

BADGER INNOVATION-WHERE DATA AND PEOPLE MEET

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Overview

The Wisconsin Technical College (WTC) System, consisting of 16 technical colleges, transitioned its statewide monitoring/reporting system for college programs (or services) into a quality improvement process between 2001 and 2007. The overall process includes performance scorecards, self-study activities, and an innovative web tool to report the analysis of organizational performance and action plans related to improvement. The tool enables colleges to track the results of their action plans as well as share information about best practices and future trends. The unique web tool enables thousands of staff access to data, reports, and quality improvement information from their college and other colleges.

Introduction/Background

The Wisconsin Technical College (WTC) System provides educational services to the public and citizens in various technical occupations. The System responds to the needs of our communities by bringing students, employers and jobs together. The systems' 16 colleges equip students and graduates with real world, hands-on experience they can apply to specific occupations that provide us all with security and quality of life. Wisconsin technical colleges stimulate local economic development by providing a well-educated workforce based on the occupational needs of local business and industry. From biotech to electronics to health care to public safety – great paying jobs await technical college students and graduates that are in demand.

The 16 colleges offer more than 300 programs related to:

- Two-year associate degrees
- One and two-year technical diplomas
- Short term technical certificates (nine months or less)
- Customized training and technical assistance (direct to business and industry)

State statutes require the colleges to evaluate educational programs and services at least once every five years. The college has the option to conduct the quality review on a more frequent basis. A college's role is to plan and implement the evaluation (quality review) within the scope of the college's activities. Multiple roles of the System Office include providing data, a web reporting tool and managing a core strategy of evaluation activities on a statewide basis.

Each quality review (evaluation) must be reported in the web tool entitled the Quality Review Process Data System (QRPDS). College staff enter background and qualitative (not statistical data) information about the quality review. Extensive reports are available to

thousands of staff on a 24 hour/7 day basis via a web tool. A major output is a summary report describing the college's analysis and research as well as improvement plan/results.

During the 1990's colleges and the System Office used a paper monitoring and reporting model to evaluate each program. Colleges provided large (200-300 page) printed documents summarizing their activities and conclusions. The model had limited use due to the paper format. It was a major work assignment to write, word-process, and report to the System Office. The process posed many internal problems and resulted in limited sporadic improvements. In addition, it was a static "once-every-five-years" process that was quickly forgotten until the next reporting deadline.

Wisconsin's Quality Review Process supports a philosophy of strengthening organizational excellence, by:

- Helping improve overall organizational performance practices and capabilities;
- Facilitating communication and sharing of best practices information among colleges;
- Serving as a working tool for understanding and managing performance;
- Developing a guide for further planning and staff development;
- Creating a data tool that supports rapid change and flexibility; and
- Fostering and documenting innovations developed by colleges.

New Evaluation Model

The new model entitled the Quality Review Process is a joint partnership between Wisconsin's 16 technical colleges and the WTC System Office (state level). The review is focused on programs and not courses or instructional staff. This new model puts deans, associate deans, and service administrators/managers in a more active leadership role than the previous process did. They are now clearly "process owners".

The WTC System Office and colleges began a collaborative process of transitioning Program Evaluation requirements in the spring of 2001. An advisory committee of six colleges was involved in the design of the Quality Review Process (QRP) model and the new web tool. As the result, the QRP was developed into a "self-study" model for use by college staff. The process is different because it integrates quality improvement concepts into discussions about educational programs and support services. The foundation of the QRP is a continuous improvement process (Plan, Do, Check, Act) that occurs on a continual basis.

The QRP process is aligned with the Baldrige National Quality Program and the Academic Quality Improvement Process (AQIP) project of the Higher Learning Commission. Twelve (12) out of 16 technical colleges participate in the AQIP project to obtain their accreditation from the Higher Learning Commission. Both the QRP and AQIP support the use of longitudinal and segmented data for continuous improvement activities. They both support conversations related to quality issues. The QRP process does not include direct measures of student learning.

A comparison of the attributes of the past evaluation model to the QRP Model is summarized below:

Past Evaluation Model	QRP Model
<ul style="list-style-type: none"> - Compliance-driven - Institution-focused - Based on an inspection cycle - Focused on conformance to a model - Program evaluation is perceived to be a few people's job 	<ul style="list-style-type: none"> - Results-driven - Program and customer focused - Based on continuous improvement - Focused on systems and improvement -Evaluation has a wider ownership by college staff

The QRP also aligns with the strategic planning activities currently used in the technical colleges (Plan, Review, Study, and Adjust). Another component of the QRP model is the statewide benchmarks for quality indicators. So colleges can compare programs on a statewide basis. Colleges are also able to develop an archive of best practices so they can recognize and share successes with other colleges.

Common Goal

In 2000, the WTC System Office charged the colleges to develop a common, standard web tool to support evaluation activities and leverage information about best practices between colleges. The colleges developed and now use a web-based software tool which supports administrative activities associated with quality improvement and evaluation.

The QRP enabled the WTC System Office and individual colleges to make a shift from collecting and reviewing data, paper reports (static process) to using data to guide performance improvement. Essential to this new process is a critical analysis of data to determine the cause of performance gaps as well as identify and evaluate strategies to improve performance.

The QRP is a quality tool for:

- WTC System Office staff
- College executive staff
- College evaluation directors
- College research directors
- Instructional staff
- Others

The WTC System Office has a statewide student and course data reporting system entitled the Client Reporting System. It collects a comprehensive amount of student, course, program, and grant data. When analyzed it can assist educators and stakeholders to understand what drives "success" in their college. Ten years of data is available for reports and trend analysis.

By identifying and analyzing quantitative data in conjunction with a discussion of quality improvement, program improvements are expected on an annual basis. The process strives to include as many types of data as possible for measurement, management and improvement. While the WTC System Office provides comparative data on programs statewide for benchmarking, each college can establish its own set of indicators based on strategic planning goals.

Quality Review Process-Purpose

The purpose of the QRP is to:

- Identify factors of program/service quality through quantitative and qualitative analysis
- Facilitate program/service continuous improvement through data based decisions
- Innovate programs by anticipating future trends
- Identify and prioritize state and local planning, staff development and use resources
- Ensure responsiveness and accountability to customers and stakeholders
- Improve overall organizational performance practices and capabilities;
- Facilitate communication and sharing of best practices information through the Internet
- Foster and document innovations developed by colleges.

There are eight types of quality reviews:

- Educational Programs
- Apprenticeships
- Adult Basic Education
- Adult Secondary Education
- Development/Remedial
- English as a Second Language (ESL)
- General Education
- Liberal Arts Transfer

The System Office is able to use milestones to manage the completion of three major phases related to each evaluation: 1) Program Profile, 2) Analysis Summary, and 3) Improvement Plan. This “manage by milestone” strategy is taken from project management concepts.

At the completion of a quality review, colleges are expected to report on:

- Program Profile (Outcomes, # of courses, team members)
- Analysis Summary
- Improvement Plans
- Future trends
- Best practices
- Innovations
- Annual Update of Programs with Improvements

These components are developed into a library of information within a web tool for use in the ongoing Quality Review Process. The reporting system is designed to display data related to areas targeted for improvement. These strategies are then formulated into an improvement plan which is tracked annually and used to document the results of the improvement initiatives.

New Web Tool

The WTC System Office implemented the web-based data collection/reporting tool in December 2004 for use by all colleges for eight (8) types of quality reviews. The web tool provides an opportunity for the System Office to structure the core components of the quality review and still allow for flexibility between colleges and different types of quality reviews. The web tool is entitled the Quality Review Process Data System (QRPDS). It consists of a mainframe database, integrated enterprise reporting software, and web forms. It is used for collecting both qualitative and quantitative information.

The web tool has three main functions:

1. Data collection from the colleges
2. Data reporting to the colleges
3. Manage the statewide quality review process by milestones

The web tool is available to all WTCS staff via the Internet (See below.). The various job categories include Vice Presidents, Deans, Associate Deans, and professional staff from quality improvement and research areas as well as instructional and support service areas. Each user needs a security account established by the System Office prior to using the web tool and reports. A computer and an internet browser are needed to access the reports. No other special software is needed.

The benefits of the web tool include:

- Providing Presidents, Vice Presidents and Deans with a data tool that goes beyond basic data reporting so they can conduct more effective management oversight of quality reviews
- Providing a web resource for instructional & service staff to learn from other colleges
- Increasing efficiency by using a common data reporting tool
- Supporting colleges' continuous improvement initiatives related to accreditation
- More effectively demonstrating the System's accountability to public policy makers

College-Wide Model

Essential to the success of the Quality Review Process is a college-wide effort and culture that develops, manages, supports and sustains a continual improvement process. Within its culture, each college institutes a plan which has eleven basic steps. As colleges move through the process, there are QRP steps which will occur simultaneously with the college-wide planning process-especially steps 5-11 listed below.

11-Step Model

The following 11 steps are a basic model for conducting a quality improvement review. Colleges have the option to supplement this model and conduct a more comprehensive review than the components required by the WTC System Office.

PLAN – Getting Organized

1. College internally schedules a program or service to review
2. Launch quality review teams and plan the review process

REVIEW - What Needs Improvement?

3. Create a Program Profile in QRPDS
4. Analyze Scorecards and related indicators in QRPDS

STUDY- What Should be Done to Improve?

5. Conduct research about causes, impacts, and trends related to indicators
6. Conduct quality review activities
7. Create an Analysis Summary in QRPDS
8. Create an Improvement Plan in QRPDS

ADJUST-What Are the Results?

9. Implement the Improvement Plan
10. Monitor Improvement Plans and record results in QRPDS
11. Evaluate Process and Adjust Program or Service

Note: This process is followed up on an annual basis to track improvements and sustain continuous improvement.

Quality Review Team

The quality review team process begins with the annual review of the scorecard (Step 4) and proceeds through the remainder of the steps. If a program is beginning a QRP process, all of the steps are followed to examine the program. The quality review team analyzes the scorecard (and indicators), identifies areas for improvement, develops solutions for improvement, and creates the improvement plan. Improvement plans are always targeted to specific indicators. In subsequent years, the scorecard results and improvements are monitored for impact and adjustments are made as needed. The span of time between steps 3 through 11 may be between 12 – 24 months.

Quality Review Process Scorecards

Scorecards include state, college and program level indicators related to each type of evaluation. Each Scorecard includes a minimum of 10 state level indicators and applies to all programs within an evaluation type. Indicators are based on priorities of the college, state system, and strategic directions related to federal grant requirements. Identified priorities such as course completion rates have consistent data available annually on a statewide basis through the Client Reporting System (CRS).

Data comparisons within a program or service are made through a system of:

- Thresholds
- Targets
- Actual Performance

A threshold level (percent) has been established for each indicator that is the lowest acceptable level of performance (calculated as the average performance of the four lowest performing programs). The target level (percent) represents a preferred level of attainable performance (the average performance of the four highest performing programs). Adjustments to the threshold and target calculations are made when less than 10 colleges have less than 10 students in the program. Actual performance data is presented as a percent.

The scorecard allows colleges to compare similar programs across the state. The establishment of a threshold and target for each indicator gives a college the opportunity to see where their program stands in relation to other colleges. This assists the program in benchmarking as well as seeking best practice information from high performers.

For programs offered by less than ten colleges, the Scorecard uses a different calculation for threshold and targets. For these programs, a comparison strategy is used between the regular (4 college) calculation and a division wide calculation. The division wide (all programs) calculation averages the previous three years for all programs within that division. The two calculations are compared against each other. The lower of the two is used for thresholds and the higher of the two is used for targets. Under this approach, a program is comparing its performance against others with the division (statewide).

The original performance data from CRS is normalized using a linear transformation formula to arrive at the scorecard chart. This process equalizes all of the thresholds at 50 and targets at 100, placing the actual performance at the appropriate range between the two. The normalization process makes it possible to compare the level of performance on all indicators from an equal perspective. Colleges provide their own data to the System Office for reporting on Scorecards without edits performed by CRS.

Indicators-Overview

The QRP model includes three levels of indicators-state, college, and program. The total number applied by a college can vary based on their option. Most evaluations use from 12 to 14 indicators for measurement purposes. A summary of two colleges and the use of their options are described in the table below.

Accounting-College A		Accounting-College B	
10	State Level Indicators (required)	10	State Level Indicators (required)
2	College Level Indicators (optional)	2	College Level Indicators (optional)
0	Program Level Indicators (optional)	2	Program Level Indicators (optional)
12	Total Number of Indicators	14	Total Number of Indicators

State Level Indicators

The System Office defines the type and number of state level indicators used by each type of quality review. The number of indicators varies from 10 to 23 different measurements. State level indicators apply to all colleges and their programs and sub programs.

Examples of State Level Indicators

Evaluation Type	# of Indicators	Example
Educational Programs	10 Indicators	% Course Completion
Apprenticeship	10 Indicators	% Apprentice Retention in Paid Instruction (Semester to Semester)
Adult Basic Education	11 Indicators	ABE-One Year Math Gains
Adult Secondary Education	15 Indicators	ASE-One Year Math Gains
Development/Remedial	13 Indicators	Pass Rate for General Studies Students Taking Remedial
English as a Second Language (ESL)	14 Indicators	Writing/Grammar Learning Gains
General Education	10 Indicators	% Course Completion AAS All General Studies
Liberal Arts Transfer	23 Indicators	% Special Populations Course Completion

College Level Indicators

Colleges are allowed to add up to eight optional college level indicators to the scorecard. These are added to the 10 state level indicators to create a scorecard. The number of college level indicators is determined by the type of quality review and is at the college's discretion. College level indicators apply to all programs within a single college. Other colleges may or may not have similar indicators. All users can view information about the college indicators.

Indicator Example: Student Satisfaction

Program Level Indicators

Colleges are allowed to add up to two optional program level indicators to the scorecard. These are added to the state and college level indicators. The number of program level indicators is determined by the type of quality review and the college's discretion. Program level indicators apply to a designated program within a college. Other programs within the college may or may not have similar indicators.

Example: Non Traditional Occupation (NTO) Recruitment

General Resources

The resources listed on the next page can be found at the WTC System Office Web Site: <http://systematic.wtcsystem.org/qrp/>.

- Access to the Quality Review Process Data System (QRPDS)
- Access to the COGNOS Reports and Scorecards
- Data Definitions and Calculations of Indicators
- Calculation of Thresholds and Targets
- QRPDS User Guide (Step by Step Instructions)
- WTCS Evaluation Model
- QRP Supplemental Reports
- Program Data Sheet (Hard data-Numerators and Denominators)
- QRP Indicators Listing
- QRPDS User List (Users in Security System)
- QRPDS On-line Tutorials

Database Tools

- 2 File Servers, SQL Databases, Java Script-Open Code
- COGNOS Software Suite – Version 7

Information Technology Support-Development & Maintenance

Aquent, Inc. Moline, IL (Regional Office)

Project Manager: Mr. Rana Kundu

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Biographical Information

Roe Parker works as a Planning Analysis Administrator for the Wisconsin Technical College System. His job duties include Quality Review Process Project Manager and administrator of the \$1 million Workforce Advancement Training grants. Roe has also worked as educator and manager for the Wisconsin Departments of Health and Family Services and Workforce Development. His contact information is:

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References

Baldridge National Quality Program; <http://www.quality.nist.gov/>.

Higher Learning Commission, Academic Quality Improvement Process (AQIP) project;
<http://www.aqip.org/>.

Wisconsin Technical College System - State Level Indicator Summary

	Metric	Description	Calculation (business terms)	Exceptions / Special Cases
C200	Course Completion	Percentage of students in a program who completed at least 80% of the courses they took the previous year	<ul style="list-style-type: none"> - Retrieves a list of students in previous year for the program - for each student, identify the courses they enrolled in and whether they completed it - Calculate student course completion = # of courses completed / no. of courses enrolled - Count # of students where course completion >= 80% (x) - Calculate Metric = x / #of students enrolled 	A student could be in the program with no courses taken that year and would have a zero course completion. These students should be disregarded.
C400	Special Population Course Completion	Same as all student course completion. QRPDS defines special population students as single parents, displaced homemakers, nontraditional for gender (NTO), students with disabilities, economically disadvantaged, academically disadvantaged, and Limited English students	Selects unduplicated special population students and count them. Proceed as for all students.	A program with no special population students is reported as zero. Some other "no special pop student" designation could be created.
C600	Minority Student Course Completion	Same as all student course completion for students that are African American, Asian, Hispanic, Pacific Islander, or American Indian	Selects unduplicated minority students and proceed as for all students	A program with no minority students is reported as zero. Some other "no students" designation could be created.
F200	Second Year Retention	Percentage of first-time students still enrolled or graduated from the program in two years based upon the most current record for the program.	<ul style="list-style-type: none"> -Creates a list of first time students in the program two years prior to the most current year. -First-time students are students that have not been enrolled in any program in the previous four years. Qualifying Programs are those with aid code 10, 20, 20, 31, 32, 50. -Counts the students in the most current year that were on the first time student list that are still enrolled in the program in the current year. 	All of the first-time-in-a-program cohorts currently do not count as a student the second time when they show up in a new program in years two, three, or four. This is a problem and a process that looks at the program, then the students might overcome this and the second program could capture that student as first time in that program as well.
F400	Third Year Retention	Percent of first-time students still enrolled or graduated from the program in three years based upon the most current record for the program.	<ul style="list-style-type: none"> -Creates a list of first time-students in the program three years prior to the most current year. - First-time students are students that have not been enrolled in any program in the previous four years. Qualifying Programs are those with aid code in ("10","20","30","31","32","50") - Count the students in the most current year that were on the first time student list that are still enrolled in the program or have graduated from the program in the current year. 	

	Metric	Description	Calculation (business terms)	Exceptions / Special Cases
F600	Third Year Graduation	Percent of first-time students graduating from the program in three years based upon the most current record for the program.	<p>Creates a list of first-time students in the program three years prior to the most current year.</p> <ul style="list-style-type: none"> -First-time students are students that have not been enrolled in any program in the previous four years. Qualifying Programs are those with aid code in ("10","20","30","31","32","50") - Count the students in the most current year that were on the first time student list that have graduated from the program in the current year. 	
F800	Fifth Year Graduation	Percent of first-time students graduating from the program in five years based upon the most current record for the program.	<p>Create a list of first time-students in the program five years prior to the most current year.</p> <ul style="list-style-type: none"> - First-time students are students that have not been enrolled in any program in the previous four years. Qualifying Programs are those with aid code in ("10","20","30","31","32","50") - Count the students in the most current year that were on the first time student list that have graduated from the program in the current year. 	A program with no graduates is reported as zero. Some other "no graduates" designation could be created.
I300	Job Placement-All Employment	Percent of most recent graduates responding to the graduate follow-up survey, in the labor market and report employment.	Select the program from the graduate follow up database for most current year. <ul style="list-style-type: none"> -Subtract the respondents that reported they were not in the labor market. -Select the respondents that state they were employed. 	A program with no graduates is reported as zero. Some other "no graduates" designation could be created.
I600	Job Placement - Related Employment	Percent of most recent graduates responding to the graduate follow-up survey, in the labor market and report training related employment.	Select the program from the graduate follow up database for most current year. <ul style="list-style-type: none"> -Subtract the respondents that reported they were not in the labor market. -Select the respondents that state they were employed in jobs related to their training. 	A program with no graduates is reported as zero. Some other "no graduates" designation could be created.
J500	Non-traditional Gender	Percent of students in the program that are of a gender designated as "nontraditional" for the occupation. This will be N/A for some programs.	Check the program number against the list of NTO programs -if the program is on the list not if male or female is the nontraditional gender - using current year data, calculate the percent of the nontraditional gender as enrollment/headcount	Programs not on the NTO program list are recorded as zero for this category. Some other "not applicable" category could be used.