

*Appendix E*

*Continuous Improvement Tool Rubrics*

*Flow Chart Rubric<sup>1</sup>*

**FLOW CHART RUBRIC**

Refer to the Tools section of your Participant Handbook, the Flow Chart section in the Memory Jogger, the Deployment Flow Chart in the Overview of Total Quality Learning and the Flow Chart in the Enterprise Village Handbook.

	Not Yet!	Done It!	Above & Beyond!
A clear definition of a Flow Chart is given.			
A real life process has been chosen.			
A flow chart of the process has been made.			
The symbols used are explained.			
At least 5 ways that flow charts can be used to <u>improve processes</u> have been explained (refer to Participant Handbook)			
2-3 real life/work related examples of how it might be used have been given.			

<sup>1</sup>From *Process Improvement Tools* (p. 21) by Pinellas County Schools, 1998. Largo, FL: Quality Academy. Copyright 1998 by Quality Academy. Reproduced with permission.

*Force Field Analysis Rubric<sup>2</sup>***FORCE FIELD ANALYSIS RUBRIC**

Refer to the Tools section of your Participant Handbook, the Force field section in the Memory Jogger, and the Force Field Analysis in the Overview of Total Quality Learning.

	Not Yet!	Done It!	Above & Beyond!
A clear definition of a Force Field Analysis is given.			
A change that you would like to see has been chosen.			
Driving and Restraining forces have been brainstormed and are recorded on a Force Field Diagram drawn on a sheet of chart paper.			
Three possible change strategies are presented (see Participant Handbook).			
Several advantages to using a Force Field Analysis are given.			
2-3 real life/work related examples of how it might be used have been given.			

<sup>2</sup>From *Process Improvement Tools* (p. 23) by Pinellas County Schools, 1998. Largo, FL:

*Affinity Diagram Rubric*<sup>3</sup>**AFFINITY DIAGRAM RUBRIC**

Refer to the Tools section of your Participant Handbook, the Affinity Diagram section in the Memory Jogger, and the Affinity Diagram in the Overview of Total Quality Learning.

	Not Yet!	Done It!	Above & Beyond!
A clear definition of an Affinity Diagram is given.			
A real life topic or problem has been chosen.			
Ideas relating to the topic have been brainstormed and recorded on sticky notes--at least 30 ideas--one idea per sticky. Stress that this should be done silently.			
The teams ideas (sticky notes) have been placed on a sheet of chart paper.			
The team has grouped the ideas on the sticky notes into categories according to likeness or "affinity". Stress that this should be done silently.			
A header that describes the ideas in each category has been written at the top of each grouping.			
<b>Be sure to:</b>			
describe the process used to make it.			
explain the importance of silently brainstorming and grouping in this process.			
give several advantages to using this process for collecting and organizing data (see Overview of Total Quality Learning p. 58).			
give 2-3 real life/work related examples of how it might be used.			

<sup>3</sup>From *Process Improvement Tools* (p. 22) by Pinellas County Schools, 1998. Largo, FL:



*Cause & Effect Diagram Rubric<sup>4</sup>*

**CAUSE & EFFECT DIAGRAM RUBRIC**  
**FISHBONE**

Refer to the Tools section of your Participant Handbook, the Cause & Effect/Fishbone section in the Memory Jogger, the Fishbone Chart in the Overview of Total Quality Learning and the Cause & Effect Diagram in the Enterprise Village Handbook.

	Not Yet!	Done It!	Above & Beyond!
A clear definition of a Cause & Effect Diagram is given.			
A real life problem has been chosen.			
Possible <u>causes</u> of this problem have been brainstormed and recorded on chart paper ( <u>do not generate solutions</u> ).			
From the possible causes recorded, a fishbone diagram has been made (use as your 4 categories manpower, methods, materials and machines <u>or</u> procedures, people, policies and plant).			
For at least two causes, the question <u>Why</u> has been asked 5 times and the responses have been listed as alternating branches on the diagram (see example in Participant handbook).			
<b>Be sure to:</b>			
describe the process used to make it.			
explain why it is important to ask <u>why</u> several times for each cause (develop the concept of "root cause").			
explain that the fishbone helps us not to blame people by focusing our thoughts on causes that come from materials, methods, machines, etc.			
give 2-3 real life/work related examples of how it might be used.			

<sup>4</sup>From *Process Improvement Tools* (p. 24) by Pinellas County Schools, 1998. Largo, FL:

*Pareto Analysis Rubric*<sup>5</sup>

	Not Yet!	Done It!	Above & Beyond!
A clear definition of a Pareto Analysis (chart), that emphasizes the word priorities, is given.			
The statement, "Sorting out the vital few from the trivial many," is explained (also explain that 85% of the variation in any process is due to 15% of the causes--this is called the 85-15 Rule or Pareto Principle).			
A real life problem has been chosen.			
Data is created or collected, through brainstorming, that may account for the problem you have chosen and these causes are listed on a sheet of chart paper.			
A frequency or percentage value has been assigned to each cause and is shown on the same chart paper.			
This data is used to make a Pareto Chart on a sheet of chart paper.			
<b>Make sure that:</b>			
causes are listed from left to right along the x-axis in order of decreasing frequency or percentage.			
vertical bars are constructed over each cause whose heights represent the frequency or percentage.			
<b>Be sure to:</b>			
describe the process used to make it.			
interpret the significance of the taller bars on the chart.			
explain how this information might be used in allocating time, money and other resources to <u>improve processes</u> .			
explain how it is <u>different</u> from a histogram.			
give 2-3 real life/work related examples of how it might be used.			

<sup>5</sup>From *Process Improvement Tools* (p. 25) by Pinellas County Schools, 1998. Largo, FL:



*Histogram Rubric*<sup>6</sup>**HISTOGRAM RUBRIC**

Refer to the Tools section of your Participant Handbook, the Histogram section in the Memory Jogger, the Frequency Chart in the Overview of Total Quality Learning and the Histogram in the Enterprise Village Handbook.

	Not Yet!	Done It!	Above & Beyond!
A clear definition of a Histogram is given, stressing that it is a graph of frequencies of some occurrence or event.			
<u>Number</u> data has been created or collected (30-40 data points) to use in creating your histogram.			
These 30-40 data points are displayed randomly on a sheet of chart paper.			
This data is used to construct a table of frequencies on a sheet of chart paper.			
The frequency table is used to construct a histogram of the data on a sheet of chart paper.			
<b>Be sure to:</b>			
describe the process used to make the histogram.			
explain the parts of the histogram (axes, labels, bars, etc.).			
explain what the histogram tells us.			
give 2-3 real life/work related examples of how it might be used.			
EXTRA: An explanation of the statistics associated with a histogram is given (mean, median, mode, range, skewness, etc.).			

<sup>6</sup>From *Process Improvement Tools* (p. 27) by Pinellas County Schools, 1998. Largo, FL:

Control Chart Rubric<sup>7</sup>CONTROL CHART RUBRIC

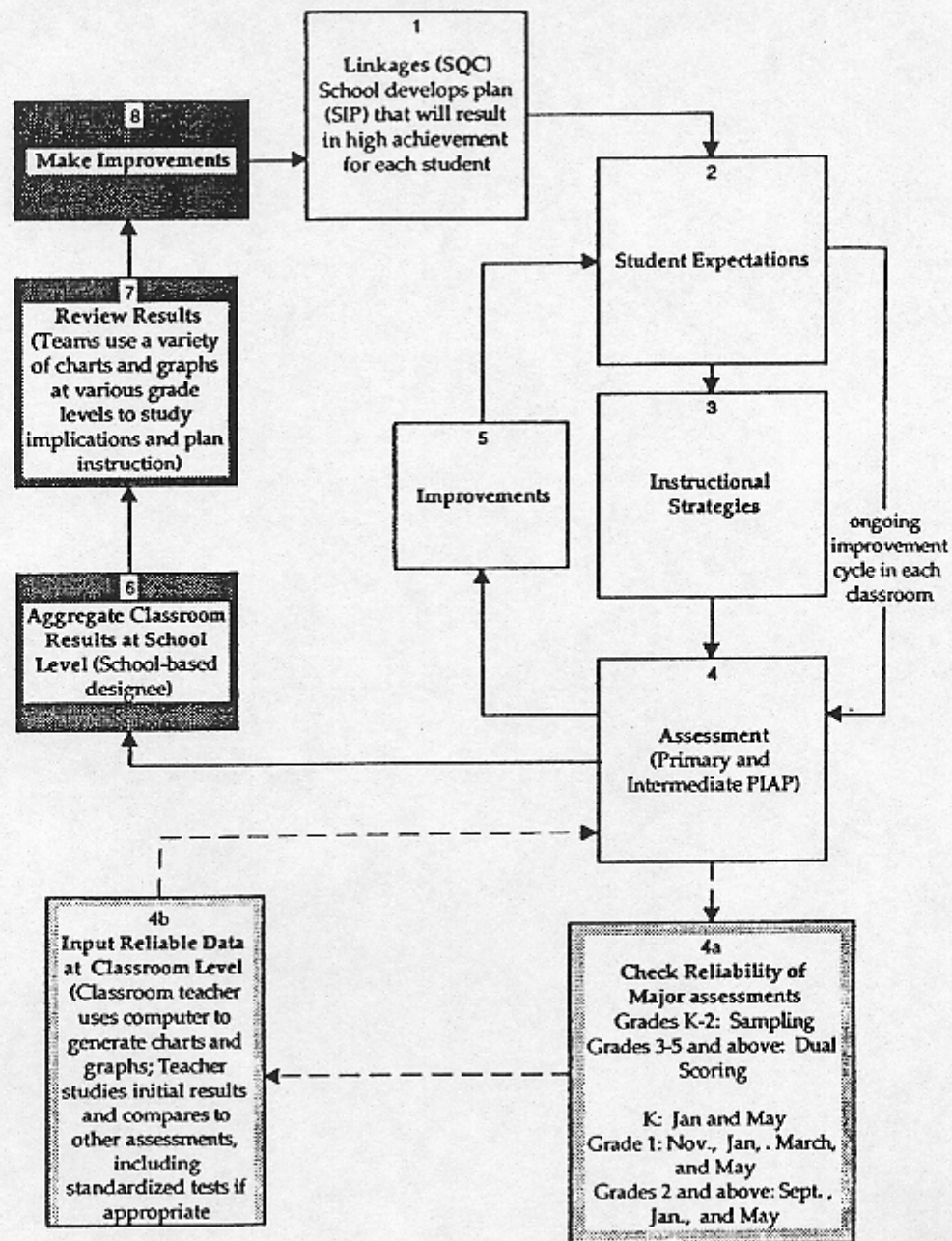
Refer to the Tools section of your Participant Handbook, the Control Chart in the Memory Jogger and the Stability Chart in the Overview of Total Quality Learning.

	Not Yet!	Done It!	Above & Beyond!
A clear definition of a Control Chart is given.			
Data is created or collected to use in creating your control chart.			
This data has been used to make a control chart on a sheet of chart paper.			
The mean (average) has been determined and displayed as a line on the chart.			
The upper and lower control limits have been <u>estimated</u> (a general explanation of how the control limits are actually determined must be given).			
At least one <u>special cause</u> data point has been shown on your chart.			
<b>Be sure to:</b>			
compare it to the run chart.			
describe the process used to make it.			
interpret your control chart for the audience (point out common cause and special cause variation in your data).			
point out that judgments about "goodness" or best and worst workers cannot be made from this data.			
explain what it means to have a system "in control."			
give 2-3 real life/work related examples of how it might be used.			

<sup>7</sup>From *Process Improvement Tools* (p. 29) by Pinellas County Schools, 1998. Largo, FL:

*Student Achievement Model Flow Chart<sup>8</sup>*

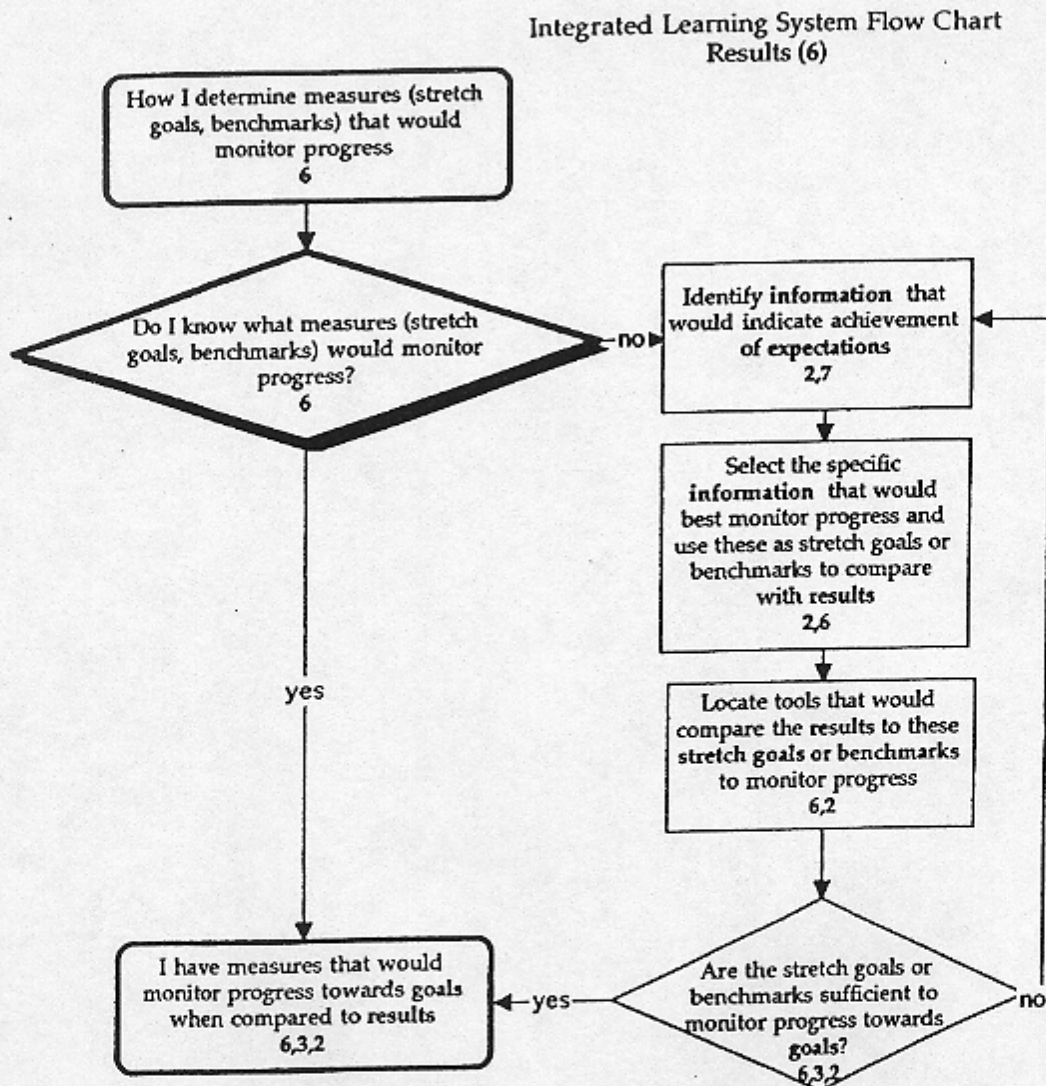
**Aligning Student Expectations, Instructional Strategies, and Assessment within an Integrated System of Process Improvement**



<sup>8</sup>From *Process Improvement Tools* (p. 35) by Pinellas County Schools, 1998. Largo, FL: Quality Academy. Copyright 1998 by Quality Academy. Reproduced with permission.



*Integrated Learning System (Results) Flow Chart*<sup>9</sup>

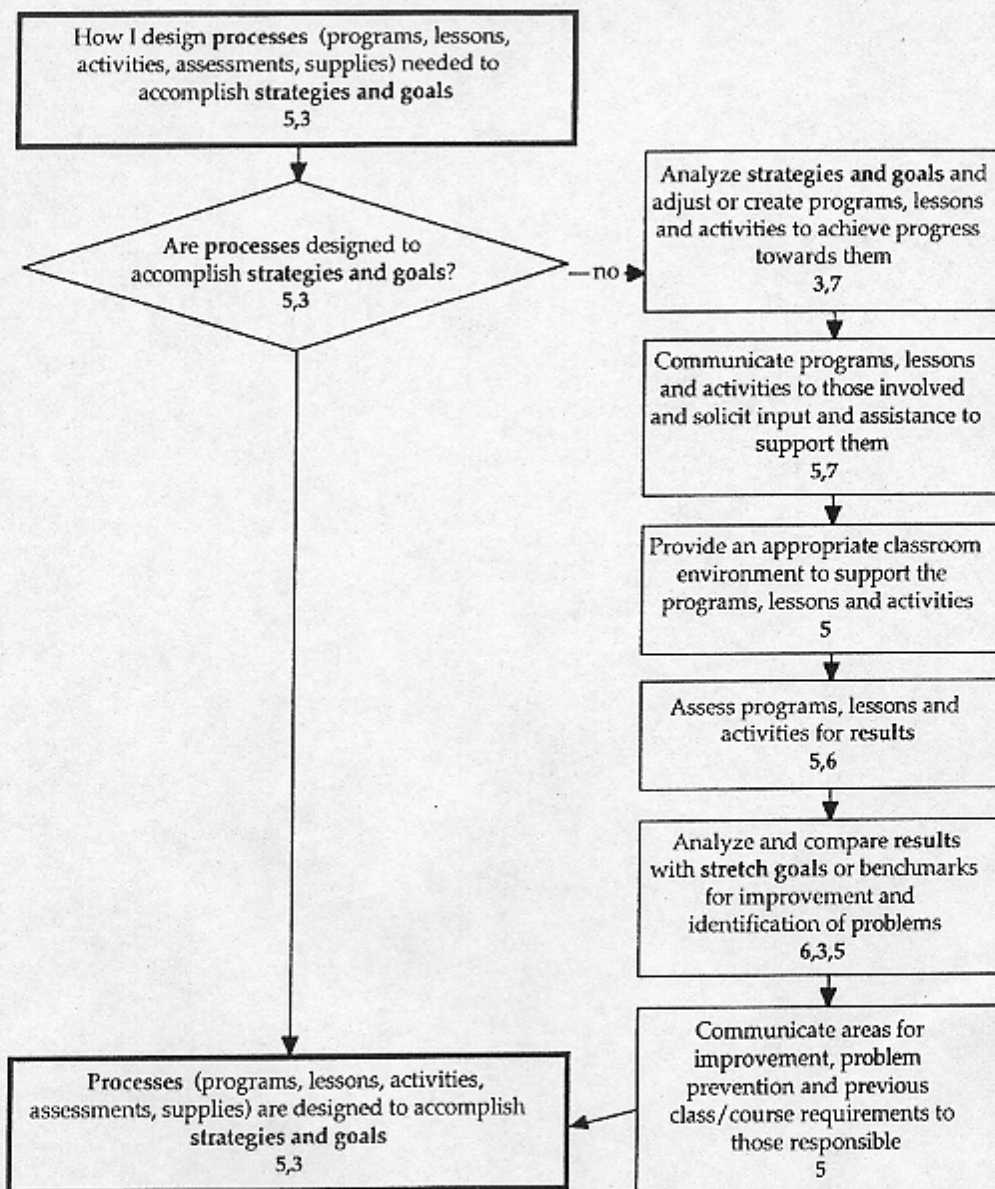


Once expectations and strategic plans and goals have been established, information describing what successful accomplishment of these goals "looks like" needs to be gathered. It might "look like" the highest score on a standardized test, an exemplary third grade class or high levels of involvement by students in community programs as indicated by bar graph and written information obtained from a particular district. This information could then become the stretch goal or benchmark and a teacher could use this as the highest standard and could chart progress towards it. Run, Control, Pareto, Frequency Charts and Check Sheets are tools that could help in monitoring progress. Bubble Charts, Relations and Scatter Diagrams might assist in determining stretch goals and benchmarks.

<sup>9</sup>From *Process Improvement Tools* (p. 40) by Pinellas County Schools, 1998. Largo, FL:

*Integrated Learning System (Processes) Flow Chart*<sup>10</sup>

Integrated Learning System Flow Chart  
Processes (5)



Teachers spend much of their time designing processes to teach, assess and improve their instruction. Creating these to align to the strategic goals and plans requires continuous PDSA so progress and problems can be managed and communicated to all those who are involved for assistance and improvements. Many tools can be used to help teachers, students and parents develop and improve the process, eg., fishbone and affinity diagrams and competency matrices.

<sup>10</sup>From *Process Improvement Tools* (p. 41) by Pinellas County Schools, 1998. Largo, FL: