary matters, available support services, time lines for completion of work and the mechanisms for team reports, recommendations, and actions. The areas of team discretion should also be made clear at the outset. The team should be given ample room to interpret its task, to determine the best approaches to it, and to decide how it can be most effectively completed.

4. Team members should be introduced to the quality issues that will inform their work. The material in this *Handbook* can be used for this purpose. The background to the quality movement as well as the tools of process analysis, system design, and data gathering should be emphasized as should the importance of operationalizing initiatives.
5. Team members should begin to develop the process through which they will conduct meetings and carry on their work. They should consider how to maximize the use of time by agreeing on procedures for limiting discussion and staying on task.
6. Through brainstorming, team members should begin to explore how they might collectively address the task(s) which they have been assigned and how they will comply with time-lines and reporting mechanisms. They should explore how they will structure their work and what resources they will need to draw upon in order to complete it. In short, they should begin to collaboratively develop the processes they will use to satisfy their mandate.
7. Before the meeting is adjourned, the team should collaboratively build an agenda for the next meeting and set a date, time, and location for it. The time allotment for the meeting should also be set.
8. It should be made clear what work, if any, participants are to do before the next meeting. For example, team members might be asked to try their hand at completing a process-flow diagram about how an issue of concern to the team could be approached.
9. An evaluation sheet for the meeting should be distributed to those who attend. Participants should be invited to provide positive criticisms that will help set the tone and structure of future meetings. Make sure that a space is provided for narrative comments as well as for number-scale responses.
10. Informal time should be allowed at the end of the meeting for individuals to converse and to explore their new role as team members.

The key issues associated with the forming stage, then, are the recasting of identities and the definition of the new working context. Like a student's first day in a new school, anxiety and defensiveness are understandably high in such situations. In exploring how to move effectively through the formative stage, we may draw on the eighth and ninth of Deming's 14 points:

8. Drive out fear so that everyone may work effectively, and,
9. Break down barriers between departments.

An effective team leader or facilitator will understand that feelings of anxiety and defensiveness are appropriate to the forming stage, but that they must be overcome if the team is to develop. The movement through anxiety can be initiated by planning carefully for the first team meeting. This meeting should include several formal and informal opportunities for individuals to get to know each other and to try on their new team roles. The trust that is needed to reduce fear and make groups work must begin with knowledge of who one's new working colleagues are and what resources they bring to the team process. Carefully developed, the constitution of a team can provide fresh opportunities for learning about one's own capabilities as well as about the capabilities of others.

Storming

> This is the stage where members realize the scale of the task ahead and may react negatively to its challenges. (Sallis, 1993, 94)

Once the initial anxieties of team membership have been overcome, the nascent team will typically enter a period when doubts, disagreements, and even hostilities may begin to emerge. Safe passage through this period in which a team confronts the limits of its capabilities, its operating constraints, and its responsibilities is critical. This does not mean, however, that every interpersonal scuffle or doubt must be conclusively resolved by the team or the team leader. Even attempting to do so will produce exhaustion and set up a cycle that rewards disruption. As Sallis (1993, 94) tellingly remarks:

> Humour and patience are important qualities for a team leader at this stage, as are firmness and resolve.

Referring again to Deming's 14 points, points 1 and 2 are particularly applicable to this stage of group development:

1. Create constancy of purpose, and,
2. Adopt the new philosophy.

In the storming stage, team members must develop the patience and fortitude that will allow them to maintain constancy of purpose despite temporary upsets and obstacles. The importance of long-term commitment in quality management can be exemplified by the team leader's patience and prudence in knowing when and how to manage conflict while maintaining an emphasis upon quality-oriented methods and goals.

It is important to remember that conflict and disagreement are not in themselves negative. In fact, a team leader would have cause to worry if agreement were too readily found. Such "premature agreement" might signal that the team will avoid the challenges to business-as-usual that are needed to create worthwhile innovations. Team members must experience that they have the freedom to ask difficult questions that do not have easy answers and which may sharpen rather than dampen points of difference. Without the creative tension engendered by significant differences of opinion, a team may lack the drive and the insight needed to create quality improvements.

Read positively, conflict accents where learning needs to occur. This learning may be about the issue involved, it may be about the values and concerns of a fellow team member, or it may be about how to improve the inner workings of the team itself. The value of adopting the quality philosophy and the importance of putting it to work are the outside limits that must constrain generative disagreement and conflict. In order to move forward with its work, the team must take collective responsibility for respecting difference while transforming conflict into learning.

Chapter 7 of Peter Scholtes' (1988) *The Team Handbook* titled "Team-Building Activities" describes ten exercises that can help teams develop the working relationships that will sustain cohesiveness and productivity. We recommend that you take time to familiarize yourself with Scholtes' chapter and that you choose selectively from the exercises in accordance with group needs as they emerge.

Teams: Conflict and Consensus

Conflict can be the most difficult obstacle to effective teamwork and to the advancement of quality improvements. When dealt with successfully, instances of conflict can present opportunities for learning both about the issue in debate and the means that can allow a team to function effectively. Extreme and irresolvable forms of conflict, however, can jeopardize a team's coherence and can sidetrack the issue with which the team is working. More importantly, conflict can result in the withdrawal of commitment to improvement initiatives that require broad-based support in order to succeed. As everyone who is involved with school improvement knows, it often takes consensus to move initiatives forward but it takes only minor opposition to stop them.

In situations that do not require consensus, conflict — even to the point of a withdrawal of support — is not a critical factor. When a "sense of the meeting" is enough to move an issue forward or when a majority vote is sufficient to resolve potential impasses, such conflict will not stop decision-making. But when the issue being dealt with can be effectively stopped by the withdrawal of any team member's support, consensus is required. Whenever it is essential to have everyone on-board and committed to an issue, there is no option but to pursue consensus decision-making.

David Tinnes, an Eastman Kodak organizational consultant who has worked with Clara Barton School since 1991, has developed the concept of consensus decision-making and a set of techniques that can make it work. When he presented his model for consensus decision-making at the *Symposium on Quality Schools*, he began with a question. He asked the participants which option they would choose from the following set of possibilities:

OPTION 1	OPTION 2	OPTION 3
High Quality Decisions	Decisions High in Quality & Commitment	High Commitment Decisions

When he introduced the constraint that option 2 was not available, the opinions of participants split equally between the first and the third options. Tinnes, however, indicated that option 3 "high commitment decisions" was the preferred choice.

The selection of the third option emerged from Tinnes' extensive experience as an organizational consultant. This experience had convinced him that if a condition of high commitment could first be established, it is possible to build-in quality as implementation goes forward. On the other hand, he felt it would be almost impossible to build-up commitment if a decision, regardless of how high in quality it might be, divides a school into irreconcilable factions.

Tinnes' thinking was borne out at Clara Barton School where obtaining consensus before quality paid very real dividends. The consensus that preceded the introduction of educational innovations at Clara Barton meant that when problems were encountered — and they were! — they resulted in calls to fix the problem rather than to scrap the reform. Consensus had changed the mindset of the stakeholders who now found value in securing the implementation of proposed reforms rather than in sniping at them.

Tinnes' definition of consensus allows for a careful blending of individual and team interests. This means that the process that leads to consensus does not demand an all or nothing alternative.

> Consensus is the group's agreement to try a course of action which everyone is committed to support and make work. We each feel we have had an opportunity to influence the group, our views have been heard and understood, and we are all committed to support the group's decision and make it work even if it would not have been our own personal choice.

Tinnes' four rules for approaching consensus-decision can be used to facilitate and focus team discussion when a decision is the required outcome. The underlying principles, however, can be applied to all situations when consensus is essential.

4 Rules for Consensus Decision-Making in Teams

1. Ask for every team member's input, and give each two or more opportunities to share their information with the team.

   This rule is intended to give every member of the team an opportunity to be heard during the discussion and to limit the length of the discussion.

   Two is an arbitrary number of inputs; your team may choose more or allow free discussion before each member states their position. If the latter is chosen, you might use only one round of position statements. The important point is that each member must feel they have been heard.

2. After discussion is complete, go around the table once more and have each member say what they heard from the group.

   This is an opportunity for the team to find consensus in the discussion.

3. The team leader speaks last in each round of discussion.

   This rule is intended to allow all members in the group to speak without being inhibited if their views don't agree with those of the team leader.

4. Respond only with affirmations or questions.

   This rule encourages effective listening.

If consensus is still not reached, try these additional options:

A. Agree on the higher-order purpose or principle served by this decision, then see if you can reach consensus on a decision that fits the higher-order purpose or principle.

B. Agree on a test capable of deciding the issue. Construct the test based on the purpose or principle articulated in "A".

C. 1. Establish in advance one member of the group whose responsibility is to provide the decision if the group does not reach consensus. This may be the leader, or the responsibility may be rotated.

   2. If the group is unable to reach consensus, ask the designated "last resort" for his/her decision which will be adopted if the group does not agree. Then try once more to reach consensus.

   3. If the group still cannot agree, adopt the designee's decision.

WHAT IS CONSENSUS?

CONSENSUS IS

- Finding a proposal acceptable enough that all members can support it; no member opposes it.

CONSENSUS IS NOT

- A unanimous vote. A consensus may not represent everyone's first priorities.
- A majority vote. In a majority vote, only the majority gets something they are happy with, people in the minority may get something they don't want at all, which is not what consensus is all about.
- Everyone totally satisfied.

CONSENSUS REQUIRES

- Time
- Active participation of all group members
- Skills in communication; listening, conflict resolution, discussion facilitation
- Creative thinking and open-mindedness

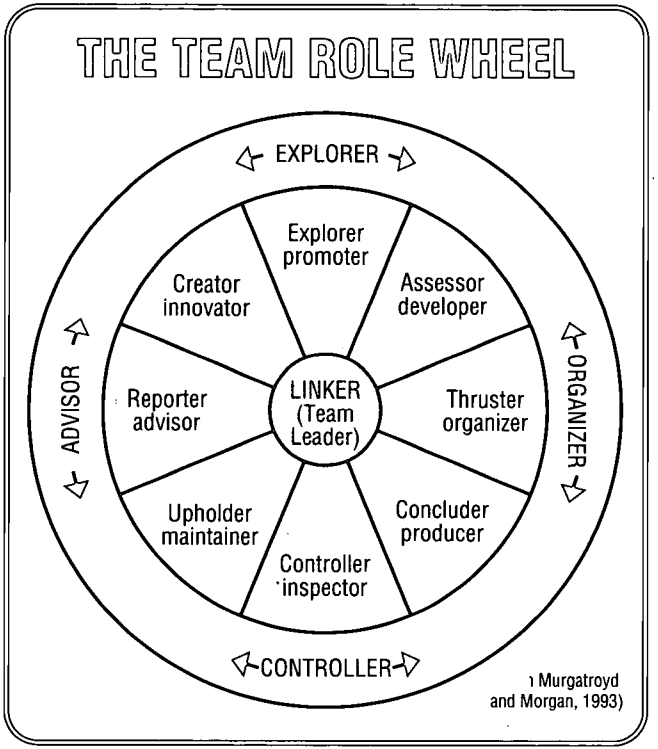
Presented by D. Tinnes from Scholtes, *The Team Handbook*

Norming

> The key characteristic of this stage is acceptance — of roles, tasks, ways of working and diversity within the team. During this stage, a sense of shared responsibility and cohesiveness emerges. (Murgatroyd and Morgan, 1993, 151)

In the norming stage, team members begin to feel confident in and comfortable with their group coherence. Instead of looking at each other, they look at the issues which led to their being brought together. Team members begin to establish the operating procedures that will guide their work, to operationalize the goals which they seek to achieve, and to draw upon the abilities and interests of team members in the assignment of duties. The team typically establishes a work plan that integrates the tools of quality management with their school improvement task. Through these activities, the team begins to form as a cohesive unit maximizing the capabilities and the knowledge of its members.

The various roles that team members typically play are illustrated in the graphic to the right. The roles are organized under the generic headings of "explorer, organizer, controller, advisor". As we have alluded to above, a key organizational role is that of the team leader. One of the primary functions



of the team leader in the norming stage is building linkages among team members. When thoughtfully developed, these linkages maximize the synergistic interweaving of individual talents and capabilities. They add significant value to team effort. While the graphic is intended to be suggestive rather than exhaustive, it does give a sense of the roles with which individuals may begin to identify as their team moves through the norming stage.

Chapter 6 of Scholtes' (1988) *The Team Handbook* titled "Learning to Work Together" contains many useful insights for teams in the norming stage. Again, we encourage you to become familiar with this valuable resource and to use it selectively in facilitating team development.

Performing

> By this stage, the team has settled its relationships and expectations. They can begin performing — diagnosing and solving problems, and choosing and implementing changes. At last, team members have discovered and accepted each other's strengths and weaknesses, and learned what their roles are. Now they can swim in concert. (Scholtes, 1988, 6-7)

The team is now moving forward in designing concrete and practicable improvement proposals. By learning how to form itself as a productive unit, the team has gained valuable experience in applying process improvements to real world settings. It now moves from self-knowledge to generating the knowledge about organizational processes needed to effect quality improvements.

At this stage, the team can exemplify two more of Deming's 14 points, specifically points 5 and 7:

5. Improve constantly and forever the system of production and service, and
7. Institute leadership.

Through application of the analytical and design tools associated with quality management, the team is capable of planning and initiating innovations which contribute to the process of continuous organizational improvement. In carrying out this work the team becomes both a means and an end. As a means it demonstrates that teamwork can produce improvement often of a kind unanticipated by organizational participants. As an end, it is itself evidence of new ways of doing organizational work which take

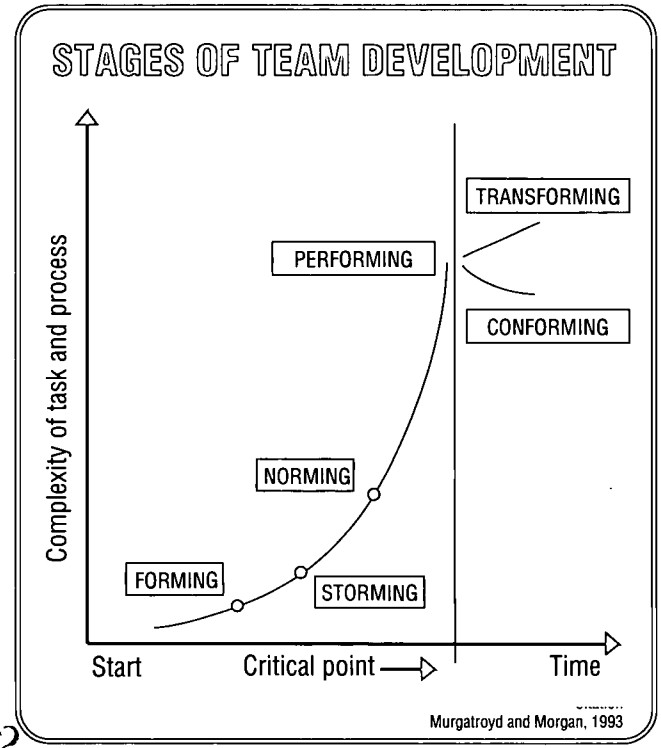
advantage of the experience and the heretofore hidden expertise of those within the organization. The team is both a vehicle for, and an exemplar of, organizational learning. It provides active leadership for the organizational improvements that fall within the limits of its mandate.

But the evolution of the team is not yet over. A performing team can fall into routinized patterns which begin to circumvent the asking of difficult questions and the searching for better ways of doing things. As Murgatroyd and Morgan, (1993, 151) have pointed out,

> Many teams in education have settled for the safe option of conforming. Over time, performance levels stabilize into acceptable but not optimum levels — growth and energy decline as performance becomes comfortable.

The team must be aware of this tendency to *conform* rather than *transform* and to seek occasions for its own renewal and challenge. In the team, as in the organizational context, complacency always signals the end of quality.

In order to become a high performance team that can retain its freshness, team members must remain committed to the *Quality Schools* goal of continuous improvement. A high



performance team utilizes the trust, communication skills, working relationships, and methods it has developed through experience to ask difficult, provocative, and ultimately productive questions about existing practice. Through creatively drawing upon the differences and diversity of its membership to look beneath existing practices for potential gains, a high performance team plays a significant role in the quality leadership of schools.

The Life Expectancy of Project-Based Teams

Not all teams are intended to have an indefinite life. In fact, the majority of teams are assembled to complete a specific project on an *ad hoc* basis. The life span of a project-based team may be measured in months or in years. But in all cases, the involvement of team members is not a permanent one. Rather, it is horizoned by the completion of the project assigned.

This raises two matters of importance. The first is ensuring that the expertise developed in teams is utilized in the evaluation phase of improvement initiatives selected for implementation. When teams are disbanded before the monitoring and evaluation phase, not only does the organization underutilize its investment, but team members are denied participation in the most important part of the learning cycle. Involving team members in the assessment as well as in the design of improvement initiatives capitalizes upon learning, sustains momentum, and creates continuity.

The second matter involves effecting a suitable closure to the team experience. The dissolution of a team at the completion of its work cycle can be a difficult time for participants. They must let go of what will probably have become a personally and professionally significant involvement. The effort of team members as well as their accomplishments should be honored. Remember that in a culture of learning maximization, the risks that must be taken to learn as well as successful outcomes deserve recognition.

* * * * *

As we remarked above, schools should have a very real advantage over corporations in the introduction of teamwork. This is because the enhancement of learning capabilities that is central to the successful development of teams is the core process employed daily by the

professional staff of schools. Educators are already trained and practiced in creating the learning environments that allow individuals from diverse backgrounds to work together towards positive learning outcomes.

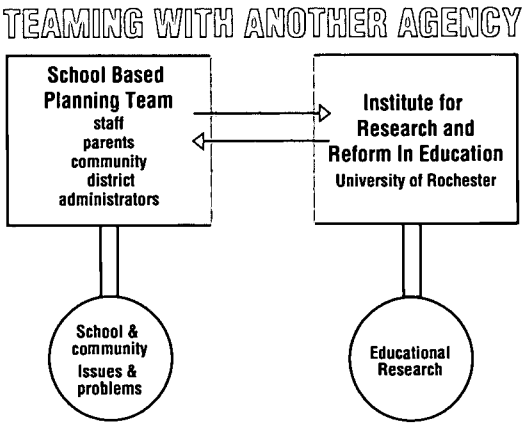
Corporate organizations, on the other hand, have to import the expertise needed to transform their work settings into effective learning environments. Senior managers in corporations often talk about the necessity to "drive down" learning capability in their organizations. The key to the quality transformation of schools, however, is quite the opposite. It is to allow the learning technology already being used within the school to work its way up and through the institution. It is to maximize a technology that is already firmly in place.

When the Clara Barton School Initiative Team began to develop an agenda for school improvement, it had a significant advantage in approaching and making use of educational research. Through its linkage with the Institute for Research and Reform in Education at the University of Rochester, the Initiative Team avoided what might have been a confusing and overwhelming encounter with the existing research on learning and school improvement issues. It also avoided the trap of allowing "experts" to provide ready-made solutions which ignored significant situational factors. This is how the collaboration between the Team and the Institute worked.

The Institute had a thorough knowledge of the national and international research on best educational practices and successful school improvement efforts. The Initiative Team, which was composed of parents, administrators, teachers, and para-professionals, had a thorough knowledge of its community, school, staff, and students. The matching of the Team's knowledge with the knowledge of the research community was enabled by the "brokering" function exercised by the Institute. That is, when the Initiative Team brought its knowledge and its tentative agenda for change to the Institute, the Institute acted as a "broker" providing an unobstructed path to findings from the most pertinent educational research.

In bringing local or situational knowledge together with research expertise, the Initiative Team was able to incrementally build the improvement agenda that would transform Clara Barton School. By "brokering" what would otherwise have been an imposing and a perhaps impervious volume of research literature, the Institute facilitated the accessing of key information needed by the Team to make its design and implementation of school reforms practicable. Research *informed* rather than *directed* the interests of school practitioners in their search for ways to maximize the learning opportunities available to its key customer group, the students.

We may view the collaborative relationship between the Initiative Team and the Institute for Research and Reform in Education as being, itself, a form of teamwork that optimized a customer-supplier relationship. Much as in our previous analysis of a typical conversation, the customer-supplier relationship expressed mutuality rather than subordination. The Team supplied local or situational infor-



mation and the Institute supplied relevant research findings. The Team was a customer for those findings and the Institute was a customer for the local information provided by the Team. The two bodies worked synergistically in a non-hierarchical context that maximized mutual learning and supported the risks associated with educational innovation. Think of how you might design similar forms of teamwork that could enhance improvement initiatives in your school or school system. In doing so, explore how you might enlist the assistance of other schools, external researchers, and faculties of education at universities within your region.

A Note on the Importance of Communication

Excellent communication is necessary for authentic collaboration and for realizing the true value of teamwork. Open communication allowed the members of the Initiative Team to speak frankly with each other and to draw upon the perspectives of each team member in formulating what was happening at the school, why it was happening, and how it could be improved. Open communication provided access to the multiple perspectives

needed to accurately comprehend existing community and school realities and to phrase truly shared aspirations.

It was equally important for the Initiative Team to maintain open communication with its constituent groups within the school and the community. All of the *Symposium* presenters from Clara Barton School attested to the many, many meetings held with diverse constituent groups to build consensus around an emerging vision and the incremental improvements needed to realize it. The Team understood that its job was not only to develop potential solutions to school problems. The members were acutely aware that they had to secure broad-based constituent support if they were to translate their good ideas into school improvement projects that worked.

As you develop improvement initiatives for your school or schools system, you should be sure to design and incorporate the processes needed to form and re-enforce essential communication linkages. When you consider who your customers are, you are also highlighting the constituent groups with whom your need to communicate is the greatest. Communication is the means through which team members can allow colleagues and constituent groups to understand and to endorse the significance of their work.

MUCH OF THE WORK THAT TEAMS DO involves the analysis of process. Continuing attention to process allows teams to see where opportunities for internal and external improvement may exist and how improvement interventions should be structured. It also allows teams to assess whether a particular improvement initiative justifies the human, organizational, and financial costs of its development and implementation. In short, through process analysis of both existing situations and planned improvements, teams can learn what may be wrong, how it may be ameliorated, and whether the amelioration is practicable and worthwhile.

In developing the concepts of the customer and supplier in Chapter 2, we described several techniques for diagramming processes and for mapping systems. And while teams will benefit from creating comprehensive system maps or models, they can make use of a range of other less complicated tools in their first approach to issues and problems. The successful application of these tools will provide teams with both insight and a sense of accomplishment in their early work.

In assembling the tools that can be used for ordering and analyzing the information generated by groups, we have drawn heavily from Edward Sallis' book *Total Quality Management in Education* and Peter Scholtes' *The Team Handbook*. Each book contains elaborations of the methods discussed below.

And one more note before we get started. Team size is an important variable that can condition success. Ideally, teams should have between five and eight members. Fewer will deny the critical mass needed to work productively. More will begin to limit individual participation and will prolong the time needed to complete work. Limited membership should be complemented by ensuring that there is good communication and consultation with key constituent groups.

Brainstorming

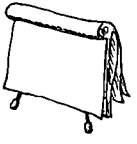
When the anxieties that accompany the first meeting pass, team members will naturally begin to discuss their mandate. They will want to develop a sense of their task and how they will go about their work. Free, unguided discussion, however, can ramble. Without structure, it can leave

participants feeling that they have achieved little. A good way to ensure that early meetings give team members a sense of focus, accomplishment, and participation, is to use the technique of brainstorming.

Brainstorming is a form of collective free-association constrained only by the idea or concept being discussed. In a brainstorming session, team members should be encouraged to freely express their thoughts. Ideas should not be evaluated, they should simply be collected; the more the better. When the session works well, ideas build upon those previously expressed so that there is a cumulative effect.

A typical first meeting brainstorming session might focus on the issue(s) or mandate assigned to the team. This will allow the team to collaboratively define its scope and what its work will entail. The team leader can begin the session by first reading the mandate and then asking each member to verbalize an idea that will help define it. In order to ensure everyone's participation, responses might be called for by rotating repeatedly through the team until there are no further contributions. All ideas should be written on a flipchart as they are given. If necessary, the team leader should pause to make sure that each idea is accurately captured. Risk taking should be encouraged by inviting participants to articulate ideas that may sound silly or peripheral. It is often in the exploration of tangential and seemingly outlandish thoughts that real gains can be made.

Brainstorming sessions allow team members to experience how much information and insight they bring to a problem or issue. It is a way of enjoyably making clear that the team's primary resource is its membership and that this resource is more abundant than may have been anticipated. In addition to revealing the synergy that can be generated in teams, brainstorming allows team members to understand each others' orientations and divergent ways of approaching problems.

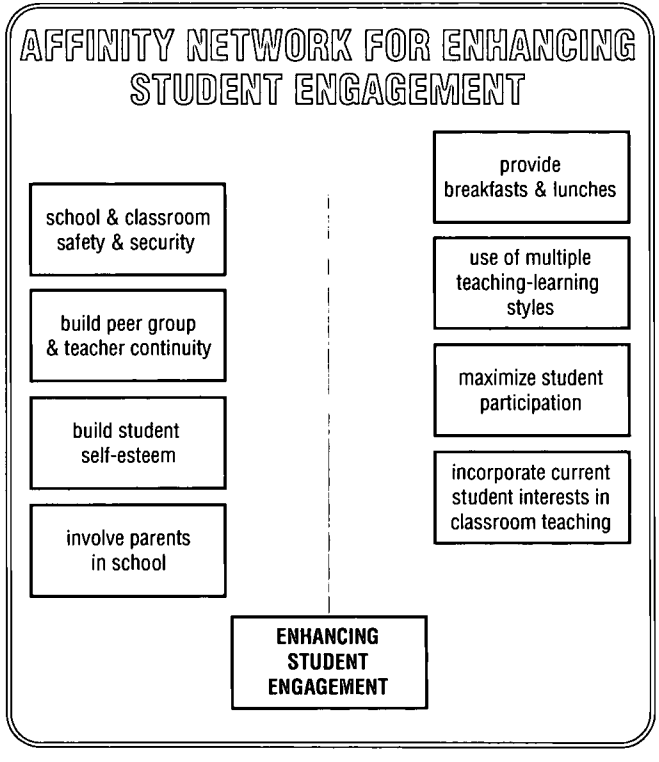


When led well, brainstorming is an energizing experience that can enhance initial approaches to a problem and reinforce team solidarity. A danger in brainstorming, however, is dissipation. If the brainstorming session is not guided by a discerning leader or if it is allowed to go on too long, ideas can become repetitive and momentum can be lost.

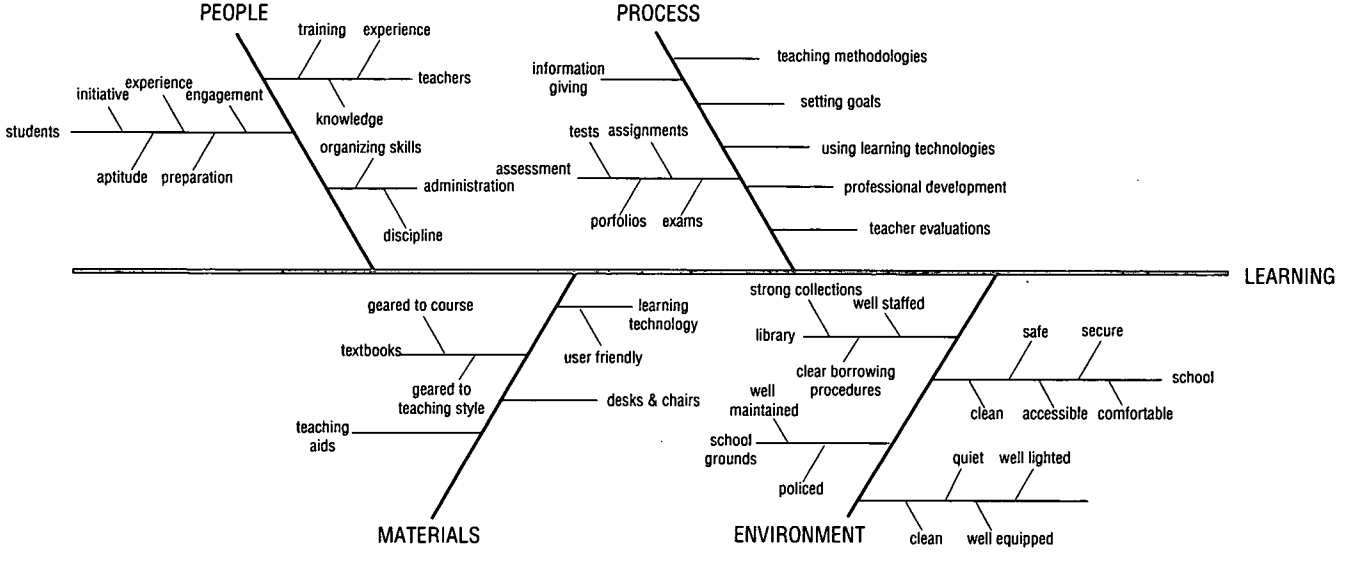
Affinity Networks

The creation of affinity networks introduces a systematic means for enhancing brainstorming sessions. Affinity networks can also be used to initiate an independent process of idea formation and focusing. The object of the exercise is to first elicit and then reduce a range of ideas to a set of predominant and inter-linked themes. When the building of affinity networks follows a brainstorming session, it provides a method for team members to interconnect the major ideas expressed. As an independent process, it offers a formal method for generating and networking ideas relevant to a particular issue.

When used as an independent process, affinity networking begins with the writing down of ideas relevant to the topic being considered either on file cards. As in brainstorming, team members should be encouraged to write down any idea, regardless of how tangential it may seem. Again, the process is generative not evaluative. When everyone has finished writing, the cards should be placed on the table. At this point participants work as a team in arranging the cards into affinity groupings — that is, groupings reflecting common themes and principles. During this operation, discussion should be minimal.



A FISHBONE DIAGRAM OF LEARNING



Upon completing the arrangements of cards, the team may discuss and alter the groupings. It should also either select one card that captures the main theme or make a card stating the unifying principle of each grouped set. This card becomes the heading or title. Once the groupings have been finalized and titled, team members begin the process of linking them into affinity networks. This is done by drawing lines between the headings that reflect their inter-relationship. The interlinking of the various headings may result in a variety of forms including a horizontal process-flow diagram, a vertical tree, or any other form that reflects how their relationship is perceived.

Fishbone or Cause-and-Effect Diagrams

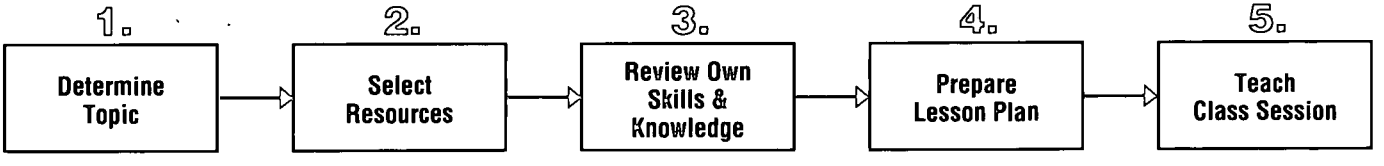
Invented by Kaoru Ishikawa, fishbone or cause-and-effect diagrams help teams translate information initially gathered in list form into factors that are causally linked to an outcome. This outcome may be a resolution to an existing problem, a given idea or process that is being developed, or a desired organizational goal. Making fishbone diagrams is a way of further developing the interlinkages made in affinity networks in order to show cause-and-effect relationships. Major causes are linked by lines connecting them to a unifying theme line. The structure of the fishbone diagram allows for the drawing of cause-and-effect relationships at increasing levels of detail by adding lines to link secondary and tertiary causes to their effects.

Top-Down Flow Charts

Top-down flow charts do not mean the pyramid-like organizational charts you might think of when you hear this term. Rather, they present a horizontal, sequential ordering of the primary steps in a given process. The order traces the development of a process through its causal steps to the desired outcome or point of completion. A top-down flowchart, however, is intended to be neither exhaustive nor a detailed representation of a complex process. Rather its purpose is to isolate only the primary steps needed to achieve an objective. The chart is completed by listing beneath each primary step the core process elements that constitute it.

Top-down flow charts should focus only on how a process *should* work under ideal circumstances. The utility or top-down flow charts lies in their ability to quickly map the key sub-processes needed to produce a desired result. They give teams an immediate grasp of what an efficient

A TOP-DOWN FLOW CHART FOR TEACHING A CLASS



1.1 ensure relevance to curriculum

2.2 determine key issues/aspects-focus topic

2.1 ensure availability of resources

2.2 look at non-text (e.g. audio visual) teaching aids

2.3 investigate possibility of guest speaker

3.1 self-assess existing knowledge

3.2 acquire new knowledge if needed

3.3 hone current skills

3.4 review resources to be used & become comfortable with them

4.1 incorporate different teaching/learning styles

4.2 fit lesson into teaching time allotted

4.3 select main points to present

4.4 involve class participation

4.5 review of topic with class

4.6 include a collaborative assessment of learning & teaching

5.1 present information clearly

5.2 provide opportunities for questions

5.3 attentiveness to group & individual needs & concerns

5.4 seek feedback as lesson proceeds

5.5 verify learnings at class end

5.6 check what was most helpful to learners

and effective process should look like. And by doing this, they provide the departure point for asking questions about why things may look and work differently in practice.

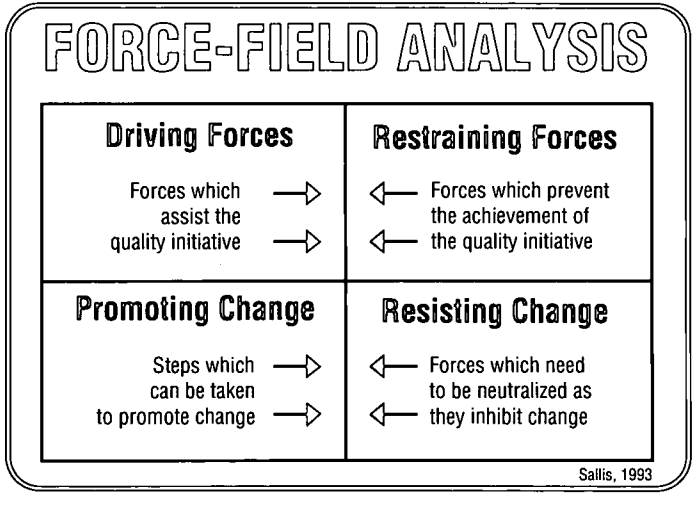
Force-field Analysis

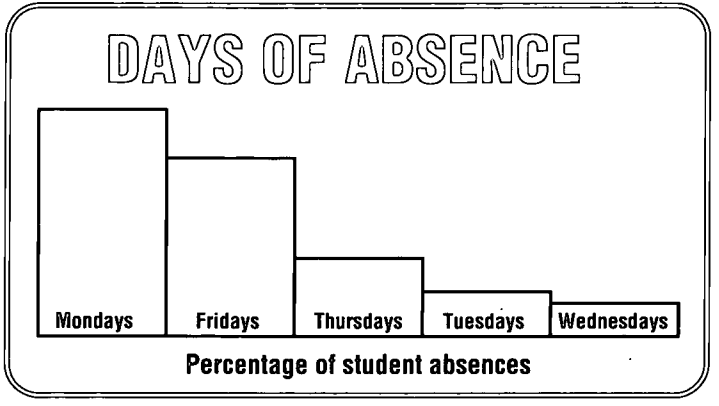
When teams have determined that an issue with which they are working requires the introduction of change, they can make use of force-field analysis. This analytical tool allows teams to focus on the forces which drive a change initiative forward and the forces which constrain it through resistance. From this analysis, teams may begin to draw out the process steps which would lead to the prospective change and to list the obstacles that each step will predictably encounter.

By completing a force-field analysis, teams can come to understand the organizational dynamics that condition whether a prospective change is practicable. The analysis will allow teams to realistically assess the viability of an improvement effort. They will also be able to sense if the improvement will provide benefits that merit the expenditure of resources needed for its successful implementation.

Pareto Charts

Developed by the Italian economist Vilfredo Pareto in the nineteenth century, these charts are commonly used to graphically display the distribution of a common element or characteristic. In teams working with quality principles, they are most often used to show how often problems occur and the seriousness of their effects. In this variant of the traditional bar chart, the bars are arranged in descending order of magnitude from left to right. Pareto





charts focus attention on those issues which occur with greatest frequency and those problems that have the greatest organizational impact.

Benchmarking

In industry, benchmarking involves analysis of the best products and services currently available. These products and services become the benchmarks that corporations will strive to meet and to exceed.

In school and school system contexts, benchmarks are found by focusing upon what are considered to be the best existing practices and organizational features of special merit. Exemplary models for the organization of work and the technologies that support them provide additional benchmarking information. The formulation of benchmarks may also be assisted by consulting current research on topics that relate directly to team concerns. In addition to providing standards which can focus organizational effort, benchmarking can make the reform process less arduous. As Sallis (1993, 106) notes:

> The importance of benchmarking is that it saves reinvention. There is almost always someone somewhere who has solved your problem.

Customer-Path Mapping

By mapping the pathways through which customers and key constituent groups encounter the school or school system, educators can gain a fresh and an often enlightening perspective concerning their organizations. From a short walk in the shoes of the customer, the obstructions that impede the meeting of client needs can become tellingly visible. Given that every process and every organization is designed with a customer's interests in mind, this exercise can provide a vivid sense of what may be going wrong

within an organization and how it can be corrected. As you will recall, this methodology was used by the Initiative Team at Clara Barton School when it began to develop its student-centerd mission.

* * * * *

These are only a few of the tools that will assist teams in the analysis of process that must precede the design of effective improvement initiatives. The resources listed at the close of this chapter contain many others that, when used judiciously, can enhance team efforts.

While teams can clearly benefit from the use of these tools, they can also be misled by them. That is, processes may be oversimplified, the connections between elements may be distorted, and the team may project its biases onto data through selective presentation. Teams may, to some extent, self-correct for these tendencies by asking themselves difficult questions about their arrangements of data and the conclusions they draw from them. An effective team leader will be able to coax groups out of the conceptual traps and premature certainties that can hinder perception and which can undermine the value of innovations.

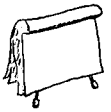
It is also important to remember that the tools described in this section are heuristic devices for understanding what is going on in organizations. They are pictures we create by selectively appropriating data from the ongoing continuum of experiences and events that constitute our organizations. Team members should be careful never to confuse the ideas and the images they create with the reality that they represent. They should try to avoid the perpetual problem of the well-intentioned planners who are surprised when the world habitually eludes their designs for its improvement.

In saying that all models are wrong, Deming reminds us that humility and openness to surprise should always accompany our improvement efforts. In saying that some models work better than others, he reminds us that the collection of data is both a means to secure this functional humility and a vehicle for enlightening surprise. In the next and final chapter of the *Handbook*, we shall examine how the implementation of improvement initiatives can be monitored through the gathering and the analysis of data to ensure that we are indeed on the road to quality.

Core Questions

1. How does your school and school system utilize teams and teamwork now? Is teamwork a substantive means of organizational improvement or is it a means of spreading work without sharing responsibility? Upon what observations is your response based?
2. What must happen within your school or school system to make teamwork work? In Deming's terms, what are the barriers that must be broken down between organizational sectors in order to build cross-functional teams? What concrete supports and rewards need to be in place to foster the effective development of teams?
3. Given that the introduction of teams and teamwork changes many aspects of organizational structure and practice, in the context of your school and school system:
   a. How would teams and teamwork change the existing functions of administrative leadership?
   b. How can teams be utilized to enhance the ability to listen to customers/clients and to design improvements responsive to their needs?
   c. How can teams aid the development of long-term relationships with internal and external suppliers?
   d. How would teams restructure existing work relationships among support, teaching, and administrative staff?
4. How are teams both an exemplar of, and a means to, an educational culture of continuous improvement through learning maximization? What message does an organizational commitment to teamwork send to staff, customers, and suppliers?
5. How would you design and deliver the interpersonal and technical training needed to make teams effective? What key issues would this training have to address? What critical elements should be in place to ensure the success of initial team efforts?

- *people working together are the center of all change*
- *consensus is vital; not everyone gets what they want, but all are on side*
- *community/parent involvement on teams is essential*
- *teams can build the quality & commitment required for decision-making*
- *for teams to work listening & learning are key requirements*
- *synergy from team participation builds excitement & identifies hidden talents*
- *through empowerment teams reduce resistance to change*
- *teams can make sure that change = improvement*
- *teamwork = learning about what makes a good school work*
- *training, support, & outside advice are needed for teams to work*
- *select a manageable but important project*
- *maintain focus on what will benefit kids*
- *teams break down barriers*
- *don't water the rocks — provide options for those uninterested in change*
- *be like water: go with the flow & find alternative paths when there are obstacles*



Key Symposium Learnings

- *teams develop leadership skills & allow for the identification of leaders*
- *strong value base is essential; agreement in principle if not in detail*
- *senior administration must be involved*
- *teams can make trust happen & build commitment*

- ❑ The senior administration has adopted and modelled teamwork as a mode of operation and as a means for realizing key institutional goals
- ❑ An action plan for moving matters of organizational importance from the top of the hierarchy to teams whose membership includes those closest to the process or issue of concern
- ❑ Processes are in place for: identifying problems suitable for teams, forming teams, designating team leaders and facilitators, creating team mandates, establishing time-lines for teamwork, supporting the team process, evaluating teamwork, determining when a team's work is completed, and bringing a team's work to closure
- ❑ Supports and recognition for team participation are in place
- ❑ Cross-functional teams with active management participation together with representatives from diverse but relevant organizational, community, and constituency group sectors have been created
- ❑ Careful preparation, training, support, and clarity of mandate for initial team projects to enhance prospects of success and to model teamwork as an effective means to accomplish organizational objectives
- ❑ Teamwork is more than a slogan or appearance; teams are empowered to ask critical "what", "why", and "how" questions concerning existing practices; teams have wide scope in designing improvement initiatives and implementation plans; and teams are involved in the monitoring of the improvement initiatives they design and which are implemented
- ❑ Education and professional development at all organizational levels about what team work is, why it is needed, and what is expected from it
- ❑ Teamwork is part of a culture of continuous improvement that advances: staff empowerment, an active sharing of vision and responsibility, "surfacing" of staff expertise, and collaborative achievement
- ❑ An assessment process to determine: where teams and teamwork have been introduced, where they have proven effective, and the critical factors for team success

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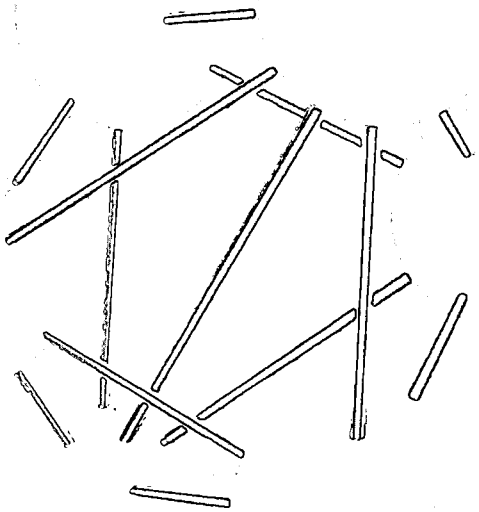
CHAPTER FOUR

ADDING VALUE AND MONITORING QUALITY

Linking Process and Measurement

Measures of productivity are like statistics on accidents: they tell you all about the number of accidents in the home, on the road, and at the work place, but they do not tell you how to reduce the frequency of accidents.

W. Edwards Deming



CHAPTER FOUR

ADDING VALUE AND MONITORING QUALITY IN EDUCATIONAL PRACTICES

Linking Process and Measurement

In this Section:

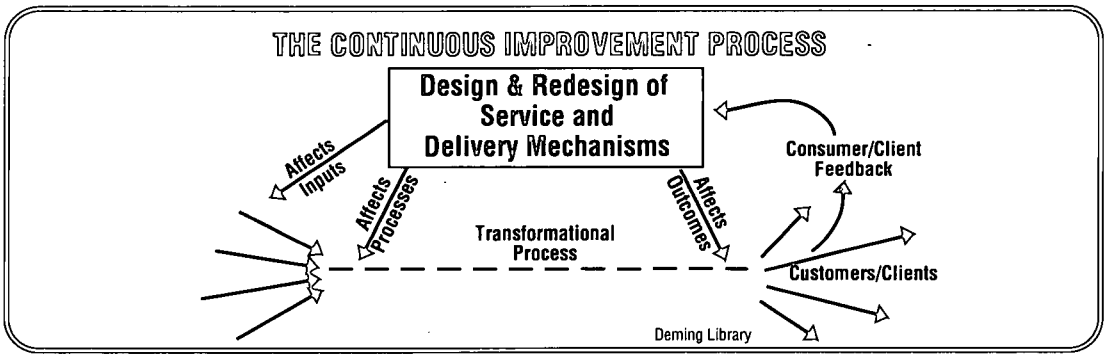
- *Measuring the Value Added:* exploring how the development, interpretation, and use of data can ensure the improvement essential to *Quality Schools*
- *Quality Assurance Through Through Asking Critical Questions, Generating Standards, and Focusing on the Learner:* creating improvement from change by satisfying the four quality imperatives, reducing lost opportunity costs, and integrating the procedural and the transformative aspects of quality
- *Quality School Checklist — Self-Auditing for Quality:* developing a checklist that will allow educators to audit their institutions for quality progress
- *Core Questions*
- *Key Symposium Learnings*
- *Implementation Checklist*
- *Refereances and Additional Resources*

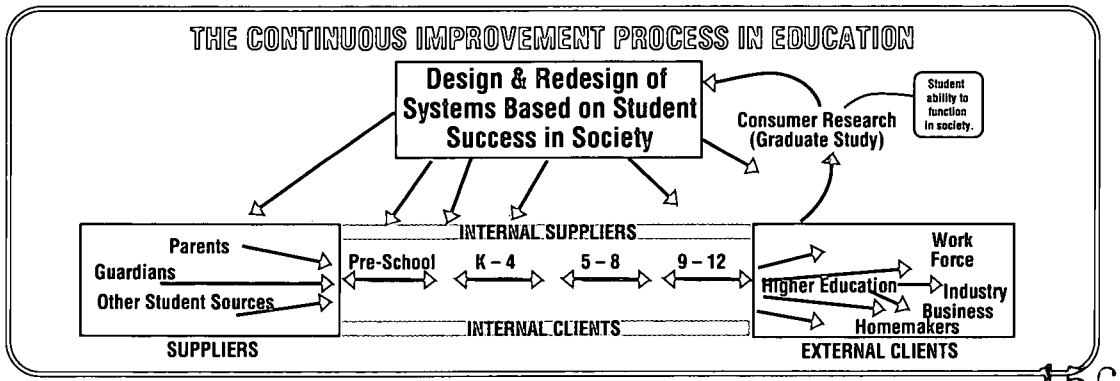
WE BEGAN THE INTRODUCTION to the *Handbook* with a discussion of "quality." In each of the three successive chapters we have progressively defined quality within the conceptual framework articulated by W. Edwards Deming. Our objective throughout has been to explore which aspects of the Deming quality philosophy lend themselves to adoption by schools seeking to systematically add value to the learning opportunities they present.

Beginning with Deming's 14 points, we have seen how educational organizations can define and move towards quality by putting the needs of their customers/clients first. We have learned how we can understand organizational practice as a series of interlinked processes each of which can be designed to add value to inputs. And we have explored how leadership and work patterns may be restructured to advance continuous improvement and to enhance the intrinsic motivation of organizational participants. In this final chapter of the *Handbook*, we shall explore how schools can define and monitor their efforts to add value to educational services through the collection of data.

The fourth and closing day of the *Symposium on Quality Schools* was specifically designed to address the topic of quality assurance through data-based monitoring. We were fortunate that Edward Sallis, the author of *Total Quality Management in Education*, could travel from Britain to present this topic. In his day of presentations, Sallis shared insights gained from extensive research and practice in the educational applications of Quality Management principles. He challenged symposium participants to think through what factors make a *Quality School* and how these factors might be linked to measurable indicators of success.

Sallis began his presentation by stressing the distinctive and somewhat unique role played by data gathering in the development of *Quality Schools*. He prefaced his remarks by reminding symposium participants of a point to which we have alluded in each of the previous sections of the *Handbook*. That point is: *there is no blueprint for the production of quality organizations*. Applied to educational settings, this means that there is no master template through which the characteristics and structural manifestations of *Quality Schools* can be predetermined. Given the absence of a controlling external pattern for school





Quality Schools Share Process Not Content

development, data developed by practitioners is the primary means to ensure that the system interventions they design do indeed lead to improvement.

The lack of a defining set of uniform, cross-institutional characteristics distinguishes the movement for *Quality Schools* from the effective schools movement and other school reform projects which offer prepackaged solutions to problems which are presupposed. As Leithwood (1993, 312) has remarked, quality improvements respect the distinctiveness of particular organizational contexts and the contingencies which characterize them,

> total quality improvements do not occur in general contexts. They occur in specific and always partially unique contexts in which productive leadership responses will be contingent upon circumstances unique to the context.

This means that the job of securing improvement cannot be reduced to merely a technical matter of installing reforms designed elsewhere. Rather than adopting generic reforms, improvement efforts specific to a given setting are developed by practitioners and external partners working in cross-functional teams that maximize sensitivity to organizational and community contingencies. Beginning with the client-centred objectives which define their operational context, team members design the processes that will add measurable value to inputs. In order to evaluate these situation-specific improvement efforts, monitoring must ensure not only that things are measured right, but that the right things are measured and that the right conclusions are drawn from the data obtained.

Monitoring improvement efforts for their effectiveness means measuring their capability to reduce the variation that separates intention from practice. But in order to reduce the variation that undercuts the realization of purpose, we must accurately locate its causes as well as its existence. If we fail to understand why variation is occurring we will misunderstand and misuse data, and we will fail to create improvement.

In the "Counting F's" exercise in Chapter 3 (see page 92) we saw how easily *common causes* of variation may be confused with *special causes* of variation. We also saw the unfortunate educational and human consequences of this confusion. As you will remember, we learned that we could understand the distribution or variation of answers reported by symposium participants in one of two ways.

IMPROPER INTERPRETATION OF OBSERVATIONS AND DATA

A fault in the interpretation of observations seen everywhere and every day is to suppose that every event (defect, mistake, accident...) is attributable to someone or is related to some special event.

W.E. Deming, 1990

The fact is that most troubles (95% says Deming) lie in the system. People always do what makes sense to them. The system must be changed. Do not blame people for problems.

Victor Dingus, 1992

VARIATION TYPES OF CAUSES

SPECIAL CAUSE:
Special causes of variation are **not** part of the process all the time. They arise because of specific circumstances.

COMMON CAUSE:
Common cause variation is typically due to a large numer of small sources of variation. The **sum** of the small sources may result in high levels of variation. The **sum** causes the inherent variation of the process.

FOCUS:
IDENTIFY SPECIAL "UPSETS" AND PERMANENTLY FIX THE PROCESS

Data, Causes, and Clarity

Victor Dingus reminded participants in the *Symposium on Quality Schools* that we are led to improperly interpret observations and data when special and common causes of variation are confused. By untangling the two causes of variation, we may fix the process rather than blame the people.

We could regard it either as an indicator of difference in individual capabilities — a special cause of variation — or as an indicator that the process or method was flawed — a common cause of variation.

If we accepted the former understanding of the data, we could use it to build a profile of individual capabilities. But when we altered the process, we found that the attribution of variation to special causes was erroneous. When we allowed symposium participants to work in teams we found that everyone could get the right answer. By changing the process we were able to eliminate the variation that could have been used to generate seemingly hard evidence to support differences in individual ability.

How we interpret data is often a function of our implicit theories about what is true. The inadvertent distortion of information to fit our beliefs of what is possible creates blind spots that obscure pathways to improvement. This is what Deming means when he cautions that "there are no facts." He is reminding us that we must take a critical attitude to what we regard as obvious and true if we are to develop the profound knowledge needed to improve systems. In presenting at the Symposium, Victor Dingus made the same point when he used the following phrase to describe the origin of so many of our problems: "It ain't what we don't know, it's what we know that just ain't so." The "Counting F's" exercise provided an example of how we may shape data to re-enforce presuppositions and to preempt the insight needed to effect positive change.

Had we believed that success is inevitably predetermined by differences in ability, we would have regarded the variation documented in the initial counting trials as a function of individual difference. The variation would have proved that our belief in the existence and the efficacy of differing ability levels was true. We almost certainly would not have thought about designing a method to eliminate the variation that coincided so conveniently with our orienting premise.

But when we suspend our implicit beliefs in ability levels and their impact upon success, we are led to a very different response to the observed variation. Rather than using it to buttress a prejudgment, we can seek to eliminate it. We can change our purpose from one of determining who is equipped to succeed to having everyone succeed.

This change in purpose both prods and enables us to explore how the reduction of variation can be achieved through the redesign of process and system. By locating causality in the system rather than in the individual, we can optimize improvement. Learning to advance improvement through the redesign of systems becomes especially important given Deming's recurrent claim that over 95% of variation is attributable to common rather than special causes.

When we collect data through measurement, then, it is important to be clear about what we are measuring, why we are measuring it, what the data from our measurements can tell us, and what the data will enable us to do. In the following exercise, you will have a chance to analyze the measures you use and which are used by your school and school system to generate data. Using the format given below, describe how you, your institution, and your board develop data through measurement processes now in place. Follow the generation of data through the following steps:

1. the measurement or measurement process used (e.g., testing, self-assessment, staff evaluation, costings, incidence of occurrence),
2. what the measure is designed to measure (e.g., performance, development, effectiveness, efficiency, expenditures),
3. the data and/or the form(s) of data generated from the measurement process (e.g., rank scores, percentages, narrative material, accounting figures),
4. the special causes of variation reflected in the data,
5. the common causes of variation reflected in the data, and
6. the current uses and applications of the data.

MEASUREMENT, DATA, VARIATION, AND USE

1. Measurement/ Measurement Process	2. What is Measured	3. Data Generated	4. Special Causes of Variation	5. Common Causes of Variation	6. Uses of Data

In your own thinking and, preferably, in discussion with others, explore the adequacy of the measures now in place and the usefulness of the data they yield. As the quotation from Deming at the beginning of this chapter indicates, much of the information we collect is "dead" data; that is, it is regarded as an end in itself rather than as a means to improvement. Be attentive as to how the data developed and collected by your school system, your school, and by you is or is not used in the service of improvement initiatives. Develop ways to use existing data to advance improvement rather than to merely document the *status quo.* Also be alert to instances in which data gained from current measurement practices may confuse special causes with common causes of variation. When you note an instance of this confusion, examine how it diminishes the potential value of what the data can tell us and how the use of this data affects the people it concerns in your organization.

As the "Counting F's" exercise illustrated, the conceptual shift required to look beyond the initial presentation of data is often difficult to make. But if we do not remain alert to the assumptions that are hidden in our data, we cannot develop the knowledge needed to initiate the process of continuous improvement. And while it serves neither our best interests as educators nor the best interests of our clients, we show a continuing tendency to misunderstand data about variation when we monitor individual and school performance.

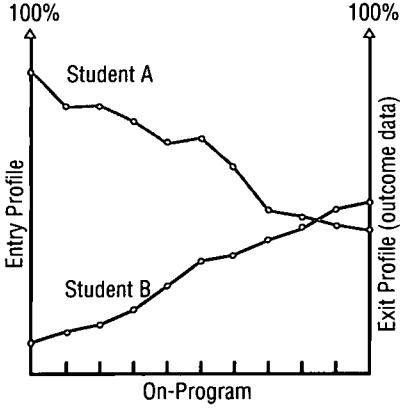
Sallis provided a useful example of how the misunderstanding of data leads inevitably to its misuse and to the defeat of improvement efforts. In doing so he also showed how we can reinterpret data that might otherwise lead to erroneous conclusions about the individuals and the systems within which they work. He offered the example of the league tables which are presumed to establish the relative worth of British educational institutions. These rankings, which are published by the press, are based upon the collated student scores on standardized exit tests. Their use by prospective clients to select the "best" institution for further study supplies an illustration of how we commonly make unmerited assumptions from seemingly factual data.

When we look behind the data compiled in league tables, we find that it actually tells us very little about the value

added by an educational institution to its students. At its most extreme, a high league table standing might reflect nothing more than the fact that an institution attracts very capable students and avoids putting obstacles in their way. A more useful form of data would tell us how much students benefited from study at a given institution. Such data would be based upon the difference between student knowledge upon entry and the knowledge level upon completion.

This is exactly the kind of data developed by Sallis' further education colleague Kevin Conway. Conway realized that reliance on collated exit examination results was a faulty way of measuring institutional performance. As an alternative, he developed a means of assessing the value that the institution actually adds to its students' knowledge base. By generating individual student profiles at the time of institutional entry and then comparing them with exit profiles, Conway found that he could develop a more systematic way of determining an institution's value adding capability.

MEASURING THE VALUE ADDED AND THE VALUE LOST — A TALE OF TWO STUDENTS



What conclusions would you draw if you only had outcome or point-of-exit data?

What conclusions would you draw if you had all of the data shown above?

This simple step both uncovered and corrected the misuse of seemingly sound data to draw what appeared to be valid conclusions about institutional and individual performance. It revealed that a student who did very well on an exit examination, might have performed significantly less well than would have been predicted from the entry level profile. In some cases students who ranked high in exit examinations had actually declined in test scores! Conversely, students who had relatively mediocre exit examinations scores might have shown great improvement over entry level scores and expectations. This "lost" data was recovered by Conway's entry and exit profile comparisons.

Conway's data also allowed his institution's staff to assess what they were doing well and what they were doing poorly. By untangling the common and special causes of variation it became clear where his institution was adding value and where it was not. And by moving the entry and exit profiling to the program, year, and course level, a systematic improvement-oriented redesign of processes could be undertaken. A few examples will help to show how data properly interpreted led to concrete improvement initiatives in Conway's institution.

The profiling activity itself led educators to define their expectations more clearly and to track and communicate student progress with greater certainty. The operationalizing of the value-added component of their work reduced ambiguity and highlighted areas where improvement could be secured. After finding that increased tutorial support added more value to student progress than did classroom attendance, additional resources were moved to this instructional delivery mode. Because student performance was now measured against individual expectations rather than global indicators, early warning signals of academic problems could be spotted and ameliorated. Not surprisingly, drop-out rates were decreased. As data about value adding filtered down to finer and finer levels of institutional activity, it provided the basis for meaningful program appraisal and improvement. In sum, by measuring the actual gains a student made rather than final outcomes, Conway's institution could be sure of its successes and it could design improvements in areas where performance was poor.

The fact that both Sallis and Conway work in postsecondary settings should not obscure the utility of value-

added measures in school environments. One of the symposium participants recounted the following story which supplies an example of how value-added assessments can be applied in school settings. When he was a principal he had received a call from an upset parent complaining that her child's teacher had tested the class on the first day of school. After hearing the parent's complaint, the then principal explained the purpose of pre- and post-testing in assessing and documenting student progress. The parent was satisfied by learning how the teacher had imaginatively augmented the value of a standard measurement device.

This example illustrates that we can be so habituated to using exit or outcome measures as the sole index of achievement that other approaches to measurement can seem incomprehensible. And yet by confining ourselves to outcome measures — what Deming decries as management by numbers and dependence upon end-point inspection — we are blinded to ways of measuring the value added by a given process. When we rely exclusively upon outcome measures to make attributions about individual competency and institutional success, we fail to disclose the value that a process or system adds. And when we do not measure the value added, we close off important roads to improvement.

The teacher in the above anecdote was individually doing what Conway had done at an institutional level. While such quality measures may be applied productively by individual teachers at the classroom level, their value is amplified when institution-wide applications are developed. They become even more useful when applied throughout a school system. In Britain, Conway's work has led to the publication of value-added league tables which provide potential clients with truly useful information in selecting an institution for further study. Such tables avoid the dead-end of simple ranking. They invite and encourage institutions to improve quality by using measures to diagnose where change is needed and to celebrate accomplishment where it is merited.

There are also non-academic areas that can serve as indices of an institution's value adding capability. Measures in such areas give deserved significance to the "softer" areas in which schools add value to students' lives and which support academic achievement. These areas include establishing a secure and caring school climate, a

welcoming environment, and the development of non-academic activities and support services that contribute to student wellness. The staff at Clara Barton School found ways to use non-academic activities as levers to advance both student wellness and academic achievement. As you will remember, the school's non-academic initiative of serving breakfasts and lunches in classrooms, and inviting parents to attend school cluster breakfasts, had a significant academic and social impact.

When we move to a value-added framework, we can make use of existing data in new ways. Data which has been routinely used to generate inspection statistics may now be used to drive improvement initiatives. Through creative application we can rescue this data's lost value. For example, tardiness and absenteeism have proven to be highly significant predictors of individual student success in school. By using increasing tardiness and absenteeism as a signal for constructive intervention rather than punishment, we can focus on and reduce both special and common causes of variation. We can learn — often by involving those who are becoming chronic non-attenders — how to make schools attractive places to be while at the same time adding value to those who attend. By looking at existing data creatively and by entertaining atypical educational initiatives, we may begin to do things in new and better ways.

The following exercise focuses on how you as an individual practitioner can use the value adding orientation. It involves applying the concept of value adding to your immediate work situation and your professional functions. Use the format given below to list:

1. the products, services, and capabilities you individually create and/or enhance in your professional capacity,
2. how you add value in the creation or enhancement of these products, services, and capabilities,
3. how the value added is measured,
4. who receives the value, and
5. how data derived from measurements contributes to potential improvement initiatives.

Remember to include the academic, the administrative, and the non-academic factors associated with your work. And

don't forget to list the products and services you provide to the internal customers who are your working colleagues. You may also note how the data derived from current measures could be reinterpreted or enhanced in order to maximize its use in a value-added context.

This exercise encourages you to *operationally define* the content of your daily work. When you describe the processes you use to add value and the measurements used to verify this adding of value, you are translating abstract intentions into pragmatic applications that you and others can use. For example, you might begin with "learning" in the first column. When in the second column you show how you enhance learning by adding value, you are specifying the concrete processes through which an abstract objective is grounded in practice. Similarly when you describe how learning is measured in the third column, you are spelling-out the specific criteria by which achievement is defined and verified. Operationalizing concepts helps us to be clear about what we do, why we do it, and what our doing does. It reduces the uncertainty that can impede improvement.

ADDING AND MEASURING VALUE
THE INDIVIDUAL PRACTITIONER

1. Products/Services **Individually** Created	2. Process Used to Add Value	3. How the Value-Added Is Measured	4. Who Receives the Value	5. Data-Based Improvement Initiatives

The fourth column is intended as a reminder that the value added is always added for a client(s) or customer(s). By defining who the customer is we can remember that the data we generate is also always for a purpose and for an audience. Because all data will be used by different individuals and audiences for different purposes, we must be as clear as possible about what the data derived from our measurements is saying. As the preceding examples have shown, we can maximize the usefulness of data by ensuring that it provides a basis for improvement rather than a simple reporting of variation statistics.

After you have completed the exercise, read over your work considering the following questions:

- Do the products and services that you create add value that meets the needs of your customers/clients? Do you involve clients and/or constituent groups in the design of the processes used for delivery and measurement? What processes have you used or might you use to do this?
- How well have you been able to operationally define the processes through which value is added? Would an "outsider" understand what your activities were meant to achieve? If not, how can they be stated to ensure greater clarity and ready communication?
- Do your measures yield data only about outcomes or do they produce data that indicates the value added? How would you change current measurement practices to obtain data about value adding? Have you designed measures that are sensitive to both common causes and special causes of variation?
- Who will use the data from your measurements and for what purposes? In providing data do you make clear what it is intended to indicate? How have you or how might you do this?
- What processes do you now use for the interpretation of data? How might you change these processes to increase the use of data in designing improvements that add value to your work?
- Can you describe the process through which you would design improvement initiatives based upon value-added data? What concrete improvements might emerge from value-added data? What changes would these initiatives involve in what you are doing now?

If you are working in a group, you can add value to this exercise by discussing your entries with your colleagues. Together you can build affinity networks, top-down process flow charts, and fish-bone diagrams (see Chapter 3) to better define and to bring out the relationships between the various elements in your lists. You can also explore how you could redesign present practice to ensure that you are producing goods and services of value to your students and to your organizational colleagues. Think about how you might involve colleagues, clients, and members of constituent groups in the design and measure of value added processes as well as in the interpretation of the data that emerges from them. You will increase your proficiency in operationalizing terms by listening to how others have operationally described processes for delivery and measurement.

As we mentioned above, the value adding process becomes more effective when it is applied at the institu-

tional and school system levels as well as at the level of individual practice. It is through institutional and, ideally, system-wide commitment to quality principles that a culture of continuous improvement may be established. When this occurs, improvement efforts are galvanized, supported, and amplified. With this consideration in mind, use the format below to describe how your institution or school system either does or could engage in processes for adding and measuring value.

When you have completed this exercise, examine how institutional and system level processes compare with those that can be used at the level of the individual practitioner. Explore how the adding of value at the two levels can be mutually re-enforcing and synergistic. Develop strategies for transforming existing institutional and system practices and measures so that they would be appropriate to a value-added context. Discuss how value-added data could effectively advance improvement at the level of the individual practitioner, the school, and the school system.

By developing knowledge about measurement and data, educators can enrich the feedback that is essential to individual and organizational learning. Data properly developed and understood can energize, focus, and document the process of continuous improvement. Data is the means through which we can map the quality journey and ensure that we are progressing towards our *Quality Schools* destination.

ADDING AND MEASURING VALUE
THE SCHOOL AND THE SYSTEM

1. **School** or **System** Products and Services	2. Process Used to Add Value	3. How the Value-Added Is Measured	4. Who Receives the Value	5. Data-Based Improvement Initiatives

IN HIS *Symposium* PRESENTATION, Edward Sallis spoke about what he considers to be the four "drivers" of quality in educational organizations. He referred to these drivers as the four *quality imperatives*:

1. ***The Moral Imperative*** — *The Link with Customers*
   Our customers and clients (students, parents, the community, etc.) deserve the best possible quality of education.

2. ***The Professional Imperative*** — *The Link with the Professional Role of Educators*
   As educators we have a professional duty to improve the quality of education.

3. ***The Competitive Imperative*** — *The Link with Competitors*
   We must meet the challenge of our competitors who are constantly improving the quality of their products, services, and delivery mechanisms.

4. ***The Accountability Imperative*** — *The Link with Constituent Groups*
   Schools and school systems must meet the political demands for education to become more accountable and to publicly demonstrate the high standards of their products (e.g., curriculum, learning, graduates) and services.

Failure to meet even one of these imperatives can jeopardize institutional well-being and survival. If public sector educational institutions fail to provide the best possible services, they risk losing clients who will opt for increasingly available alternatives. As the "information highway" is put in place, as learning technologies continue to develop, and as private schools become more aggressively competitive for students, educators in the public system will face increasing competition for a clientele that is no longer captive. Continuing pressures on government treasuries and a beleaguered tax base mean that schools must not only find ways of effectively competing for customers but that they must do so in a way that conserves rather than expends limited human and fiscal resources.

If these challenges are not met, there is no guarantee that public education as we know it will survive. By regarding Sallis' four quality drivers as anything less than imperatives, we risk the integrity of our profession and the future of our institutions. Our many constituency groups and our

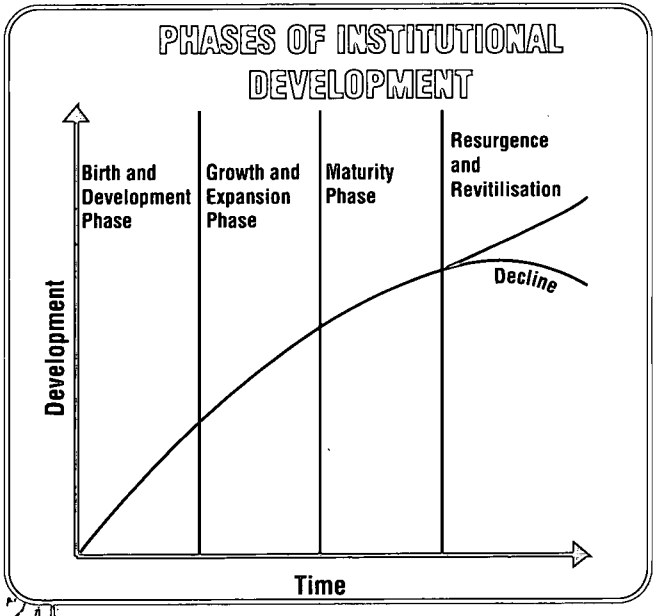
Organizational Life-Cycles

Organizational development can be understood as analogous to the individual life-cycle. Each organization has a point of origin or birth, a period of growth through which it becomes more capable of actualizing its purposes, and a period of maturity which it enters when it has developed the means appropriate for the effective achievement of its ends.

The birthing period involves the assemblage of resources to make organizational existence possible. The growth stage involves learning how organizational purposes may be effectively realized. The maturity phase involves a plateauing in which an organization may become complacent with its technologies and the purposes they are designed to advance.

If organizations allow habitual assumptions of purpose and process to displace opportunities for learning, they will enter a period of decline. If, on the other hand, they can critically re-evaluate their means and ends, organizations can move from the maturity phase to a period of energetic renewal. The origin point for this renewal lies in operationalizing the continuous improvement process.

As we noted above, Deming's statement that "Survival is not compulsory," is a reminder that the costs of complacency can be higher than we might like to pay.



government funders are asking value-for-money questions of all public sector institutions and this is especially the case in education, which receives substantial tax-based support.

We are entering a social and economic period in which the asking of tough and uncompromising questions will accelerate. For education, improvement is no longer an option — it is a necessity. If we do not take the renewal of our educational organizations seriously, there is no reason to think that we will continue to be taken seriously by those outside our profession.

When any of the four quality imperatives are not met, organizations incur very real costs. The "costs" of lost opportunities, however, can remain hidden if we do not ask questions like:

> What do we fail to achieve when we do not maximize the utilization of talents that exist within our organization?
>
> How much do we lose and what kinds of losses do we suffer if people do not come to our institution?, and
>
> What is the effect upon our students and our communities when students do not succeed?

As we are beginning to learn, the opportunity costs of not doing the right things and of not doing things right can have significant organizational impact. When we shy away from asking ourselves difficult questions, when we block data that may speak critically, and when we unthinkingly adopt externally designed reforms, we lose opportunities to develop the knowledge that can make us truly effective. We can inadvertently become part of the problem rather than part of the solution.

In thinking about our work and how we, as educators, are viewed by others, it is especially important that we not lose sight of the distinction between change and progress. For many, what is perceived as a preoccupation with change has come to characterize an educational system that has lost its way. The agenda of unrelenting educational change is being viewed as a dubious end that is a poor substitute for constancy of purpose. And there is a growing awareness among educators themselves that the attempt to become effective by implementing a proliferating array of externally fabricated reforms can preempt rather than advance improvement. It has become disappointingly apparent that continual change is not at all synonymous with continuous improvement.

If, however, we engage the critical issues that now face education, and if we learn how to develop quality in our own schools rather than cultivating a "change dependency" that can only be satisfied by external suppliers, we can move towards genuine improvement. And as we reinstill quality as the orienting focus of our work and our schools, we will build support among our customers, our communities, and our constituent groups.

As we have suggested in the first section of this chapter, quality improvement can be documented by operationalizing and measuring the adding of value through our work. By documenting the value we add, we can assure ourselves and our external constituents that quality is not a euphemistic slogan. We can document that quality is what we do. But to ensure that quality is integral to our work, we must learn to ask the right questions and we must develop data that documents our achievements.

Up to this point, we have discussed the transformational role that quality can play within corporate and educational organizations. We have seen how the application of quality principles can transform our usual understanding of leadership, the significance of process, the roles of customers/clients and suppliers, the organization of work, and our way of measuring performance. But there is another understanding of quality that is equally important and which speaks directly to the issues we are now discussing. In order to distinguish it from the "transformational," we may follow Sallis in calling it the "procedural" concept of quality.

As you can see from the graphic on page 157, the transformational and procedural concepts emphasize different aspects of quality. Rather than being oppositional, however, the two concepts are complementary; both must be in place if quality is to become a serious organizational focus. That is, in operationalizing improvement initiatives, organizations must set standards for successful implementation as well as for measuring the adding of value. In *Quality Schools*, the procedural gives structure to the transformational component by supplying standards through which quality progress can be ascertained.

Without the procedural component, the transformational aspects of quality may become empty gestures devoid of

THE TWO COMPLEMENTARY CONCEPTS OF QUALITY

THE TRANSFORMATIONAL CONCEPT	THE PROCEDURAL CONCEPT
1. Focuses on Improvement	1. Focuses on Accountability
2. Based on Staff Empowerment	2. Based on Systems and Procedures
3. Long-Term Success	3. Immediate Feedback
4. Quality Defined Through Attentiveness to Customer/Client Needs	4. Quality Defined as Conformance to Customer/Client and Organizational Requirements
5. Culture Rather Than Systems Bottom-up "hearts and minds" approach Managers as facilitators and leaders	5. Meets System Requirements Measuring effectiveness Managers as monitors and sources of feedback
6. Standard is to Do the Right Things	6. Standard is to Do Things Right
7. "Soft" Indicators	7. "Hard" Indicators

content. For example, teams and teamwork may become nominal realities without substantive value if we do not ask procedural questions like:

What teams now exist and who are members of each?

What support and training are available for teams and team members?

Do teams keep and circulate agendas and minutes of their meetings?

Do teams involve senior administrators?

How often do teams meet?

On which projects are teams now working?

Does each team have a specific mandate and an action plan?

What concrete organizational improvements have emerged from team projects?

If we do not measure the extent of an organization's commitment to teamwork, we cannot be sure if teamwork is organized, if it has a purpose, or if it achieves objectives. Without a standard against which such measurements may be made, teams and other quality components may exist within an organization that routinely passes over opportunities for improvement by doing business as usual. The procedural aspect of quality provides the "reality-checking" that can prevent the mistaking of appearance for substance.

Like the quality improvement initiatives that emerge from participant design, the procedural aspects of quality are generated by practitioners and their external partners in improvement. Educators must collaborate with external partners to develop the standards against which quality progress can and will be critically measured. As we have indicated, quality is only given substance when goals are operationalized in concrete and measurable initiatives. Similarly, we must develop standards by which we can determine the successful introduction of the transformational aspects of quality. Without such standards, attempts to develop *Quality Schools* will founder.

Let's briefly explore how we can construct procedural standards against which the successful introduction of transformative quality factors may be measured. Using the above questions concerning teams as a model, design parallel questions to determine organizational commitment to quality in the following areas:

- Purpose, mission, and vision
- Leadership
- Ongoing staff training and education
- Process design and improvement implementation
- Customer/client orientation
- Institutional/organizational self-evaluation
- Data development and usage

Your questions should be geared to determine whether these elements have become part of a culture of continuous improvement or merely add-ons that ultimately subvert quality objectives. Make sure that you focus upon the critical factors that indicate if quality is being taken seriously. By asking these questions you are creating the categories and the criteria for an "organizational report card." You are making a procedural mirror in which schools and school systems can see themselves more clearly. Having a tool for critical self-assessment allows organizations to continuously improve rather than to become captives of concepts that elude application. We will return to this issue when we build a "Quality Schools Checklist" in the final section of this chapter.

The development of data that penetrates beneath the level of appearance is critical if improvement is to be advanced. In the quality context it is essential that we develop what Deming calls "profound knowledge" of what drives the improvement process forward. If we separate the transformational and procedural concepts of quality, rather than build upon their complementarity, we risk losing this knowledge.

By itself, the transformational concept of quality can lead us to mistake tampering and sloganeering for quality improvement. The complementary development of the procedural aspects of quality ensures that the full value of transformational quality elements is realized in measurable organizational practice. Taken together the application of the transformational and the procedural concepts of quality allow us to assure ourselves as well as our external publics that quality is an institutional reality.

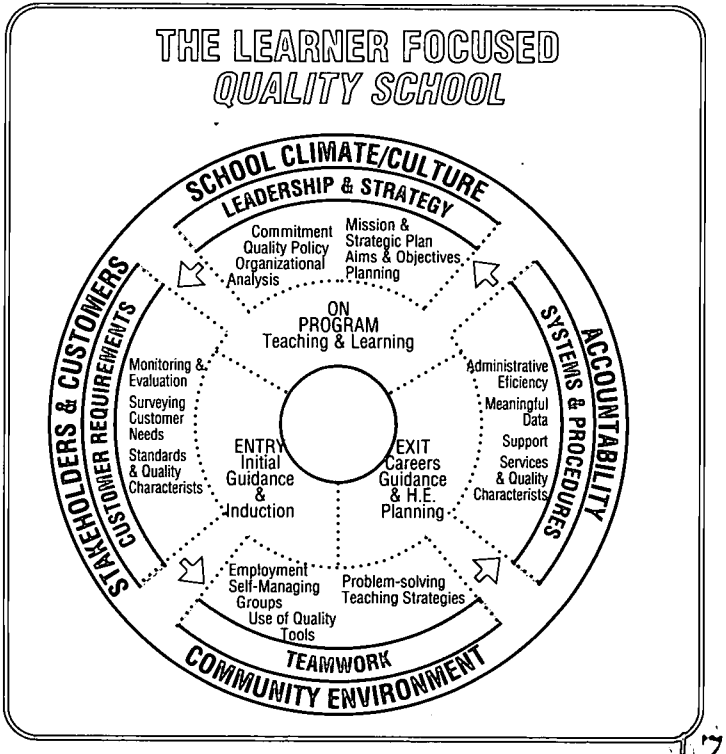
The procedural and the transformational aspects of quality can be brought together by focusing upon the learner. It

is in the enrichment of the learner that *Quality School* improvements must find their ultimate justification. Without this linkage to enhanced student learning, educational reform is a wasted exercise. Unfortunately the persistent emphasis upon educational change has too often bypassed the centrality of the learner by focusing exclusively on the school as the unit of improvement. This bias can be corrected by remembering that schools are a means rather than an end in themselves. Their effectiveness is shown not by the features and characteristics that they display, but by their ability to enhance student learning and development.

Sallis has created a useful graphic to show how the complementarity of the transformational and the procedural aspects of quality can be visualized by placing the learner at the centre of organizational processes. In Sallis' graphic representation, the learner is the focus of three "critical moments." The first is the entry point at which the learner is given guidance and orientation to the school setting. The second is "on program" teaching and learning through which value is added to the knowledge, character, and development of the student. The third and final critical moment is the exit point at which time the learner "bridges" to either advanced educational settings or to employment.

In *Quality Schools*, each of these critical moments is supported by both transformational and procedural practices. These practices are depicted in the next circle which is formed by "Leadership & Strategy," "Systems & Procedures," "Teamwork," and "Customer Requirements." By showing the key elements of each, Sallis gives general quality terms specific content. An outer circle consisting of the "Stakeholders & Customers," "the School Climate/Culture," "Accountability," and the "Community Environment" shows the context in which quality practices are designed and implemented.

Sallis' graphic links all of the elements depicted by emphasizing their common focus on the learner. All obtain their value in accordance with their ability to enrich the learner's capabilities, skills, and knowledge. The emphasis is upon "building-in" learning quality rather than "inspecting-out" educational failure.



This transition to a learner and learning-centred organization entails the transformation of a culture of risk minimization into a culture of learning maximization and continuous improvement. The new culture supports efforts to re-think what is important, to monitor what is of value, and to rectify what is deficient. A culture of learning maximization is one that encourages the asking of hard "what" and "why" questions about existing processes and structures. It is a culture that supports data-based innovations which are informed rather than dominated by research findings and the exemplary practices of others. And it builds a tolerance for error together with a commitment to its progressive amelioration.

Schools and school systems with cultures of learning maximization do not tire of asking how what is being done well can be done even better. They do not flinch from looking at what is less than optimum; they know that mistakes are opportunities for learning; and they take pride in celebrating improvement. The ongoing effort to create *Quality Schools* through the continuing data-based assessment of effectiveness has its *raison d'etre* in learning improvement.

As Deming reminds us, perfection is never a prerequisite for improvement interventions, but a willingness to work systematically to reduce error is. In the final section of this chapter we will explore in detail how schools can build a quality checklist that will make the reduction of error through self-assessment an organizational reality.

WHILE *QUALITY SCHOOLS* NEED NOT CONFORM to an idealized model, they do share a range of issues, approaches, techniques, and terminologies. These family resemblances spring from a shared focus upon customer/client needs, the utilization of teams and teamwork, and the application of process-oriented tools to define and realize quality improvements. *Quality Schools* have a clear vision of where they want to go, they monitor their performance in moving toward their goals, and the improvement interventions made are guided by data systematically gathered and critically analyzed. And while the stories *Quality School* practitioners tell are varied and distinctive, they are spoken in a common language.

It is important, however, that institutions which would define and travel their own paths to quality do more than speak a common language. They must put the language of quality concepts into practicable form in accordance with the contingencies that characterize their school and its community environment. In order to ensure that the practices particular to a given school advance quality, a procedural standard must be developed against which implementation can be measured.

And while the forms that individual school practices take will fit the individual characteristics of the implementing institution, there is sufficient commonality to develop a set of *critical success factors* that will look much the same across institutions. These critical success factors are the *sina qua non* or the baseline characteristics that identify a *Quality School.* They map the standards that an institution must achieve it if is to satisfy its customers and realize its mission.

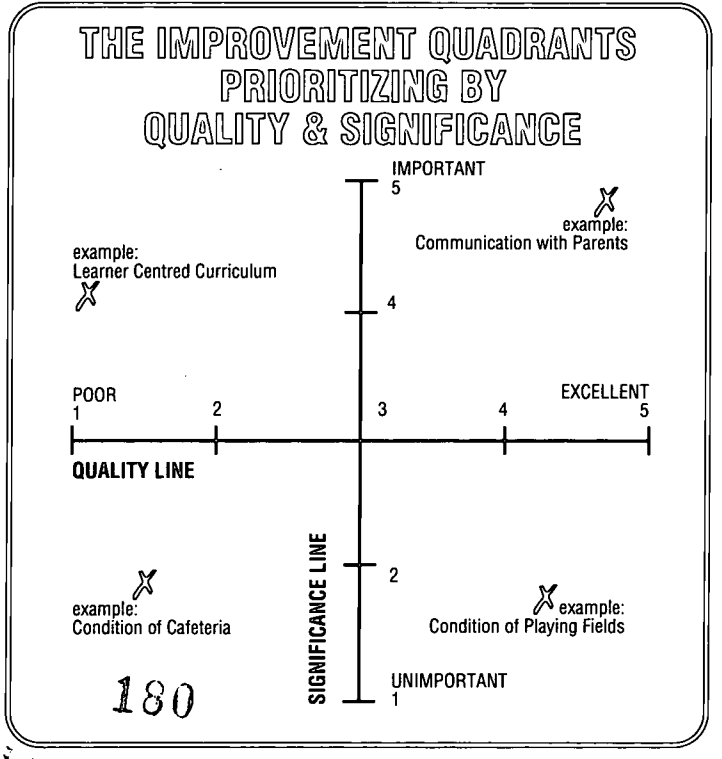
As part of his presentation, Edward Sallis guided participants in assembling both a list of the factors that identify a *Quality School* and the indicators that ensure these factors are being given form in organizational practice. The two were brought together in the design of a "Quality Schools Checklist" that could serve as a tool for institutional self-assessment or a combined internal and external audit. Sallis provided several cautions and points of information useful in the development of a checklist through which quality progress may be effectively monitored.

Sallis underscored that the comprehensiveness of the checklist must be balanced by a need for conciseness. The checklist should be kept simple and visible. It should focus only on critical success factors in areas that are broadly perceived to be of importance. The usefulness of the checklist and the data derived from it are enhanced by isolating the critical

success factors in those areas that will make a difference to school improvement.

For example, the school cafeteria might be an area that everyone agrees is in need of improvement. But this information by itself is not sufficient to commit resources. Before we do so, we must gauge whether or not the cafeteria is perceived to be critical to improvement. In cases like Clara Barton School, cafeteria service did play a critical role in school improvement; in other cases, it might be only of peripheral importance. If improvement of the cafeteria will not significantly advance school quality, the fact that it could use upgrading is not sufficient cause to take action. In such instances, it is better to direct resources to areas that are both in need of improvement and which are critical to quality progress.

Sallis constructed a simple set of quadrants formed by two intersecting lines that can facilitate the making of this determination. One line indicates the quality of the service; the other indicates its relative importance. By plotting responses to both quality and significance in this fashion, we can shape effective action plans for improvement. This method of determining priorities is especially useful in the design and in the



interpretation of staff and customer/user surveys. In anticipation of this interpretive method, surveys should be designed to allow respondents to indicate a rating of quality as well as a rating of importance.

In making a Quality Schools Checklist, considerations of importance are integral in the design phase. Before an item is entered in the checklist, it should be determined that it is an essential area for quality progress. If this criterion is not met, the item is better left for inclusion in a secondary survey instrument. The form reproduced to the right can be used to determine which items should be included on the checklist. By rating various elements in accordance with their potential contribution to quality progress, schools can develop a working sense of what really matters. The brainstorming and affinity network tools described in Chapter 3 can also be used to make this determination in a team context.

This brings us to the important consideration of who develops the checklist. The inclusion of multiple perspectives avoids the blind spots that result when critical success factors are determined by only one point of view. Customer/client views of what constitute critical factors for school success are especially important in the quality context. If we do not draw

CREATING A QUALITY SCHOOLS CHECKLIST
RANKING IMPORTANCE

Score 1 for low importance and 5 for high importance

	1	2	3	4	5
Headings *Subheadings*					
◦ Item	✓				
◦ Item			✓		
◦ etc.					

upon customer/client views, it is likely that we will overlook those organizational aspects that are most responsive to customer needs. We will deprive ourselves of an essential means to satisfy the moral imperative to meet the expectations of those who depend most upon our professional services. We should also make sure that customer/client groups are involved in the self-assessment process and that representatives from these groups take an active part in evaluating the data that emerges from checklist responses.

Cross-functional teams of organizational participants should also participate in the design of the checklist, the institutional audit, and the analysis of the data derived from both. The inclusion of front-line practitioners ensures that critical success factors which may be invisible from other perspectives are included in the checklist and that they receive priority in the analysis phase of the audit. Their participation allows both the school and the team members to satisfy the professional quality imperative to improve the value of education.

In asking which factors are most critical for school success, we can also make productive use of benchmarking by examining what other schools and organizations are doing to meet quality standards. While this information may not provide specific content, it will often allow us to concentrate on the right areas. In addition to helping us learn about the "how to" of quality measurement, benchmarking information also helps us to arrive at the standards against which performance may be measured. It helps us to meet the competitive imperative by ensuring that our standards are as high as, and when possible, exceed those of the best corporations and institutions. And in meeting or exceeding the highest possible standards, we also meet the accountability quality imperative that is essential to earning and retaining the confidence of key constituent and stakeholder groups.

Generally, the checklist will be a more effective tool for self-assessment if the sources for input are maximized. The more that it is an indigenous instrument collaboratively created through the participation of professional, customer, and community groups, the more useful will be the data that emerges from it. By encouraging participation in checklist design, the school is also showing that it takes collaboration and broad participant involvement seriously.

It is also important to be clear about how the Quality Schools Checklist may be used in order to get the most value from it. While the design of the checklist itself can be a constructive

occasion for school and community teaming, its application and the analysis of the data generated from it raise such opportunities to a more significant level of organizational importance. The most effective use of the checklist is as the primary data gathering device in self-assessment exercises or in combined internal and external audits. When used in this context, it is of cardinal importance that the completion of the self-assessment or audit is not restricted to the senior administrative group. Such a restriction would subvert the intention of developing a feedback tool which maximizes sensitivity to the perceptions of all participant and stakeholder groups.

A use of the checklist that is much more in line with quality principles is its employment by a cross-functional auditing team that would include the participation of external partners as well as staff from all organizational levels. Once again, the multiplicity of perspectives helps to guarantee against blind spots. The active participation of senior administration also helps to ensure that the audit is perceived as a serious exercise and that its outcome will have organizational impact. As is noted above, the audit does not end with the completion of the checklist. For this reason, it is equally important that broad organizational and external partner participation should be a characteristic of the process for developing and analyzing data derived from the checklist exercise.

When designed and used wisely, the Quality Schools Checklist accommodates the diversity characteristic of *Quality Schools* and the requirement for standards that can document success. It can reflect the points of emphasis unique to a given school or educational organization, while at the same time setting standards against which these distinguishing features can be measured. In addition to attending to the specific initiatives designed to advance the learner in a given school context, it allows educators and community participants to effectively address the four quality imperatives for school improvement and survival.

In the Key Symposium Learnings for this chapter, you will find the responses of symposium participants to the two formative questions that figure in the design of any Quality Schools Checklist: "What factors make a *Quality School?*', and "What are the indicators (i.e., measurable indices) of a successful school?" As you will see, symposium participants had no difficulty responding to these questions. The critical task with which they did have difficulty, however, concerned the reduction of both lists to only the critical or key factors

and indicators respectively. In reviewing their responses, we will invite you to take on this task. In reducing their lists you will, of course, be doing the preparatory work for creating your own Quality Schools Checklist.

To prepare you for this task, we will close this chapter by citing a somewhat modified version of Sallis' (1993, 139-146) "Quality Education Checklist". It provides one example of what a finished audit checklist may look like. While Sallis' checklist comprehensively addresses most significant *Quality Schools* issues, don't regard it as authoritative or final. Use it as a beginning point for the efforts you, your colleagues, and your external partners will make in composing a checklist that fits *your* school and which can measure the value of *your* improvement interventions.

There is one characteristic of Sallis' list that is problematic and which should be noted. While we have given special emphasis to process, Sallis' list contains many static school features. This characteristic can, at times, make his "Quality Education Checklist" appear disturbingly similar to an effective schools instrument. It gives the misleading suggestion that continuous improvement will result simply from changing school features. You will see a similar tendency to dwell on school characteristics rather than processes in the lists of critical success factors compiled by symposium participants.

Each of the static characteristics in Sallis' list does, however, reference an underlying process. For example, "a simple and lean structure" is a static feature of organization that is important because it reflects the distributive leadership process we have associated with *Quality Schools.* It has little or no significance in itself. When you include school characteristics in your checklists, make sure that you keep the process connection. When possible make the process explicit in the entry; when this is not possible, make sure that you maintain awareness of the process your entry is designed to measure. This will be important in the design of the checklist, in its administration, and in the analysis of results.

Score 1 for poor performance and 5 for excellence.

	1	2	3	4	5
Access					
◦ *Point of contact*					
Clear initial contact point for customers					
Welcoming reception					
Short telephone response time					
Advice and guidance readily available					
Survey of how well visitors think they were received					
Clear signage					
◦ *Open Access*					
Ramps and lifts for physically challenged people					
Community languages on signs and in literature					

	1	2	3	4	5
Services for customers					
◦ *Advice and guidance*					
Information and guidance service available					
Appropriate pre-entry guidance					
Appropriate continuing guidance available					
Career guidance readily available					
Accessible student wellness and counselling programs					
◦ *Learning resources*					
Well stocked library and resource centre					
Open access to learning resources					
Open access computer facilities available					

QUALITY SCHOOLS CHECKLIST

	1	2	3	4	5
◦ *Social and refreshment*					
Affordable cafeteria facilities available					
Adequate sports facilities available					
Relaxation facilities available					
Opportunities for students to organize their own activities					
Leadership					
◦ *Principal*					
Has vision and shares it					
"Walks the job"					
Knows the staff					
Knows the students					
Provides and shares leadership					
Gives quality top priority					

	1	2	3	4	5
Models quality principles					
◦ *Values*					
Mission clear and understood					
Equal opportunities policy in place and implemented					
Staff and students understand the school ethos					
Strong commitment to the needs of the community					
Physical environment and resources					
◦ *Buildings, classrooms, and workshops*					
Clean and attractive					
Fit for purpose					
Contain appropriate visual and learning aids					

	1	2	3	4	5
Strong commitment to maintaining a safe and secure learning environment					
◦ *Stimulating learning environment*					
Classroom layouts/individual learning programs exciting to students					
Learning environments well planned and organized					
◦ *Health and safety*					
Student perception/incidence logs kept					
Health and safety policies regularly monitored					
◦ *Resource control and allocation*					
Effective resource control exercised					
Resources controlled by those who use them					

	1	2	3	4	5
Effective learning					
◦ *Appropriateness of learning methods*					
Teaching and learning strategies appropriate to course and program goals					
Variety of learning modes available					
Teaching and learning strategies regularly reviewed and measured by a range of specified criteria					
Teaching and learning strategies measured by student response					
Learning is student centred					
Students encouraged to take responsibility for their own learning					
Evaluation methods use to gain customer responses					

DEVELOPING QUALITY SCHOOLS

QUALITY SCHOOLS CHECKLIST

	1	2	3	4	5
Good climate of purposefulness amongst students					
◦ *Appropriateness of the curriculum*					
Curriculum appropriate to learners' needs					
Content of course and programs relevant and up-to-date					
Short response time to the development of new course and program content					
Evaluation by clients of the relevance of the offering					
Good liaison with employers and the community on the delivery of courses and programs					
◦ *Monitoring and evaluation*					
Student feedback regularly obtained					
Feedback from other customer groups regularly obtained					
Student and community questionnaires used where appropriate					
Institution has formal systems for review and evaluation					
Feedback used in policy-making					
Students					
◦ *Students matter*					
Clear signage					
Clean and well maintained rest rooms					
Student handbooks and guides available					
Staff talk to students					
Absence of artificial barriers					

	1	2	3	4	5
Wide range of student services					
Good transportation arrangements					
Range of leisure, recreation, and sporting facilities available					
◦ *Student Satisfaction*					
Good rapport between staff and students					
Happy students and satisfied customers evidenced through surveys and questionnaires					
Students have a sense of pride in their work					
Students kept informed					
Students' views regularly solicited					

	1	2	3	4	5
Staff					
◦ *Attitude and motivation*					
Committed and knowledgeable					
Student centred					
Take responsibility for their own quality					
Have a sense of enjoyment					
Respond readily to individual needs					
◦ *Teamwork*					
Committed to teamwork and team approaches					
Have been trained in the skills of teamwork					
Have strong cohesion					
Have a clear idea of the limits to their authority					

QUALITY SCHOOLS CHECKLIST

	1	2	3	4	5
Have a resource base that allows them to improve quality					
Value and support good practice					
Regularly consulted on policy					
◦ *Staff development*					
Institution committed to developing its staff					
Is proactive and clearly states institutional needs					
Has a review of individual needs					
Is adequately resourced and funded					
Is an institutional priority					
Includes all staff					
Positive staff development in application of quality principles					

	1	2	3	4	5
◦ *Facilities*					
Good workrooms					
Adequate and appropriate equipment and facilities					
Opportunities for professional discussion and debate					
External relations					
◦ *Marketing*					
Coherent marketing strategy					
Market research carried out					
Positive seeking out of customer views					
Student and employer questionnaires employed					

	1	2	3	4	5
◦ *Community*					
Excellent links with relevant communities maintained					
Community views regularly solicited					
Strong links with business and industry through partnerships					
Strong links with community agencies through partnerships					
Organization					
◦ *Strategic planning*					
Institution has broad aims and objectives					
Staff at all levels are aware of institutional direction					
Institution has a written strategic plan					
Plan identifies how staff can contribute to success					
◦ *Organizational culture*					
Simple and lean structure					
Authority delegated down					
Change is part of the culture					
Universal statement of direction					
Strong commitment to peer evaluation and review					
Based on teamwork					
Learning maximization and prudent risk-taking emphasized					
Tolerance for mistakes					

DEVELOPING QUALITY SCHOOLS

QUALITY SCHOOLS CHECKLIST

	1	2	3	4	5
◦ *Communications*					
Good communication seen as major priority					
Bottom-up, not just top down					
Mutuality in communication seen as lifeblood of the institution					
Standards					
◦ *"Hard" standards*					
Excellent results on exams and measures of student success					
High retention rates					
Effective use of resources					
Measures of value-added capabilities in place					
Good student and community feedback based on systematic data collection					

	1	2	3	4	5
Effective budgetary control					
"Soft" standards					
Caring atmosphere					
Student welfare and wellness a priority					
Customer service in evidence					
Welcoming environment					
Commitment to learners of all abilities					
◦ *Correct application of standards*					
Rigorous program of self-evaluation in place					
Institution does not measure itself on "hard" priorities alone					
Data are cycled back into improvement initiatives					

1. Deming is fond of telling his seminar participants that he never assigned grades to his students at New York University — even though he read and annotated student papers assiduously. In light of what you have read in this and previous chapters, why do you think Deming refused to use grades?

2. How is continuous improvement related to the reduction of variation? Why is it important to distinguish between special causes and common causes of variation? Can you give an example from your own experience of what happens and what doesn't happen when we confuse the two causes of variation in schools?

3. We noted that Victor Dingus used the following phrase in describing the origin of many of our organizational problems: "It ain't what we don't know, it's what we know that just ain't so." What did he mean? How does his statement relate to Deming's claim that we need "profound knowledge" before we can create organizational improvement? How does it relate to the issue of quality assurance?

4. When we consider the concept of adding value, why is it important to consider for whom the value is being added? How can we understand the issue of quality assurance in terms of adding and losing value? How do standards help ensure that we are adding value and that we are not missing opportunities to advance quality?

5. How would you generate data from an institutional self-audit conducted using an instrument modelled on the "Quality Education Checklist" developed by Edward Sallis? What would you use the data for and how would you use it? What would the data from a single audit tell you? How would you make use of this data when analyzing future audit results?

Key Symposium Learnings

The "Key Symposium Learnings" for this section of the *Handbook* were focused around two questions: "What factors make a *Quality School*," and "What are the indicators (i.e., measurable indices) of a successful school." Rather than deleting participant contributions, they are all reported.

"What Makes A Quality School?"

- *increased self-directed learning by students*
- *safe, secure, & welcoming environment*
- *adequate resources*
- *positive climate*
- *community empowerment & participation*
- *team management*
- *high standards; high expectations*
- *visionary leadership — not just management*
- *shared vision*
- *administration has an open-door policy — active caring for students & staff*
- *student focused/student centred*
- *student self-esteem is valued as much as academic accomplishment*
- *multiple teaching styles for multiple learning styles*
- *holistic emphasis*
- *dedicated staff*
- *diverse curriculum & curricular activities*
- *rapid turn around time on requests, problem identification, & action*
- *support services available*
- *business & industry participation*
- *community volunteers*
- *involvement of all stakeholders in important matters*

Sallis' cautioned symposium participants that we must focus on critical quality factors and key indicators if we are to avoid being overwhelmed by an unmanageable agenda for improvement. As you read the lists, make your own short list of the ten elements you feel are essential to *Quality Schools* and the indicators that would show they are in place.

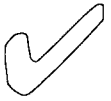
- *proper handling of incoming calls*
- *welcoming*
- *clean*
- *respect for children & parents*
- *a "noticing" school*
- *know people by name*
- *collective sense of ownership*
- *feel good about coming into this building; students want to be there*
- *"smile"*
- *principal sets tone for school*
- *teachers can work together*
- *students are actively engaged*
- *students are empowered*
- *school set up for kids*
- *good communication with parents & community*
- *prepares graduates to move on; "they are ready"*
- *teachers work as teams — they are not alone — a change of culture*
- *solutions are found by those who work in the classroom*
- *climate of risk taking*
- *students are problem solvers*
- *school reaches out*
- *minimal number of disruptive students*
- *appropriate & well maintained facility for learners*
- *synergized & committed staff*
- *mission, vision, & supporting plans in place*
- *students & staff motivated for life-long learning*
- *culture that says success, self-worth, caring are important*
- *high expectations part of culture*
- *high trust factor*
- *support systems available for non-academic needs*
- *appropriate intake procedures (e.g., data from students, parents, & other institutions)*
- *relevant learning experiences for students*

- *appropriate exit procedures (e.g., graduates, drop-outs) & tracking to assess impact of learning experience*
- *driving out fear is a school priority*
- *caring atmosphere*
- *staff encouraged to try new ideas; engaged teachers*
- *teachers who want to come to school each day*
- *good home-school & school-home communication*
- *successes surpass stresses on a daily basis*

"Critical Indicators of Success"

- *positive teacher, parent, & learner attitudes*
- *people in the community talk about the school in a positive way*
- *attendance figures (show that people want to attend)*
- *hard performance indicators (marks, standards, common understanding of success)*
- *external audits*
- *good communication in place with past, current, & future customers/clients*
- *real estate agents call to determine your boundaries*
- *all students exceed provincial/state standards (where they exist)*
- *system in place for surveying satisfaction with programs*
- *knowledge of school programs & options in the community*
- *happy kids*
- *decreasing drop-out rate*
- *success on standardized achievement tests*
- *meets needs & expectations of customers as indicated in surveys*
- *good customer ratings for climate*
- *high parent & community involvement (e.g., open & well publicized information nights)*
- *data on parent & community involvement*
- *partnerships with community agencies*

- *low staff absenteeism*
- *analysis of student performance changes on an individual basis over time*
- *net optional attendance enrolment*
- *measures of value added through implementation of improvement plans*
- *number of staff requesting & receiving professional development*
- *number of staff volunteering for committees*
- *school action plan*
- *results of student evaluations of teachers*
- *results of student readiness for work or further education surveys*
- *student success records*
- *pre & post assessment results — record of student capability growth*
- *customer satisfaction — internal & external*
- *records of student academic achievement*
- *number of police visits to your school as compared to others*
- *ongoing student feedback*
- *identification of actions taken to create improvements*
- *learners can demonstrate & articulate what they have learned*
- *participation in science fairs, etc.*
- *achievement of predetermined outcomes*
- *parents verify students' ability to demonstrate & apply knowledge & skills*
- *prizes earned by school, staff, & students*
- *low suspension rate*
- *number of teacher requests for transfers*
- *assessing that producers make sense to users & those impacted*
- *learners know they are learning*
- *parent questioning of what was learned today*
- *vehicles for collecting student opinions are in place*



Implementation Check List

- ❑ Senior administration models how decisions are made and feedback is incorporated in learning through the generation, interpretation, and the application of data
- ❑ Standards are in place for measuring quality progress at all organizational levels
- ❑ Instrument (e.g., Quality Schools Checklist) and procedures for institutional self-assessment and auditing have or are being developed
- ❑ Broad internal and external participation in the design of the instrument and procedures used for organizational auditing as well as in the completion of the audit and in the interpretation of its findings
- ❑ Results from successive self-assessments and audits are used to generate value added data about institutional improvement and to focus future improvement initiatives
- ❑ Measures of value adding rather than end-point inspection are used in assessments of programs, staff, and students; measurement and data collection are used only for process improvement — they are not used to make negative ascriptions to individuals
- ❑ Continuing training about how to generate and interpret data available to staff at all levels
- ❑ Staff in all school sectors are encouraged to document present improvements and to design future initiatives through the collection and presentation of data
- ❑ Improvement initiatives are designed (i.e., operationalized) so that their effects are readily measurable
- ❑ The circulation of data to customers/clients and to constituency and stakeholder groups is accompanied by how the data is derived and what it is intended to indicate

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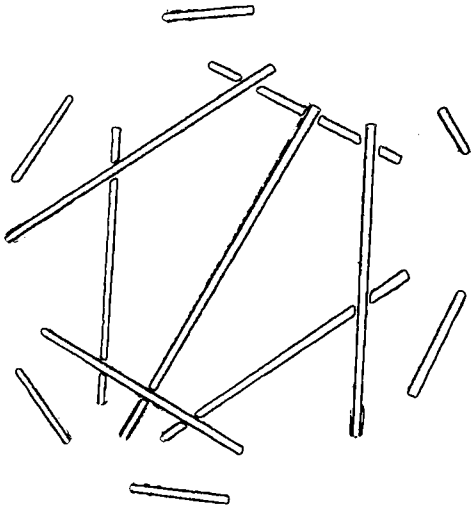


AFTERWORD

AFTERWORD

There is no substitute for knowledge.

The timid and the faint-hearted, and people that expect quick results, are doomed to disappointment.

W. Edwards Deming

AFTERWORD

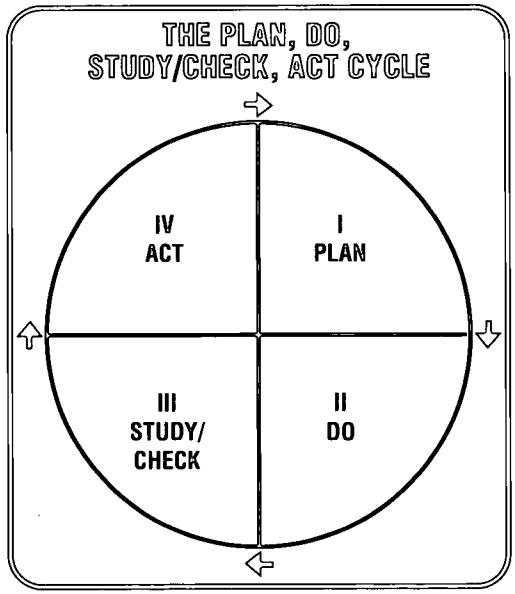
In this Section:

- *The Transition to Practice*
- *The Quality Journey*
- *References and Additional Resources*
- *Symposium Presenters and Handbook Authors*

WE ARE NOW AT THE CLOSE OF THE *HANDBOOK*. If you have read all of the text and completed all of the exercises, your journey has been an arduous, but we hope, rewarding one. You will have been introduced to concepts that are difficult to convey, to understand, and to use. But the knowledgeable application of these concepts is essential if education is to reclaim quality as both an orienting principle and a long-term goal.

As we noted in the Acknowledgements, Deming's work is often misunderstood as a series of simplistic techniques that will magically produce quality when mechanistically applied within organizations. As Deming was wont to say himself, there is no magic in quality. Quality is the result of knowledge systematically used to design the effective implementation of improvement. It is knowledge that only comes through the effort of continuing learning and its fruits within organizations can only result from constancy of purpose.

The set of interlocking themes that characterizes the development of *Quality Schools* is dominated by the concern to add value. It is the adding of value through the design of organizational processes that defines improvement.



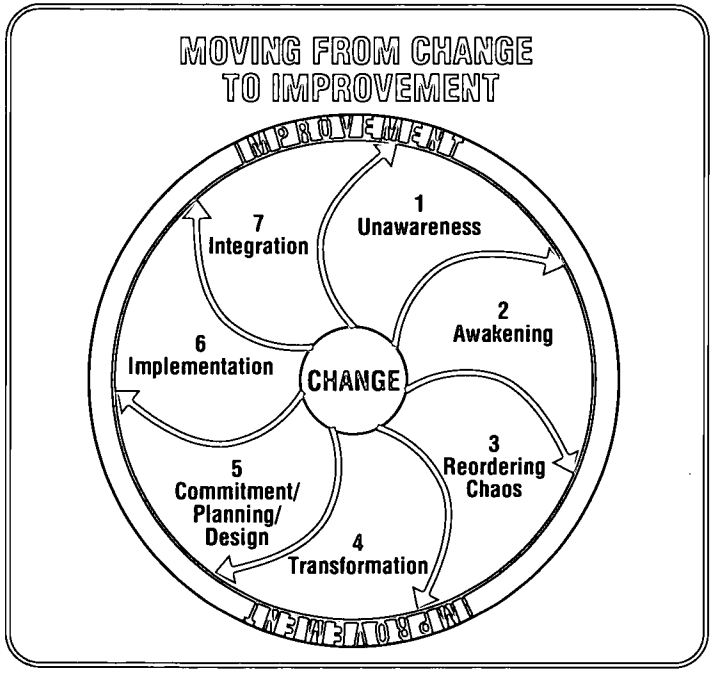
Developed by Deming's mentor and colleague Walter Shewhart, the P-D-S/C-A cycle maps the process for moving toward quality improvement. The cycle begins with a well thought-out plan that is then carried out or tested, ideally on a small scale. The results of the piloting are then studied or checked in order to determine what was learned, and then we act upon this learning by redesigning the planned change and adopting it. The adoption itself becomes the beginning point for future improvement cycles.

By designing and redesigning the processes through which organizational work is accomplished, school staff take responsibility for creating and implementing improvement interventions. The data-based monitoring of these improvement interventions completes the cycle of learning through which feedback, systematically gathered and critically analyzed, leads to further improvement of process.

The design and re-design of processes takes place in a restructured work environment characterized by cross-functional teams and a form of leadership that is no longer attached exclusively to hierarchical relationships. The empowerment of teams and the leadership that supports their work "surfaces" previously hidden organizational expertise which can now inform initiatives derived from particular school and community characteristics and contingencies. In order to maximize their sensitivity to the school's larger community and to tap valuable resources, teams also involve external partners. These external partners, whose participation is critical to educational success, typically include: parents, representatives of business and industry, leaders of community services and agencies, and members of key constituent and stakeholder groups.

The integration of internal and external customers and suppliers in long-term relationships sustains incremental improvement efforts and allows them to have a cumulative impact. The implementation of improvement interventions, as well as the knowledge needed to build upon them, is supported through the ongoing training and education of all staff. Through their involvement in the design and implementation of improvement interventions, staff have the intrinsic motivation to maximize the potential value added by reforms. By moving from faddish change to demonstrable quality progress, schools build culture of learning maximization that uses quality tools to build continuous improvement. It is the improvement process itself more than overt organizational features that is the core of the *Quality Schools* movement.

As we noted in presenting the improvement initiatives undertaken by Clara Barton School, it is the quality process and not the content of what other organizations have done that is more important to initiating organizations. In presenting the Kodak Canada Inc. experience, we do not suggest that the restructurings implemented at Kodak Canada should be copied by schools. No one



To capitalize upon change, organizations must move from change to improvement]

organization's solutions constitute a blueprint that can be simply duplicated by other organizations to produce quality. We agree with William Blake's (1967/1793, 254) Eighteenth Century aphorisms which expresses the folly of mere imitation:

> The eagle never lost so much time as when he submitted to learn of the crow, and
>
> The apple tree never asks the beech how he shall grow; nor the lion, the horse, how he shall take his prey.

Rather than providing a pattern that need only be copied, the Kodak Canada experience and the work of the staff at Clara Barton School are of value because they show how quality principles provide access to a process through which the means and methods that lead to the attainment of purposeful goals can be reshaped. By understanding the significance of process, we can learn how to introduce educational innovations that will move from change -for-change's-sake to improvements we can document.

When applied in educational organizations, the process that can lead to quality usually progresses through the following steps that incorporate the primary themes covered in this *Handbook:*

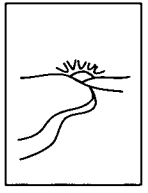
1. setting purpose,
2. articulating a vision/mission,
3. assessing current processes,
4. developing measures and standards,
5. establishing the baseline of where the organization is,
6. designing improvement interventions,
7. devising an action plan for intervention implementation,
8. data-based tracking of the intervention's value, and
9. assessing and learning from feedback.

These steps or stages are represented in the graphic on the facing page.

The role of leadership in this process is of primary importance. Without the complete, sustained, and sustaining support of senior administrators, it is difficult if not impossible for the quality agenda to survive. From the collaborative setting of purpose, vision, and mission to the managing of improvement interventions, the existence of total quality leadership must be made evident. The shared commitment of trustees and senior administrators to the creation of a culture of continuous improvement establishes an environment in which quality initiatives can flourish.

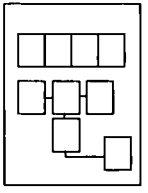
IMPLEMENTING IMPROVEMENT

① **Purpose**

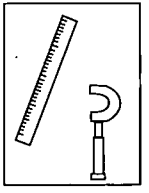


② **Vision/Mission Statement**

③ **Current Process**

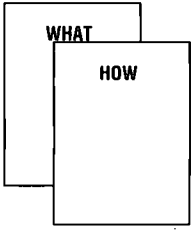


④ **Measures & Standards**

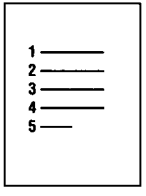


⑤ **Baseline**

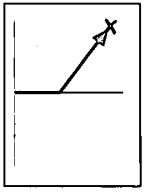
⑥ **Improvements**



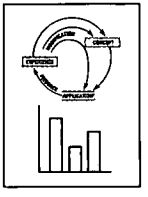
⑦ **Action Plan**



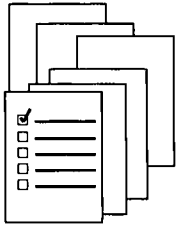
⑧ **Goal**



⑨ **Feedback/Learning**



⑩ **Managing the Process**



QUALITY, THEN, IS A PROCESS that is initiated by a thoroughgoing reassessment of purpose and which enables organizational participants to become the architects of their own future. It offers the conceptual framework and the tools for the cultivation of the profound knowledge needed to transform organizations.

The requirements to begin the quality journey are basic. To initiate a sustainable program of continuous improvement, schools must simply begin with themselves and start from where they are. A school's administration and staff must be willing to critically assess where they stand and to look freshly at fundamental questions of purpose. They must be prepared to engage the question of quality and to operationalize how value may be added to all organizational processes. They must have the freedom to strategically reshape their work patterns in order to develop the knowledge needed to create practicable improvement interventions and to support their introduction.

The making of *Quality Schools* does not involve copying a set of prescribed features, the installation of which is merely a technical matter that can have a fixed date of completion. The use of the metaphor of a journey to describe the quality process does not imply that there is a destination point where the travelling stops. Nor does it imply that there is a fixed route that all travellers must follow. Rather, the quality process is a continuing journey upon which further exploration and discovery are always possible. It invites an unending process of individual and organizational renewal.

And while there are few prescriptive signposts, we are by definition no longer on the quality journey when we feel that we have arrived at its end point. So, while we celebrate the improvements achieved in the development of *Quality Schools*, we avoid mistaking pride in accomplishment with termination of effort. Our travels towards quality are inscribed within the poetic imperative expressed by T.S. Eliot (1963, 222): "We shall not cease from exploration."

Welcome to the journey!

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James S. Brown is the Director of Education of the Huron-Perth County Roman Catholic Separate School Board in mid-western Ontario. He holds degrees from several Ontario universities, including a doctorate from The Ontario Institute for Studies in Education. He has had teaching experience at all levels from junior kindergarten to graduate school, and has served as an educational leader in school boards in eastern, central, and western Ontario. He is particularly interested in the area of staff development as it pertains to school improvement.

Victor R. Dingus, Manager of Benchmarking for Eastman Chemical Company, has a Bachelor of Science degree in Industrial Engineering and a Master of Business Administration degree from the University of Tennessee. He has worked with senior executives in the area of quality and productivity improvements and has promoted quality management in industry, government, and education. He has published in *Industrial Engineering, Performance Management,* and *Quality Progress,* and is the co-editor of two texts. Victor has been a part-time instructor at the University of Tennessee, East Tennessee State University, and the National Centre for Quality. He is now working with various school systems and community colleges in the area of Total Quality Mangement.

Paula Hansen, currently a teacher at Clara Barton School, graduated with a Bachelor of Science degree in elementary education from the State University of New York at Plattsburgh and received a Masters degree in special education from Boston University. Paula has had experience teaching regular and special education from K-7th grade levels in both rural and urban school districts. She has been Union Building representative and has held other positions in the Rochester Teachers' Association, as well as having served on the School-Based Planning Team for six years.

Lois Griffin Jones, Vice-Principal of Clara Barton School, graduated with a Bachelor of Arts degree in English and a Master of Science degree in elementary education from Nazareth College in Rochester, New York. She also received a Certificate of Advanced Study from the State University of New York at Brockport. She has taught in the Rochester City School District since 1969 in various classroom positions in the K - 6th grades, as a support teacher in reading, math, and writing, and as a teacher trainer for new teachers to the district. Since 1985, Lois has been the Vice-Principal at Clara Barton School No. 2 working primarily in the area of instruction.

Kenneth Leithwood is a Professor of Educational Administration and Head of the Centre for Leadership Development at The Ontario Institute for Studies in Education. He has longstanding research interests in planned change, educational leadership, and the nature of administrative expertise. Recent books include *Developing Expert Leadership for Future Schools* (with P. Begley and B. Cousins), *Understanding School System Administration* (edited with D. Musella), *Cognitive Perspectives on Educational Leadership* (edited with P. Hallinger and J. Murphy), and *Expert Educational Administration* (with R. Steinbach).

Bruce N. Mathewson, Director of Quality, Kodak Canada Inc., graduated from the University of Toronto with a bachelor's degree in electrical engineering. He also holds an Masters in Business Administration degree from York University. In July, 1990, he was appointed to the position of Director of Quality Management Services with responsibility for the development and implementation of Total Quality Management within the company. In his present position, he is the corporate adviser on Quality Management, consulting with the president and executive committee on quality issues. Bruce is a member of the American Society for Quality Control; Quality and Productivity Mangement Association; and the Association of the Professional Engineers of Ontario.

Ronald C. Morrison was President and General Manager, Kodak Canada Inc. On September 15, 1994, Mr. Morrison was appointed as General Manager, Kodak Park Imaging Manufacturing and Supply, and Corporate Vice-President, Eastman Kodak Company, Rochester, New York. A University of Toronto chemical engineering graduate, Mr. Morrison began his career at Kodak Canada in 1958 in the Film Processing Department. He has held progressive responsibilities in manufacturing and general management. He was named President and General Manager of Kodak Canada Inc. in 1984. Before being appointed to his position in Kodak Park, Rochester, New York, Mr Morrison served in the following capacities: Chairman of the Canadian Manufacturers Association; Chairman of the Ministry of Natural Resources Advisory Council on Industrial Energy Efficiency; Chairman of the CIPEC (Canadian Industrial Program for Energy Conservation) Policy Board; member of the Business Council on National Issues, the Conference Board of Canada, the Ontario Business Advisory Council, the Humber Memorial Foundation, the Humber College of Applied Arts and Technology Capital Campaign Cabinet, the U.S. Chamber of Commerce Committee on Canada-United States Relations and is on the board of the Council of Great Lakes Industries.

Ellie Nemeth, a classroom teacher at Clara Barton School, was born and raised in Buffalo, New York. She received her Bachelor of Science degree from the State University of New York at Geneseo and her Master of Science degree from the SUNY at Brockport. Ms. Nemeth has worked in the Rochester City School District since 1967. During this time, she has taught various primary grade levels as well as being a demonstration teacher. During the 1991-92 school years, Ms. Nemeth was selected to work with Dr. Louisa Pierson at the Institute for Research and Reform in Education and helped to develop the Clara Barton Initiative.

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Douglas Stephens is Director of Education and Development, Kodak Canada Inc. He has both a Bachelor of Science and a Master of Business Administration degree from the University of Toronto. His corporate responsibilities include directing a staff of internal consultants who work collaboratively with line managers to assess the business needs of their department so that Kodak Canada Inc. can remain competent and competitive in its marketplace. He is the primary person responsible for the educational partnerships that Kodak Canada Inc. has established with three Ontario boards of education (Etobicoke, North York, and the City of York) and with Humber College. The company's goal in these partnerships is to make a contribution toward the educating of Canada's young people in order to ensure global competitiveness.

David Tinnes is an Organization Consultant at Eastman Kodak Company in Rochester, New York. He has more than 17 years consulting experience. Since 1982 he has coached individual, team, and organizational effectiveness and quality management. He began working with Clara Barton School as a volunteer consultant in September, 1991, at the same time as the design team began working on the Clara Barton Initiative, an innovative redesign of the entire school.

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Martin Barlosky is a post-residency doctoral student in the Department of Educational Administration of The Ontario Institute for Studies in Education. He has a Bachelor of Arts degree from Adelphi University, New York, and a Master of Divinity degree from Union Theological Seminary in New York City. Martin is the recipient of a Social Sciences and Humanities Research Council of Canada Doctoral Fellowship. Before undertaking doctoral studies he was a Dean and a member of the senior management group at the Nova Scotia College of Art and Design, Halifax, Nova Scotia (1974-1991). His primary research interest concerns the relationship between administrative theory and organizational practice at all levels of education.

Stephen Lawton is Professor and Chair of the Department of Educational Administration at The Ontario Institute for Studies in Education (OISE) in Toronto. OISE's mandate is to conduct research, development, and teaching; it is affiliated with the University of Toronto for graduate studies purposes. Professor Lawton is active as a consultant on school finance across Canada and author of a number of books concerned with educational policy in general and school finance in particular. His concerns about the fiscal crisis in government led him to query the foundations of the management of our educational system and he has become an advocate for change which preserves the common interest but fosters the development of greater responsibility for education among parents and members of the community.

DEVELOPING QUALITY SCHOOLS: A HANDBOOK

DEVELOPING QUALITY SCHOOLS: A HANDBOOK guides its readers in acquiring the knowledge needed to create quality in school settings. Rather than presenting yet another set of prepackaged reforms that so often fail to fulfil their promise, the ***Handbook*** invites active engagement in the process of continuous educational improvement.

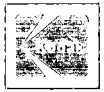
Through text, graphics, and individual and group exercises, the ***Handbook*** introduces the concepts and principles through which quality can be advanced in classrooms, schools, and school systems. Based on the findings of a symposium of educators convened to develop quality practices, it systematically presents the knowledge which can be applied to make all schools *Quality Schools.*

From the *Handbook...*

> The ***Quality Schools*** movement engages practitioners and their external partners in the design, implementation, and monitoring of improvements that demonstrably add value to schools and school systems. It entails a way of thinking as well as a way of doing. To be successful it demands training in both. Accordingly, the ***Handbook*** is designed to assist its readers in understanding and using quality principles in educational organizations. It is addressed to everyone concerned with creating lasting educational improvement.

The product of an extensive partnership between Kodak Canada Inc. and the Department of Educational Administration of The Ontario Institute for Studies in Education, the ***Handbook*** applies quality principles to educational organizations. It is addressed to everyone concerned with creating lasting educational improvement.

ISBN 0-7744-9822-6



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