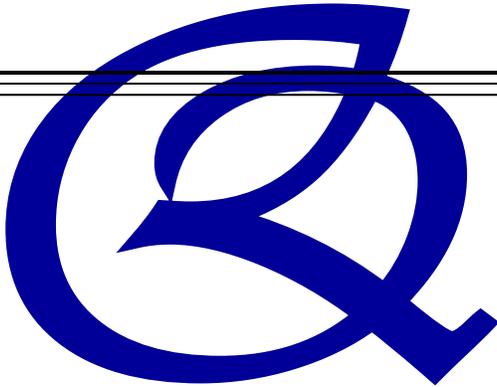


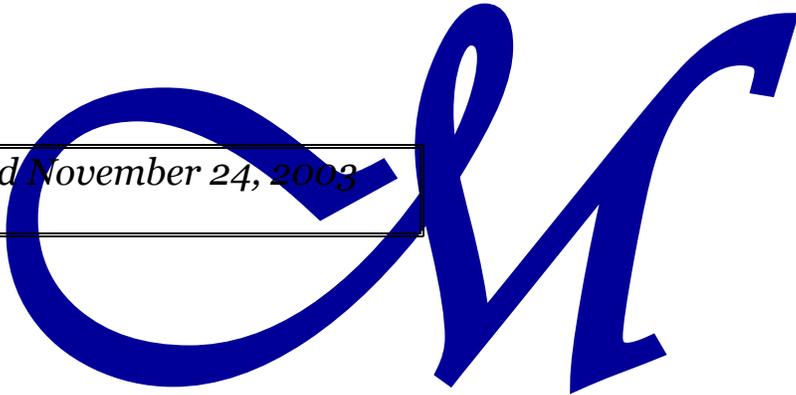


***TOTAL QUALITY MANAGEMENT SYSTEM***  
**FOR DELIVERY OF  
EDUCATIONAL PROGRAMS  
AND  
SERVICES**



**MADISON COUNTY SCHOOL SYSTEM**

*Adopted November 24, 2003*





*Total Quality Management system*

*For delivery of*

*Educational Programs*

*and*

*Services*

*in the*

*Madison County School System*

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Total Quality Management is a proven management methodology adopted from W. Edward Deming's work with the U. S. War Department and Department of Agriculture which was later used as a vehicle to transform Japan from a war torn nation after World War II to the economic world power they have become today. Deming's Total Quality Management System is based on producing quality goods and services that meet and exceed customer satisfaction. His philosophy is that satisfied customers will buy again and promote the product or service to others interested in buying. The Ford Motor Co. has used this management model to lead the automotive industry.

In applying the quality model that has proven successful in industry to education, some modifications to the concepts are in order. Foremost the products in education are living, breathing, thinking human beings. In education, we accept children as they are when they enter the school system. We provide: 1. an environment that allows for learning to take place, 2. teachers who are specialized in certain areas of expertise, 3. a curriculum conducive to the age of the child and based on normal expectations of achievement, 4. textbooks, and resources that correlate to the curriculum and 5. support services provided to add value to children's knowledge base as they progress from grade to grade.

Since we are providing programs and services that add value, we want the value added to be of high quality and meet the expectations of our parents and other customers. The quality management model to be used in our system is a modified model of the W. Edwards Deming Total Quality Management model. Some parts of the Eastman Kodak Quality Management Process and selected materials from current management theory are used to support the model.

Much appreciation goes to the Board of Education and Central Office staff for their help and valuable assistance in our preliminary team projects in quality management. In our effort to provide a quality educational program for our children, we feel this management style will help us to achieve our goals.

Ronald Wilcox  
Superintendent of Schools

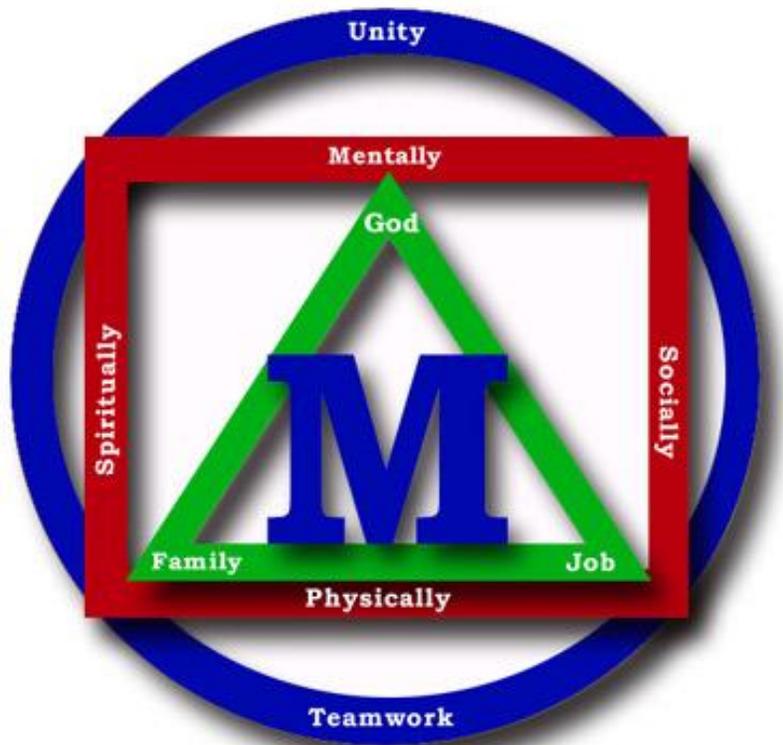


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## *Board Adoption*

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The Madison County Board of Education adopted the Total Quality Management System to provide quality programs and services at a Regular Session of the Board on November 24, 2003.



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## *Why the Quality Management system Was Chosen As The Management Style For The Madison County School System*

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- ❖ Resources available to any business or service entity are land, labor, capital, and entrepreneurship.
- ❖ The Board of Education values the labor (employees) as the most important resource it has.
- ❖ The Board of Education wishes to give employees an opportunity to help improve the quality of programs and services provided by the Madison County School System.
- ❖ The Board of Education agrees with Frederick Herzberg's motivation-hygiene theory which promotes employee involvement as a "satisfier" in the work place.
- ❖ The Board of Education shares the ideology held by William Cook that strategic planning is a way for an organization to "re-create" itself.
- ❖ The Board of Education views the Total Quality Management System as a continuous way to strategically plan for improvement and thereby continually re-create itself to remain viable in an ever-changing economy.
- ❖ The Board of Education recognizes Abraham Maslow's hierarchy of needs and perceives the Total Quality Management System as a means for employees to move from the physiological to the self-actualization need stage. The Board encourages employees to participate in teamwork activities, which will allow for needs to be met.
- ❖ The Board of Education agrees with Stephen Covey's principle that in order to improve productivity, the skill levels of employees must be improved. The Board promotes training and education to improve skill levels.

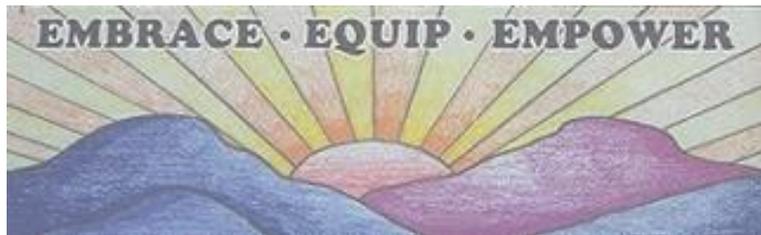


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## *Mission of the Madison County School System*

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The mission of the  
Madison County School System is to  
*embrace, equip and empower*  
our students and employees to excel.



*“Artwork by Madison High Students 2004*

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*Beliefs Held by the Madison County Board of Education*

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❖ **Honesty and Integrity**

Respect and trust develop when persons are honest with each other and strive for integrity. The Board promotes fairness and consistency in all relationships.

❖ **Teamwork**

Each member of the team shoulders his/her duties and or responsibilities. Cooperation in accomplishing tasks is a must. All must work together for the common good of the system.

❖ **Employee Well-Being**

The employee's well-being is fostered through fair policies, respect, fair treatment, adequate pay and fringe benefits and involvement in the improvement of the school system.

❖ **Continual Quality Improvement**

Constancy of purpose equates to continual improvement of the processes involved in the delivery of educational programs and services.

❖ **Creativity and Innovation**

Employees are encouraged to be creative and innovative in their work areas. Successful ventures will be lauded.

❖ **Decisions**

All decisions at every level should be made with the best interest of children in mind.

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## *Views On Change*

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- ❖ We live in a changing world.
- ❖ The Board recognizes as people breathe, they become one breath older; as their heart beats, they become one heartbeat older; as each day passes, people and things age and change. We cannot stop time; we cannot prevent change . . .

*Therefore, we must manage change.*

- ❖ As our customers change, their desires and expectations change. Universities have higher entrance requirements now than they had ten years ago. Students must be able to operate high tech equipment in the work place. Our schools must adjust the curricula to meet the new expectations.

The Total Quality Management System allows for the management of change since customer expectations are constantly assessed.

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## *How Improvement Takes Place and Quality Increases Systems' Thinking*

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The Board of Education recognizes Getzels and Guba's model of an organization being comprised of the nomothetic institution with its role and the idiographic individual with his/her needs realizing that an optimum condition exists when the individual's needs are being met as the organization's goals are met.

The Board of Education views the Madison County School System as a system comprised of many sub-component parts (Curriculum, Transportation, Maintenance, Construction, Food Services, Technology, etc.)

Each sub-component of the system is comprised of various processes.

Any process that is improved improves the quality of that particular sub-component of the system, and as sub-components improve, the system as a whole improves.

Once a process is selected to be improved upon data is gathered and studied, wherein root causes and hidden data are sought, alternative choices are studied and after weighing each option, a decision is reached on the improvement strategy.





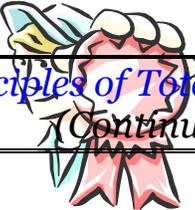
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## *Underlying Principles of Total Quality Management*

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This section identifies eight underlying principles upon which the quality theory is based.

1. **Customers:** Persons or entities that either purchase a product or service or receive the product or service in the production process. Customers can be either external or internal to the organization or process. (Scholtes, 1989) Our external customers are parents, higher education, future employers of our children and taxpayers. Internal customers are teachers of the next grade level or schools of the next level.
2. **Suppliers:** Persons or entities that pass a product or service on to customers who will use the product or service or add value to it. Suppliers can be internal or external. We are suppliers to our customers. Third grade teachers are suppliers to fourth grade teachers. Support service workers are suppliers to schools or individuals.
3. **The scientific approach:** Involves paying attention to methods as well as results; a systematic way for individuals and teams to learn about processes in order that they might be improved; making decisions on data rather than hunches; to look for root causes and permanent solutions rather than rely on quick fixes. (Scholtes, 1989)
4. **Complexity:** Complexity is a general term for unnecessary work. Anything that makes a process more complicated without adding value to a process or service; examples are mistakes, defects, breakdowns, delays, inefficiencies, and variation. Interruptions in the school schedule is an educational complexity. (Scholtes, 1989)
5. **85/15 Rule:** 85% of the problems encountered by management is caused by the system (antiquated policies, procedures out of date with methods, inadequate supervision, inadequate training, and inadequate resources) and only 15% are under the workers' control. (Scholtes, 1989)
6. **Pareto Principle:** 80% of the trouble comes from 20% of the problems. By concentrating on the 20% causing the problems we can improve the whole at an accelerated rate. (Scholtes, 1989) 80% of the discipline problems are caused by 20% of the students in an educational application.



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*Underlying Principles of Total Quality Management*  
(Continued)

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7. *Customer Satisfaction:* Management should strive to meet and exceed customer expectations. Customer satisfaction will create a demand for services; parents will bring students to your district.
8. *Using Databases for decision Making:* Decisions should be made on relevant facts, sufficient data, and awareness of all implications of each option or alternative. Decisions should not be made on hunches or intuition.



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## *Deming's 14 Points Modified to an Educational Application*

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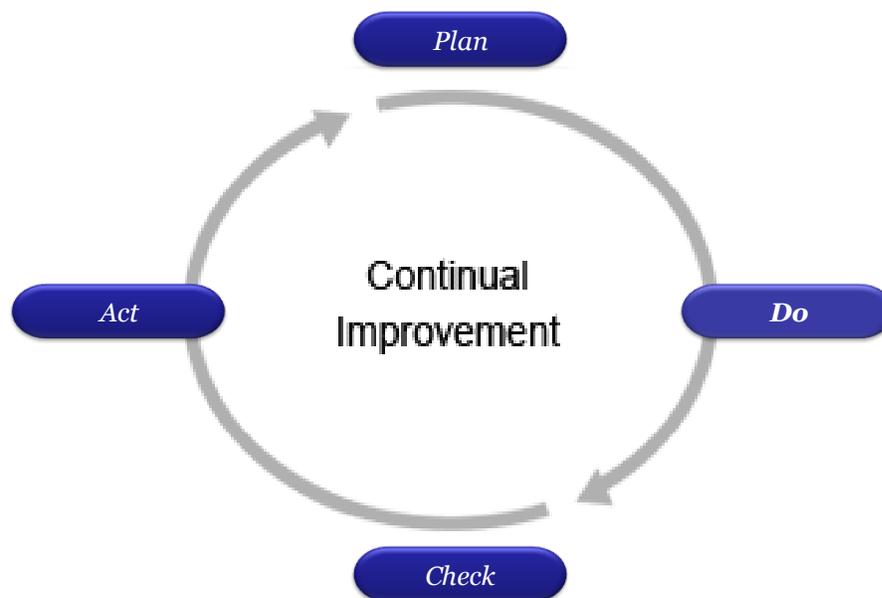
- Point 1: Create constancy of purpose toward improvement of programs and services, with the aim to exceed customer expectation.
- Point 2: Adopt the new philosophy. We are in a new economic age. Western management must awake to the new challenge, must learn their responsibilities, and take on leadership for change.
- Point 3: Cease dependence on inspection to achieve quality by building it into the product in the first place.
- Point 4: End the practice of awarding business on the basis of price tag. Seek quality products for the school system.
- Point 5: Improve constantly and forever the system of providing educational programs and services to improve quality and efficiency.
- Point 6: Institute training on the job.
- Point 7: Institute leadership. The aim of leadership should be to help people and schools do a better job. The leader should be coach and counsel; providing an environment where process improvement can take place.
- Point 8: Drive out fear so that everyone can work effectively for the school system.
- Point 9: Break down barriers between departments. People in K-5, 6-8, 9-12, and central office must work as a team.
- Point 10: Eliminate slogans, exhortations and targets for the teachers asking for zero defects and new levels of productivity.
- Point 11: Help teachers meet accountability expectations by promoting instructional leadership and skill enhancement.
- Point 12: Remove barriers that rob the worker of his/her right to pride of workmanship. Provide what is necessary for workers to do a good job.
- Point 13: Institute a vigorous program of education and self improvement.
- Point 14: Put everybody in the system to work to accomplish the transformation.

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## *Applying Deming's 7 Deadly Diseases to Education*

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- Disease 1: Lack of constancy of purpose to plan programs and services that will meet a student's needs and adequately prepare them for the future.
- Disease 2: Emphasis on short-term, quick fixes: short-term thinking (just the opposite from constancy of purpose to have stable growth and improvement), fed by fear of unfriendly public sentiment and by push from special interest groups.
- Disease 3: Lack of funds to provide needed programs.
- Disease 4: Society influence detrimental to the child's learning.
  - a. Drugs
  - b. Peer Pressure
  - c. Home Life – Non Supporter of Children
- Disease 5: Management by use only of visible figures, with little or no consideration of figures that are unknown or unknowable.
- Disease 6: Excessive inflammatory costs that use funds that could be used for improvement.
- Disease 7: Excessive time restraints required for bureaucracy and paper work.



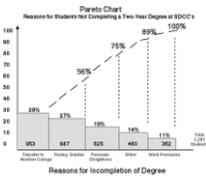
# Tools For Use In Process Improvements

## Flowcharts:



Flowcharts are used to pictorially show the movements of people, materials, documents, or information in a process. (Scholtes, 1989) Having this movement on a flowchart allows the process improver opportunity to visually study the sequences for improvement options.

## Pareto charts:



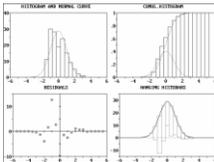
The bar chart wherein the bars are arranged in descending heights from left to right show the frequency or magnitude of the events. This pictorial graph allows the process improver to determine the major events or problems affecting the process.

## Ishikawa Charts:



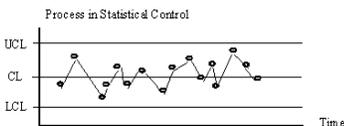
These charts are also called fish bone charts due to their appearance. The chart depicts cause and effect. These charts diagram a problem similar to the diagrams used in English grammar. Each diagram has a large arrow pointing to the problem. Then branches are drawn to the arrow depicting possible causes of the problem and potential solutions.

## Histograms:



Histograms tell how frequently something occurs. Suppose absenteeism is being studied and is plotted. A histogram showed most absences were on Monday. The process improver would then determine how to improve Monday attendance to improve the absenteeism rate.

## Control Charts:



These charts are simple run charts with upper and lower control limits. Events are recorded on a graph. The graphs allow visual study of the process over a period of time to determine the trend of the process. If an event varies greatly, it may be above or below the control limits signaling a possible problem. Absenteeism and student achievement can be charted on a control chart with upper and lower limits.

## Is/Is Not Matrix:

	is	is Not	Investigate, analyze, eliminate, prevent
Who is involved?	X, Y and Z staff	All staff	Check X, Y and Z staff affected
When it occurs?	Certain times of month Right after class Before class Staff not trained Implementation time	All the time When fully staffed When professors in place	Check control chart Only when changes involved
Where it occurs?	Certain units/depts	All locations All units/departments or units/depts	Staff assistance map the available from other sections or units/depts
How it occurs?	Staff get overwhelmed Staff get stressed	Weak staff schedule	Staff is able to generate the work at the expense of health and cost time

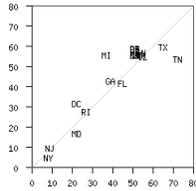
This matrix tells what the problem is and what it is not in terms of where, when, what kind, how much and who. The tool splits data in order to stratify what is and what is not relevant.

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## Tools For Use In Process Improvements

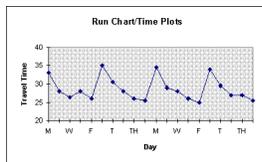


### Scatter Diagram:



This diagram can be used when two variables are compared to determine what effect the manipulation of one has on the other. Days absent could be compared to grades.

### Time Plots:



Time plots allow events to be studied over time. When the dots are connected, a trend line is established. Trends for test scores, absenteeism, trip requests, work orders, and accidents can be established for study by using time plots.

### Team Meeting Process:

In quality management, a team is assigned a process or problem on which to work.

1. Each team will have a leader.
2. Each team will have a scribe.
3. Each team will designate a resource person.

When the team has a recommendation for improvement, it is presented to the appropriate persons and disband unless it is a standing team.

### Decision Making Process:

A team follows the steps shown below:

1. Recognize a need for a decision.
2. Determine the options or alternatives.
3. Gather data; evaluate the alternatives in relation to needs of the system and the financial resources available, both externally and internally.
4. Choose the alternative.
5. Implement or acknowledge the decision.



Processes are improved by the following PDCA (plan, do, check and act) model:

	<b>Board</b>	<b>Administration</b>
<b>Plan</b> Improvement Plan	Develop/Update Strategic Plan	Identify selected projects
	Determine: Who will do what and when	Determine: Who will do what and when
<b>DO</b> Implement the Strategy	Either by individuals or by teams	Either by individuals or by teams
<b>Check</b> Determine the impact of strategy	Progress reports by superintendents/team leaders	Progress reports to the superintendent by team/individual leaders
<b>Act</b> Based on impact & strategy	Redirect/applaud accomplishments	Redirect/applaud accomplishments

The Madison County Board of Education will use the PDCA procedures for process improvement.

All processes have inputs that collectively enter the process. Transformation takes place within the process mixing, changing or manipulating the inputs in some manner resulting in outputs. If the inputs and transformation processes can be improved, the output will be of higher quality.





Once a decision is made as to whether the problem is a system problem or an employee problem, the PDCA cycle can be used to bring about improvement.

**Plan** Determine if improvement is to be done by an individual, by a standing unit team or a process improvement team.

1. Identify what is.
2. Determine what is desired.
3. Identify barriers that must be overcome.
4. Identify how barriers will be overcome:
  - a. Who will take action
  - b. When the action will be taken
  - c. What resources will be required
  - d. Where resources will come from

**Do** 5. Implement the actions.

**Check** 6. Identify assessment procedures

**Act** 7. Make decision to accept the improvement strategy or redirect efforts.

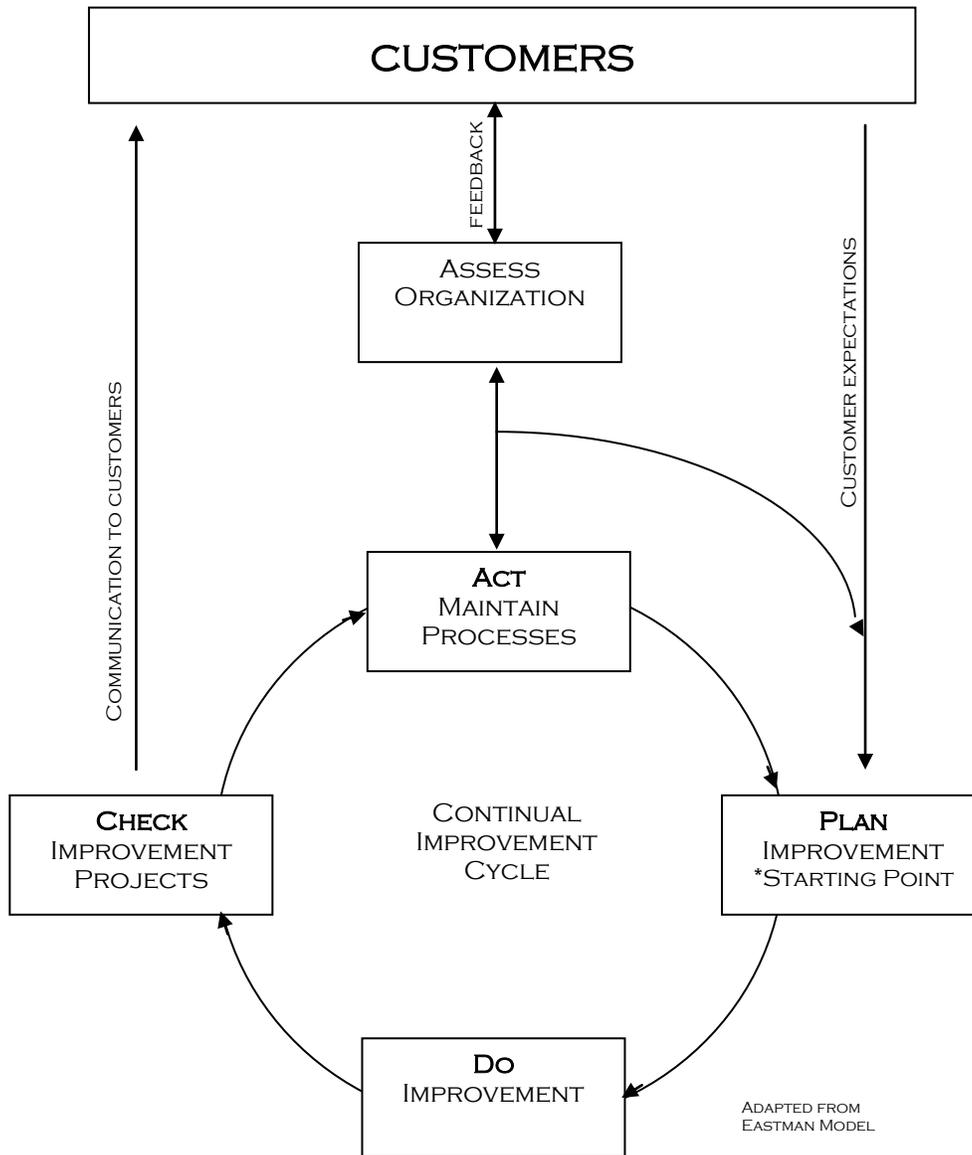
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*Model For County Educational  
Quality Management Process*

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- ❖ Customers provide input as to what expectations they have of the system.
- ❖ The system then plans the strategies to meet and exceed customer expectations.
- ❖ When further process improvements are made the customer is informed of the changes and feedback is obtained as to their reaction. This feedback kicks in further improvement strategies or serves to maintain the process depending on customer satisfaction level.



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## *When To Consider Improving A Process*

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A process should be carefully scrutinized when one or more of the following is evident:

1. Complexity or variation
2. Dissatisfaction is voiced from internal or external customers
3. Sub-systems malfunction
4. Bench mark data compares poorly
5. Slack time is evident
6. Problem is repetitious



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## *Isolating Causes of Problems*

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Problems are either system related or employee related.

1. Problems are employee related if employee is causing the problem because he/she is failing to follow established procedures, policies, etc.
2. Problems are system related if problem is not related to the employee or out of the employee's control, such as system's failure to communicate, improper training, improper or inadequate policy or procedures, etc.

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## *How Improvement Projects Will Be Selected*

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The Board of Education determines the needs of the school system through a needs assessment and personal knowledge awareness of needs. The Board places these needs in a strategic plan and updates the plan annually. The items selected for the plan are then assigned to persons in particular positions of responsibility, to standing unit teams, or to process improvement teams.

During the course of the school year, any Board members or the superintendent can recommend additional projects to be considered in the plan. Projects not in the plan that surpass the bid limits established by the Board require Board approval.

Any employee or team can identify a process for improvement. A listing of improvement options will be posted and kept at the level of initiation. Those projects beyond the means of persons or teams working at a particular level can be pushed upward. Suggestions reaching the central office will be prioritized by the Board of superintendent in relation to the magnitude of the option, the time and financial resources available and its potential to meet identified priority needs of the system.

Team leaders will select projects for the team to work on as determined by importance to needs, time required to complete and financial resources.

The superintendent, supervisors, principals, or team leaders can identify projects within their authority and responsibility and assign a team to work on the projects.



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## *Who Will Work On Processes to Bring About Improvement in Quality of The Delivery Of Programs and Services*

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The Board will improve by using individual persons and teams.

Any person in the organization should improve processes that are within his/her role, scope of authority and responsibility. In other words, the superintendent, supervisor, principal, teacher or other employee should improve anything that is within expectation of their realm of authority, job description, or responsibility. Individuals do not need a team if they recognize the need and have the resources to improve a process.

Any process selected for improvement that is beyond an employee's expertise, authority, responsibility, or financial resources should be referred upward to a higher level, or a commitment should be obtained from the next highest level for the resources needed to improve the process.

The Board recognizes two types of teams to work on projects as follows:

1. *Standing Unit Teams*: Any teams that stand for one year at a time. The Board recognizes the following standing unit teams:
  - A. Board of Education as a group
    - ❖ The Board's Committees
      - Finance
      - Early Childhood
      - Special Assigned Committees
  - B. Superintendent and Supervisors as a group
  - C. Superintendent and Principals as a group
  - D. Superintendent and Central Office employees as a group
  - E. Paraprofessional Teams
2. *Process Improvement Teams* – Any teams that are organized on a temporary basis to consider options to improve a process. Once the team makes a recommendation and the recommendation is accepted, the team is disbanded. If the recommendation is not accepted, it may be redirected with reasons, stipulations and suggestions for further investigation. Upon final acceptance or denial of recommendation, the team is lauded for its efforts and disbanded.

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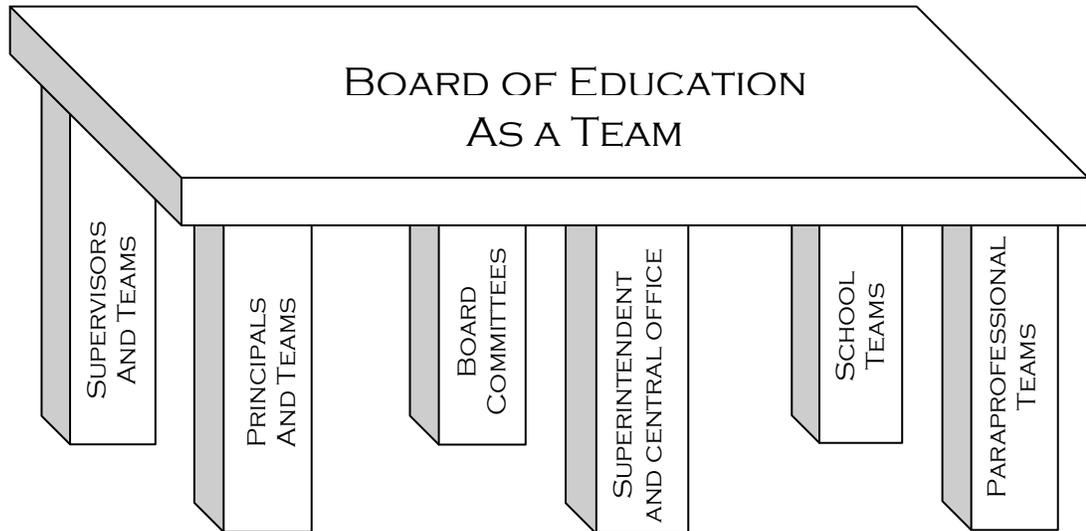


*Standing Unit Teams*

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All of these teams are in place or stand for at least one year.



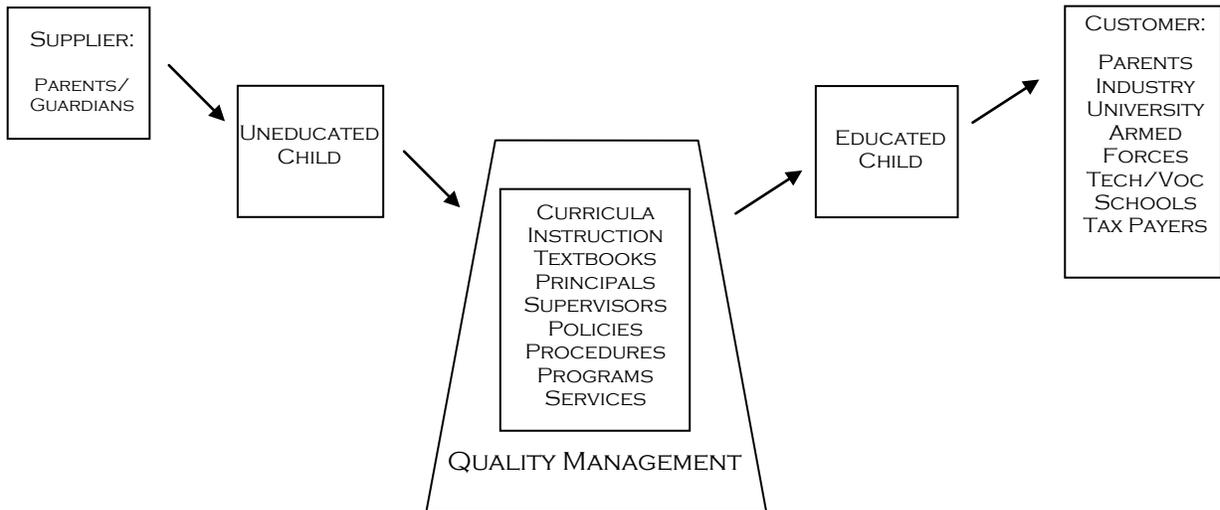
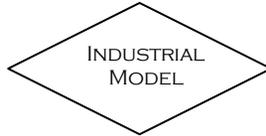
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*Quality Leadership Expectations  
For All Positions And For Team Leaders*

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1. Understands the aims of the school system – directs tasks to achieve aims
2. Focuses on the school system’s customers, both internal and external
3. Acts as coach, counsel and encourager
4. Removes obstacles to joy in work
5. Understands variation and how to control it
6. Works to improve the system
7. Creates trust
8. Promotes training, education, and skill development
9. Recognizes mistakes can become learning opportunities
10. Manages change



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## *Rewards And Incentives*

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- ❖ The Board of Education believes in giving credit where due. The Board will recognize persons and teams with special recognition at Board meetings.
- ❖ Employees who are a part of bringing about improvement in the system can enjoy the self-gratification of doing something meaningful for the district and the children of the district.
- ❖ Pride of workmanship will be promoted.
- ❖ Pride in teamwork will be promoted.
- ❖ A public relations program will promote the success of individuals in the media.

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## *Four C's Of Quality Management*

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- ❖ **C**ustomer Focus
- ❖ **C**ommunication of Mission
- ❖ **C**ommitment to Improve
- ❖ **C**ooperation Among Teams