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ABSTRACT

Focusing on the application and outcomes of quality-based management and assessment practices in use at Western Wisconsin Technical College (WWTC), this report outlines the college's four-module quality improvement training program, reviews college outcomes data related to student achievement and employer satisfaction, and describes eight strategic goals for WWTC. The first part provides brief descriptions of the following four learning modules that comprise WWTC's quality improvement training program: (1) Awareness, which explains basic concepts of quality and their implications for WWTC; (2) Tools of the Scientific Approach, detailing methods of analysis; (3) the Joiner Seven Step Method, describing the steps in the Joiner problem-solving strategy; and (4) Learning To Work Together as Teams. The second section reviews indicators of institutional achievement, providing data on graduate placement rates, employment location, and satisfaction with training for graduates from 1985-86 through 1989-90; results of a longitudinal follow-up study of 1981 graduates; results of a 1990 survey of employers of WWTC graduates; a review of WWTC's grading system; a discussion of student organizations and student honors and awards; and a review of student pass rates on certification licensure examinations for the last 5 years. The final section of the report presents brief strategic goals for WWTC addressing the issues of district vision, customer-focus, teaching and learning, fiscal resources, staffing, technology, organizational structure, and physical resources. This section also includes a diagram of the college's effectiveness model and core indicators. (PAA)

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# INSTITUTIONAL EFFECTIVENESS....

## WESTERN'S PERSPECTIVE

ED 364 265

**\* Focus on Continuous Improvement**

**\* NCA Reaccreditation**

**\*Institutional Effectiveness...the next steps**

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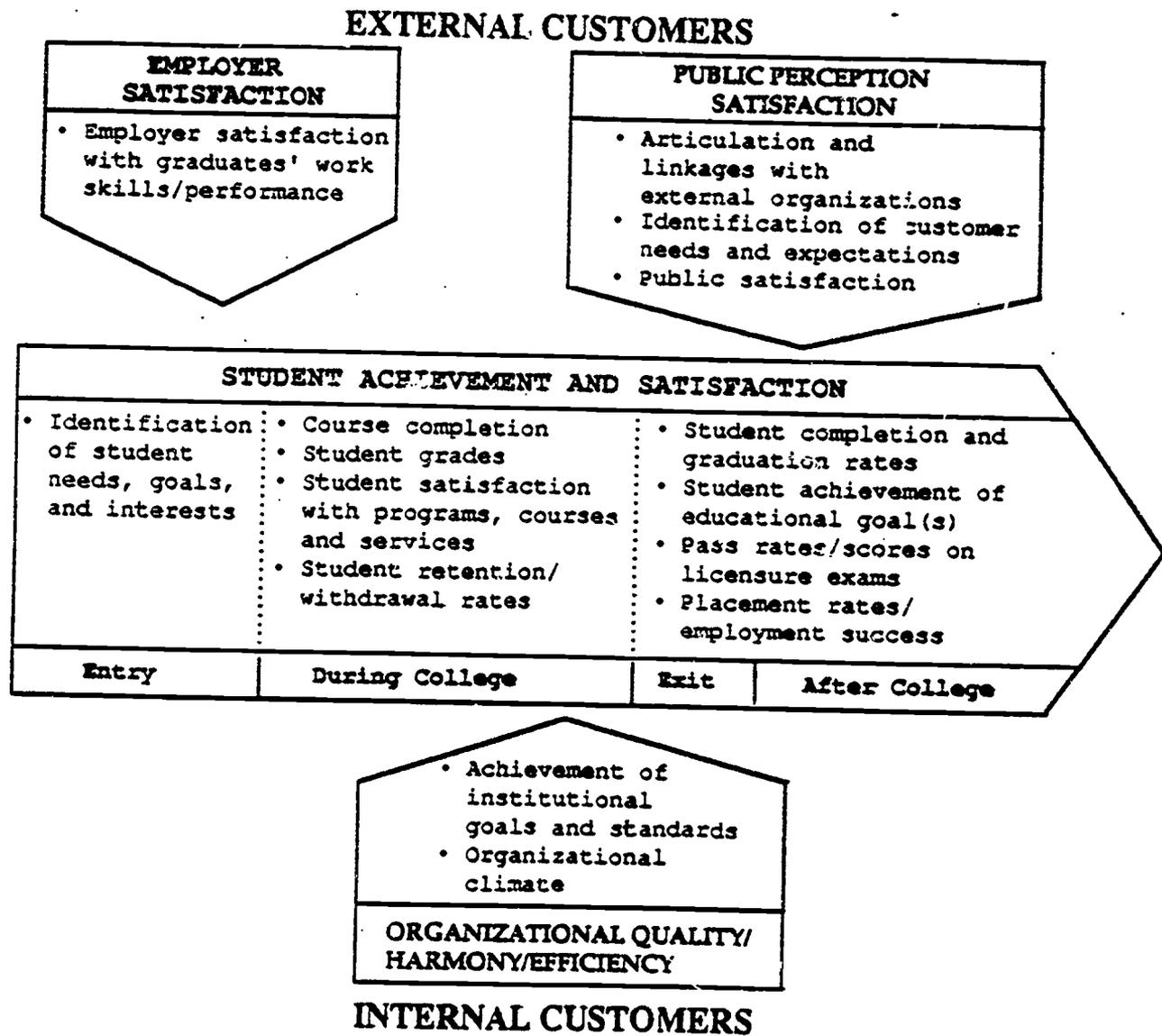
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**FOCUS ON CONTINUOUS IMPROVEMENT**

The model in Figure 1 pictures the core indicators in relationship to the effectiveness definition provided earlier. This model looks at the core indicators in a way that describes effectiveness as: 1) the activities and results that occur during different stages of customer involvement with the technical colleges and 2) the satisfaction that customers have as a result of involvement with the technical colleges.

In the section that follows, definitions and data sources are provided for each core indicator. Where data related to a core indicator is being systematically collected within or across the technical colleges, a notation appears as "WTCS."

**Figure 1. Wisconsin Technical College System Effectiveness Model and Core Indicators**



## QUALITY IMPROVEMENT TRAINING PLAN

### **Module I - Awareness**

This module explains the evolution of Quality Improvement, basic concepts of Quality and their implication for Western Wisconsin Technical College. Offered in three 1 1/2 hour segments.

### **Module II - Tools of the Scientific Approach**

Participants will learn the seven basic tools of Quality Improvement including: Pareto charts, Cause and Effect Diagrams, Is/Is-Not Analysis, Check Sheets, Scatter Diagrams, Flow Charts, and Run Charts. These tools help problem solving teams visualize a process, pinpoint problems, find their causes and determine solutions. They also provide a way to evaluate proposed changes. Tools for making team decisions including: Brainstorming and Nominal Group Process will also be discussed.

### **Module III - Joiner Seven Step Method**

Participants will learn a proven problem solving method developed by Joiner and Associates. The Seven Step problem solving method includes the following steps: 1) Project, 2) Current Situation, 3) Cause Analysis, 4) Solutions, 5) Results, 6) Standardization, and 7) Future Plans. Participants will be able to identify the appropriate tools to apply in each stage of the problem solving process based on the previous module.

### **Module IV - Learning to Work Together as Teams**

Participants will learn about the stages of team evolution and how these stages can evolve into productive team work. Participants will also learn tools and techniques to help them plan, participate and achieve results in meetings.

## JOINER TRIANGLE

### Quality

- \* Focus on delighting customers
- \* Develop an obsession with quality.

### All One Team

- \* Build a culture of teamwork.
- \* Foster internal customer-supplier relationships.
- \* Use small groups that lead, made improvements, do work.

### Scientific Approach

- \* Carefully follow a problem-solving process.
- \* Manage by facts and data.
- \* Focus on processes and systems.

## **NCA REACCREDITATION**

## INTRODUCTION

Western Wisconsin Technical College, with an emphasis on preparing students for competent performance in the work place, has a strong tradition of focusing its development and evaluative activities on outcome-based indicators. The ever changing needs of the community and expanding technologies are compelling the College to continually assess its role in the District.

In August 1991 WWTC formed an assessment task force to comply with the NCA directive that all affiliated colleges document academic achievement. The task force's first priority was to identify and evaluate the College's present assessment tools, such as graduate follow-up surveys, employee satisfaction surveys, and certification licensure examinations. After gathering this information, the task force will identify and initiate an assessment plan that is appropriate for the College.

This chapter delineates evaluative data related to student achievement, student development, quality programs, staff accomplishments, community service, and institutional climate. WWTC strives to assess and improve performance in these areas so that the College will be organizationally effective and students will succeed.

## STUDENT ACHIEVEMENT

An initial organizational thread and the top priority at WWTC is student achievement. The College Mission Statement states:

"The College exists to provide opportunities for eligible persons to learn occupational skills, to acquire additional skills, and to enrich their personal lives. The courses of study are planned so that each person may keep pace with the rapidly changing world and accelerating technologies."

As is true nationwide with technical and community colleges, WWTC's mission is expanding to be more inclusive, to offer opportunities for education to groups that have never had access to those opportunities in the past. This mission is a challenge for students and the College. How well WWTC is meeting the challenge is demonstrated by what our students achieve.

### Indicators

#### Graduate Placement

Graduate placement is measured by an annual follow-up survey conducted during October, which is approximately six months after a student graduates from his/her program. Through this follow-up survey, the College attempts to contact all persons who graduated during the previous year to determine their satisfaction with the education they received and their success at establishing a career. The 1989-90 follow-up survey report contains responses from 1,028 or 90% of the graduates. Based on these responses, 95 percent of the graduates who are available for employment are working. Of those working, 84 percent are working in career-related jobs. The following table summarizes the five-year history of graduate follow-up:

TABLE 15

#### Western Wisconsin Technical College Five-Year History of Graduate Follow-Up

GRADUATES AVAILABLE FOR EMPLOYMENT					
	1985-86	1986-87	1987-88	1988-89	1989-90
EMPLOYED	801 (89.0%)	745 (91.6%)	724 (91.8%)	809 (94.2%)	897 (94.9%)
LOOKING FOR WORK	99 (11.0%)	68 (8.4%)	65 (8.2%)	50 (5.8%)	48 (5.1%)
TOTAL	900 (100%)	813 (100%)	789 (100%)	859 (100%)	945 (100%)

### EMPLOYMENT LOCATION

	1985-86	1986-87	1987-88	1988-89	1989-90
IN DISTRICT	73%	73%	71%	76%	77%
IN WISCONSIN	11%	13%	16%	12%	12%
OUT OF STATE	16%	14%	13%	12%	11%

### SATISFACTION WITH TRAINING

	1985-86	1986-87	1987-88	1988-89	1989-90
VERY SATISFIED	36%	35%	31%	39%	42%
SATISFIED	58%	60%	66%	57%	56%
UNSATISFIED	5%	4%	3%	3%	2%
VERY UNSATISFIED	1%	1%	0%	1%	0%

#### Longitudinal Follow-Up Study

To determine the long-term benefits of attending WWTC, the College conducts a longitudinal follow-up study on an intermittent basis. Graduates from 1981 were studied, both 3 years (1984) and 5 years (1986) after graduation. Results are presented in Table 16. A five-year longitudinal follow-up study of 1986 graduates will be conducted during the summer of 1991 with results available in October 1991. [See Exhibit 150]

**TABLE 16**

#### LONGITUDINAL FOLLOW-UP SURVEY RESULTS

	1981	1984	1986
GRADUATES (1,053)			
RESPONSE RATE	91%	75%	56%
EMPLOYED	76%	87%	87%
RELATED	(88%)	(78%)	(78%)
NOT RELATED	(12%)	(22%)	(22%)
LOOKING FOR A JOB	13%	5%	4%
STUDENT	8%	4%	5%
NOT IN LABOR MARKET	3%	4%	4%

## Employer Satisfaction Survey

Employers are surveyed annually to determine satisfaction with WWTC graduates and to obtain the employer's assessment of the education and training which the graduate received at the College. Of the 333 surveys sent out in 1990, 295 or 90 percent were returned. [See Exhibit 62] Employers rated WWTC graduates on knowledge and skills, attitude and habits; and on their educational preparation. The most recent employer survey results indicate the following outcomes:

- 76 percent of the employers regarded the quality of work done by WWTC graduates as above average.
- 77 percent rated students' technical knowledge above average.
- 78 percent of the employers indicated the use of equipment was above average.
- 70 percent indicated the graduates' communication skills were above average.
- 73 percent of the employers indicated the application of knowledge learned in the program was above average.
- 67 percent indicated the graduates' problem solving skills were above average.
- Employers were favorably impressed with the attitude and habits exhibited by students on the job including cooperating with coworkers, accepting responsibilities, attendance at work, desire to improve, and practicing safety.
- 75 percent of the employers indicated that the individual's vocational education influenced their decision to hire him/her.
- 63 percent of the employers noted that vocational training shortened the normal on-the-job training time for new employees.
- As a result of their vocational-technical training, 69 percent of the graduates will have an opportunity for professional advancement.

Results from this employer survey are very similar to the results from employer surveys conducted in previous years.

## Grading System

Western Wisconsin Technical College students are expected to maintain a high level of scholarship. Grading is based on a 4-point system. Students are placed on academic probation if they fail to earn a GPA of 2.0 (C level) at the end of a quarter. A student regains academic status by raising her/his average to at least 2.0 during the following quarter of study. Failure to maintain a 2.0 GPA minimum each quarter can result in a required withdrawal from school.

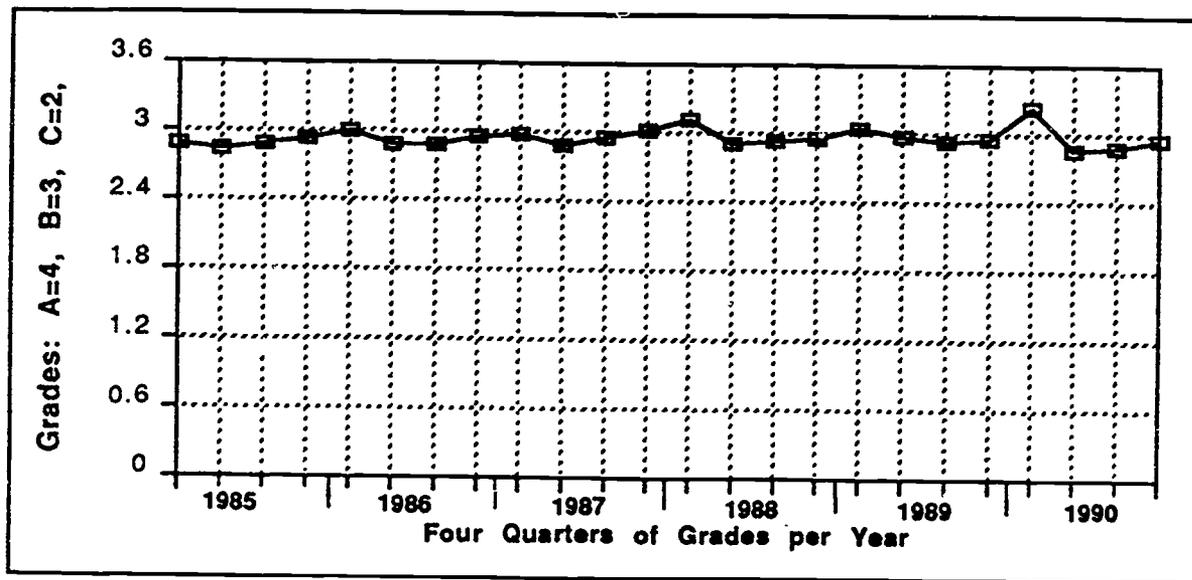
Students with an overall GPA of 3.0 to 3.4 receive an Associate Degree or Diploma with Distinction. A degree or diploma with High Distinction is awarded for a GPA of 3.5 or higher. Students in associate degree or vocational programs who take 12 credits or more can be named to the quarterly honor list for having a GPA of at least 3.0 in a quarter.

Approximately 60 percent of WWTC's graduates receive Honors or High Honors recognition at the time of their graduation. Figure 15 shows the quarterly grade point

averages for full-time students over a five-year period. Students consistently maintain a B average.

FIGURE 15

### GPA's for Full-Time Students (excluding GOAL and Undecided Programs)



### Student Organizations

Over 400 Western Wisconsin Technical College students are active each year in professional clubs and organizations on campus. Each organization is represented by primary officers (president, vice president, secretary, treasurer) as well as committee chairpersons. These organizations provide opportunities for students to develop leadership skills, occupation-related skills and professionalism.

The following major clubs and organizations are recognized at WWTC:

- Business Professionals of America (BPA)
- Health Occupations Students of America (HOSA)
- Postsecondary Agriculture Students (PAS)
- Student Nurses Association (SNA)
- Vocational Industrial Clubs of America (VICA)
- Wisconsin Home Economics—Related Student Organizations (WHE/RSO)
- Wisconsin Marketing and Management Association (WMMA, previously called Distributive Education Clubs of America or DECA)

Each major organization has several subunits, making a total of 23 clubs. In addition, there are three independent clubs. They are: Veterans, International Students, and Police Science.

## Honors and Awards

A student's success or achievement can also be measured by his or her participation in extracurricular activities and assumption of leadership roles.

Student members of clubs and organizations regularly compete in skills mastery contests at the state and national levels. Acknowledgment of achievements are published locally as well as on the state and national levels. Also, student awards, recognition, and achievement are reported to the Wisconsin Board of VTAE as part of the Annual Evaluation Report. [See Exhibit 125]

In June 1990, three students won first place in national competition. Patrick Splinter (HOSA) won the first place gold medal in the medical laboratory competition in Orlando, Florida, having placed second in 1989. Jeffrey Hankey (VICA) won the first place medal in the auto mechanics national skill Olympic competition in Tulsa, Oklahoma. Karen Clean (WMMA) won first place in the apparel and accessory marketing national competition in San Jose, California, having placed among the top ten in the 1989 contest.

In 1989-1990, 21 students from a variety of organizations competed at the national level with seven placing in the top ten. At the state level, students attending the Wisconsin Health Occupations Student Association Conference received 4 first place awards. Students received 6 first place, 4 second place, and 6 third place awards at the Wisconsin Vocational Industrial Clubs of America Conference.

Leadership qualities of WWTC students are also evident. Students have held national and state offices; i.e., in 1989-90, five students held a national or state office for their respective organizations. This included one National Vice President (PAS), one State secretary (WHE/RSO), one State representative (WHE/RSO), one State President (HOSA), and one State treasurer (HOSA). In 1991 a business student was elected National President for the Business Professionals of America. Two Associate Degree Nursing students were elected to the State board of the Wisconsin Student Nurses Association and were responsible for editing the organization's State newsletter *STAT*.

Competition based on academic achievement and College involvement is held annually for the District's STAR Award. The winner, who exemplifies excellence in vocational-technical education, is a representative of the District at speaking engagements, political functions, fairs, and promotions. From 1985-1990, 26 students have been finalists for the STAR Award. The winner of this award then competes at the state level. In 1985, a WWTC student, Karen Keeffe, was named a Wisconsin State STAR Award recipient.

Annually, WWTC students are eligible and nominated to Who's Who Among Students In American Junior Colleges. Between 1980 and 1990, a total of 365 students were nominated which averages more than 36 students per year.

Recognition banquets are held annually to acknowledge student success. Included are formal athletic, scholarship and student organization awards banquets.

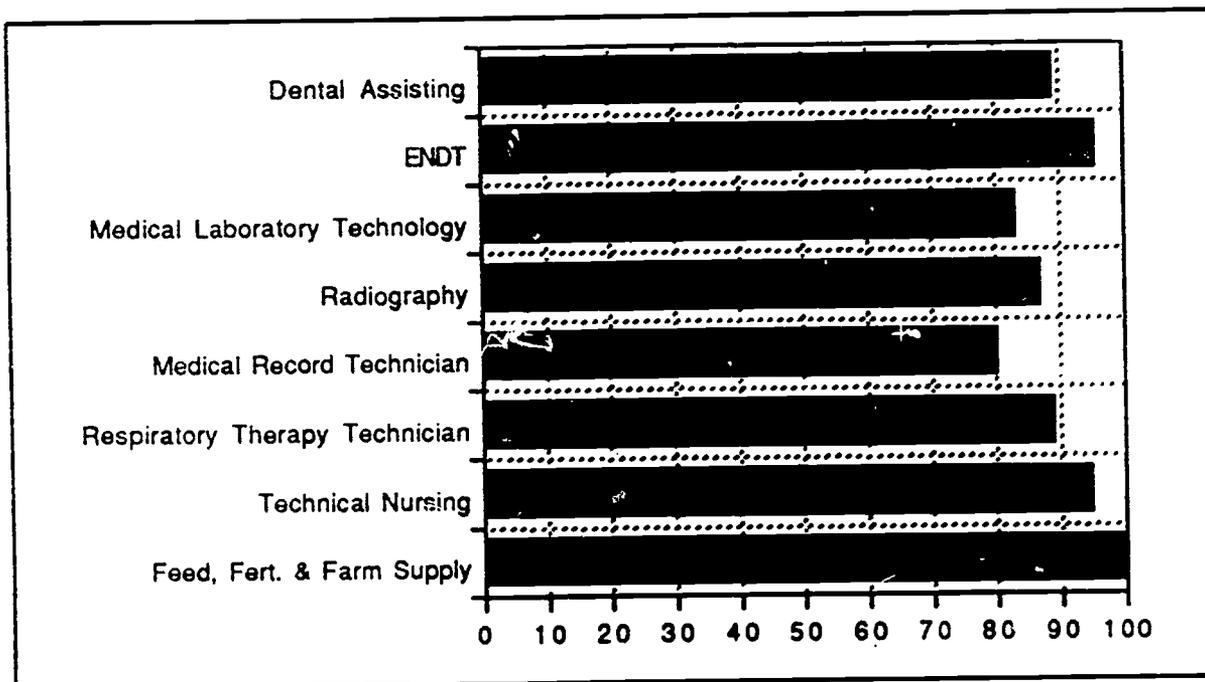
## Certification Licensure Examinations

Students in several programs are required to pass stringent certification licensure examinations administered by outside agencies before they are allowed to practice in the job market. Other programs do not require licensure for employment, but students may choose to take examination as a means of evaluating their expertise in a particular area. For the 1988-90 school years, 76 percent of these graduates elected to take the certification licensure examinations. [See Exhibit 107]

WWTC graduates have consistently done well on both compulsory and voluntary certification examinations as illustrated by the graphs in Figures 16, 17 and 18. For example, the State of Wisconsin Nursing Exam (NCLEX) statistics show that in the last five years an average 94.4 percent of graduates of the Associate Degree Nursing Program successfully passed the exam compared to the of 91.6 percent average for Wisconsin and the national average of 91.5 percent. These statistics indicate that WWTC nursing graduates are above both the Wisconsin and National percentages.

FIGURE 16

Composite Average Success Rate for  
Some Programs over the Last Five Years  
(Percent Passing Exam/Test).



**INSTITUTIONAL EFFECTIVENESS...THE NEXT STEPS**

**RESULTS OF INTER-RELATIONSHIP DIAGRAM  
ON THE MAJOR CATEGORIES OF CRITICAL ISSUES  
AT WESTERN WISCONSIN TECHNICAL COLLEGE**

**INFLUENCERS**

1. District Vision
2. Customer-focus
3. Teaching/Learning
4. Fiscal Resources
5. Staffing
6. Technology
7. Organizational Structure
8. Physical Resources

**INFLUENCED BY**

1. Physical Resources
2. Organizational Structure
3. Technology
4. Staffing
5. Fiscal
6. Teaching/Learning
7. Customer Focus
8. Leadership

## STRATEGIC GOALS FOR MAJOR ISSUES

- MAJOR ISSUE "1" - District Vision
- STRATEGIC GOAL - Create, clarify and communicate a Vision for the college.
- 
- MAJOR ISSUE "2" - Customer Focus
- STRATEGIC GOAL - Incorporate customer needs in the design of all college systems, produces and services (focuses on awareness and changing the college attitude toward customer services).
- 
- MAJOR ISSUE "3" - Teaching/Learning
- STRATEGIC GOAL - Establish a faculty-driven model that identifies and integrates key program success factors developed as part of the Statewide Institutional Effectiveness Model and enhances a climate of continuous quality improvement.
- 
- MAJOR ISSUE "4" - Fiscal Resources
- STRATEGIC GOAL - Design and implement a proactive system of financial resource development and allocation that includes quarterly reviews, staff education, grant reviews, and a two-year budget plan.

- MAJOR ISSUE "5" - Staff
- STRATEGIC GOAL - Create a leadership development corps which provides opportunities for clerical/technical and faculty/ managers to receive interim work experience, and to receive specialized training and opportunities for advancement.
- MAJOR ISSUE "6" - Technology
- STRATEGIC GOAL - Improve the system of current technology acquisition to insure each is based on customer needs and effectiveness indicators and emphasizes training and utilization.
- MAJOR ISSUE "7" - Organizational Structure
- STRATEGIC GOAL - Identify a work group(s) to analyze work processes and their components, and to examine ways to realign resources to support the in order to adhere to the college vision.
- MAJOR ISSUE "8" - Physical Resources
- STRATEGIC GOAL - Expand the Master Plan process to maximize utilization through improved scheduling, development of flexible space, and meeting customer needs.