Central Community College
October 23, 2009

**Category 7: Measuring Effectiveness**

<u>**7P1 How Central Community College (CCC) Measures the Effectiveness of Data Collection,**</u>
<u>**Processing, Storage and Distribution**</u>
Central Community College uses Colleague as a centralized data collection and retrieval system for
information relating to students, human resources, and financial services. The data collected is defined
as necessary by internal stakeholders and internal and external reporting requirements. The Colleague
system provides a common data base for all student and financial records. Figure 7P1-1 describes the
types of data inputs and outputs processed through the Colleague system.

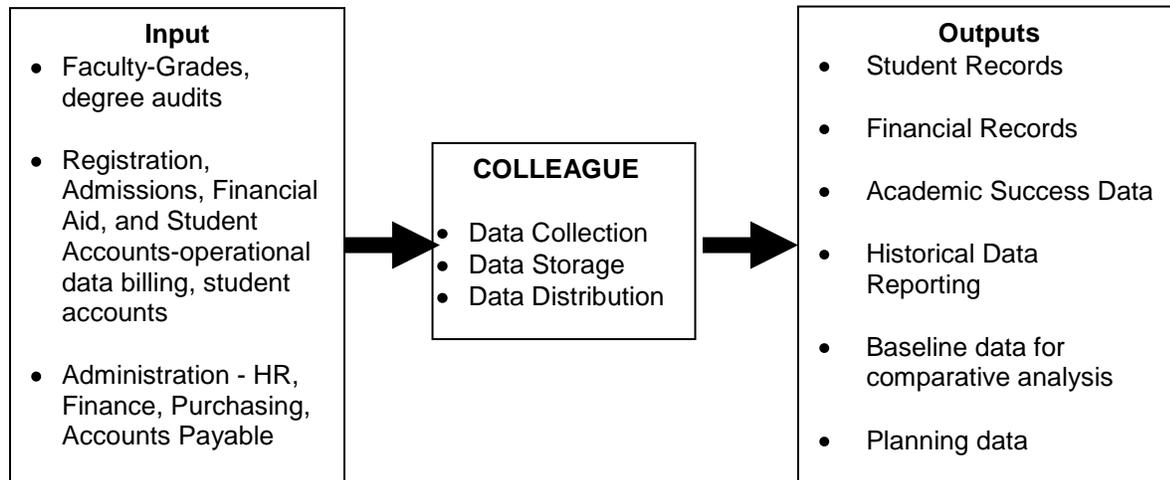| Input | COLLEAGUE | Outputs |
|---|---|---|
| • Faculty-Grades, degree audits | | • Student Records |
| | | • Financial Records |
| • Registration, Admissions, Financial Aid, and Student Accounts-operational data billing, student accounts | • Data Collection <br> • Data Storage <br> • Data Distribution | • Academic Success Data <br><br> • Historical Data Reporting |
| | | • Baseline data for comparative analysis |
| • Administration - HR, Finance, Purchasing, Accounts Payable | | • Planning data |

Figure 7P1-1

Shown above, the Colleague system serves as the data warehouse for the College. To effectively use the
data, the system has the ability to retrieve and distribute the data collected. The data distribution system
is somewhat more diverse in its structure. Based on their needs, requesting stakeholders may access
data in multiple ways. The type of data requested determines, in most cases, who should approve access
to the needed information. The College is also in the process of developing a SharePoint system that will
provide data users increased access to commonly used data and reports.

If required data is not available on Colleague or in a department specific database, the College has
access to multiple external databases that improve the scope of the data available to decision makers.
CCC accesses information from multiple databases including the following:

- National Student Clearing House (NSCH) – student migration and persistence data
- EMSI -CC Benefits – socioeconomic impact, occupational forecasting, and demographic data
- Community College Survey of Student Engagement (CCSSE) – comparison data on student satisfaction factors
- Community College Faculty Survey of Student Engagement (CCFSSE) – comparison data on student satisfaction factors
- Community College Benchmark Project (CCBP) and the Kansas Study– comparison data on key performance data of similar two year colleges in the central United States
- Nebraska Department of Education – demographic data on high school students
- The Nebraska Coordinating Commission for Postsecondary Education – comparison of performance data on other Nebraska postsecondary institutions

To assist in the process of distributing data to decision makers, the College developed the Institutional
Research Department (IR). This two-person department is tasked to provide assistance to all internal

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stakeholders on data collection and reporting issues.   The IR department works with the Information Technology Services department to compile required data to meet customer needs.

CCC continues to evolve its data management systems based on both internal and external requirements and the clear existence of a need for data.  Since 2002, the College has had three different action projects designed to improve data-based decision-making and improve access to data for all key stakeholders.  The list below outlines the basic requirements that data must meet to be selected for ongoing tracking and integration into college planning and reporting processes:

- Meets a requirement for national level reporting
- Meets a requirement for state level reporting
- Assists in defining processes associated with current or proposed quality improvement projects or campaign
- Assists in defining the performance of systems supporting College mission, vision, objectives, and goals
- Assists in defining the current or potential state of processes or systems within the College that have the potential for improvement and can positively impact the College's stakeholders

During the development of its measures, the College collects input from its internal and external stakeholders to define the need for new measures. Once the College selects a measure, it is used in one of four primary ways:

- College level short, mid-range, and long-range planning
- Campus- and department-level planning and process monitoring
- Quality Improvement activities including action projects and grants projects
- Support for the improvement of teaching and student learning

To support this process, the College President and the College Cabinet lead the College in using data to define improvement actions.  Various College committees, councils, teams, and individuals identify specific performance measures and establish standards related to improving processes. Additionally, in the past three years the College has conducted an improvement project to revise the College-level planning process.  The College is currently conducting its strategic planning in 2009-2010 and the use of data in the planning process is key to a successful outcome.

**7P2. How CCC Selects, Manages, and Distributes Data and Performance Information to Support Planning and Improvement Efforts**
As new processes are developed or as the College revises an existing measure, a quality improvement team is usually put in charge of interpreting the need and making recommendations on the selection of any new measures.  At other times a department responsible for the process in question can request new data be collected in support of a specific need from the Institutional Research or Information Technology Services departments.

One of the College's recent quality action projects focused on improving internal communications of faculty and staff.   Included in this project were steps intended to improve the distribution of the data that informs the College's decision-making processes.  Unlike the past where data collection and distribution largely focused on supporting internal and external reporting processes, new process- specific measures are regularly collected, summarized and distributed to both internal and external stakeholders. Several methods are used to distribute data including reports on the college web pages, direct email, reports on the SharePoint system, hard copy distribution and presentations at campus and college meetings.

At this time recommendations for new data collection, distribution processes, or data uses can come from a number of standing bodies including the Continuous Quality Improvement Team, Educational Services Team, College or Campus Cabinet, or any department/section.  An example of this includes measures

and distribution systems developed as a result of feedback collected during recent employee satisfaction and communications surveys and recommendations from current and past quality improvement teams. The College has implemented, or is in the process of implementing, the following college-wide actions in support of expanding data collection and distribution:

- Deploying a system of non-academic Key Performance Indicators
- Developing a communication system to distribute Key Performance Indicators data to internal and external stakeholders
- Developing shared folders in Outlook (posting in SharePoint-2009/10) for posting critical data such as the results of the Employee Issues/ Satisfaction Survey
- Posting Quality Improvement Council and other action teams updates on improvement actions
- Re-developing the College Dashboard to show results for key performance indicators for both academic and non-academic areas (2010)
- Implementing performance monitoring tools for key decision-making committees
- Utilization of Blackboard Course Management and Delivery System
- Deploying student and employee services via the CCC Web Portal
- Deploying Microsoft SharePoint Application
- Increasing the capabilities of the college-wide wireless network

### 7P3. How CCC Determines Departmental Needs and Units Related to the Collection, Storage, and Accessibility of Data and Performance Information

As stated in 7P1, CCC determines data needs based on internal or external reporting, College planning, or quality improvement needs.  Over the past three years, the College has participated in multiple (See Figure 7P3-1) national and state level standardized studies that provide the College with directly comparable data. The requirements for comparative data are nearly identical to those listed in section 7P1.  The two key differences include the need for the data to be collected in an identical fashion at all participating institutions, and that the institutions or organizations participating in the study must have similar characteristics for comparison.  The College ties currently collected comparative data to key measurements in the College performance indicators and quantifies aspects of the College's mission and vision.  The College categorizes its comparative data into four primary groups:

- Internal comparisons – FTE, headcount, completions, trends analysis, etc.
- State peer data – headcount, awards given, migration to and from other institutions, etc.
- National peer data - Department of Education reports, National Study of Faculty and Students, etc.
- Direct data from College program advisory boards, industry sources, the president's advisory groups, etc.

The figure below shows the major comparative data studies in which CCC participates:

| CCC Comparative Data | | |
|---|---|---|
| **Status** | **Data Profile/Name** | **Data Category** |
| 2002-Current | Community College Survey of Student Engagement (Community College Faculty Survey of Student Engagement | National peer and state peer (Consortium) |
| Current | Faces of the Future | National comparison |
| 2003-Current | National Survey of Faculty and Staff | National comparison |
| 1978-Current | Program Advisory Committees | Direct data from college advisory boards |
| 2002-Current | Employee Issues Survey (Employee Engagement Survey – New 2009) | Internal comparisons/trends analysis |
| Ongoing | IPEDS | National and state peers |
| Ongoing | NEEDS | State peer data |
| 2003-Current | Community College Benchmark Project | State and national peers |
| 2004-Current | Legislative Student Migration Report | State migration/ collaboration study |

Figure 7P3-1

## 7P4. How CCC Analyzes and Shares Information Regarding Overall Performance

CCC outlines its primary methods for analyzing overall performance data in the College planning process (See Category 5). The first step of this planning process defines the current state of the system in question by analyzing data from currently tracked measures of performance.

The bulk of the data analyzed comes from the College's Key Performance Indicators or externally mandated performance measure. The design of these documents uses performance standards identified as widely accepted measures of performance and reflects performance trends over multiple years. Figure 7P4-1 displays various data groupings and the types of analysis used to compare each against institutional standards.

| Analysis Techniques | |
|---|---|
| Analysis Technique | Representative Measure/Data Set |
| Trend analysis | Enrollment, FTE, program awards, etc. |
| Gap analysis | Employee Engagement Survey |
| Distribution analysis | Math completion rates, population studies |
| Point in time analysis | CLARUS marketing study |
| Design of experiments and hypothesis testing | College Black and Green Belt Six Sigma Projects – Motor Pool optimization project |
| Comparative analysis | National and state data – i.e. CCSSE |
| Projection analysis | College socioeconomic impact study |

Figure 7P4-1

To share the results of the College-level data analysis, CCC distributes the information in multiple ways including web-based shared files, review of findings in small groups and campus-based meetings, monthly and annual reports, and College-wide newsletters from the Quality Improvement Team  (See Section 7P2). Additionally, 27 percent of all full-time employees and representation from the student body and part-time employees are directly involved on one or more of the College's action project teams or the Quality Improvement Council.

Additionally the systems portfolio re-writing process involves all full-time employees and allows for a great deal of data sharing.  This degree of involvement has improved the understanding of data-based decision-making processes in general and improved the internal stakeholders' understanding of the current performance of the College.  The College also publishes monthly and annual reports through the College web page, hard copies, and the College's e-mail system.

### 7P5.  How CCC Determines Priorities for Comparative Data From Outside Organizations

The need for comparative data continues to be a challenge as educational agencies use different measures of effectiveness for their unique processes.  One of the best sources of comparative data used by CCC comes from the nationally normed surveys outlined in 7P3-1.  As these surveys are standardized, the data can be compared directly and can give the College insight on how its performance compares to other institutions.  These surveys also allow the College to compare results with other institutions that have similar size, enrollment and other demographic factors.

Besides surveys, some regionally normed studies like the Community College Benchmarking Project and the Kansas Study allow for institutions to compare standardized and quantifiable measures with peers in the study.  These studies do not in all cases identify the other institution by name but by demographic profile.   These national and regional studies provide a wealth of data the College is using for planning, quality improvement, and overall performance evaluation.

### 7P6. How CCC Ensures Data and Information Alignment

CCC continually reviews its processes to determine the utility of its measures of effectiveness and to ensure acceptable completion of meaningful work. Figure 7P6-1 below provides some of the data sets used to monitor processes and systems in the college and the evaluation frequency used to determine the viability of those measures.

| Data Set | Reviewed |
|---|---|
| Student Learning Outcomes | Annually, monthly by Education Services Committee |
| Employee Engagement Survey | Annually, by College Cabinet, and the Quality Improvement Council |
| Key Performance Indicators | Ongoing Development -leadership reviewed |
| Comparative Performance Studies | Annually –IR department |
| Financial and Student Records | Annually by external auditors |

Figure 7P6-1

These checks in themselves will not ensure the data is aligned with the strategic plan or the College mission.   These review processes serve as a way to monitor if the measurement process is still effective. The primary way CCC ensures the alignment of its measures is to ensure they meet the requirements outlined in 7P1 prior to being adopted.  The Executive Vice President's office, including the Institutional Research office, provides additional monitoring of the viability of most key measures used by the College. As new measures are developed, review processes are implemented to ensure the information remains accurate and effective.  If necessary the reviewers can also identify possible new measures that may better reflect the process or system in question and better support the college mission.

### 7P7. How CCC Ensures the Timeliness, Accuracy, Reliability, and Security of Your Information Systems.

Central Community College reviews its data systems continuously. The Information Technology Services (ITS) director and the information management team continually evaluate and track the need for hardware replacement. The ITS team has developed replacement cycles for all key hardware systems. Additionally, campus- based technology teams evaluate local software and hardware upgrade needs for specific applications.  The College regularly upgrades its network, and with the acquisition of new servers and support systems, the overall capability has continued to increase to meet the expanding needs of students and college employees.  To maintain the integrity of its system, CCC considers security and

reliability paramount. The College Cabinet has committed considerable resources to safeguard the systems from hacking and intrusion.

The ITS department employs several experts whose primary responsibilities include the constant monitoring of the system for signs of tampering and the integration of software and practices that decrease the College's vulnerability.  The ITS team also collaborates with CCC's data systems provider DATATEL to ensure a high degree of security and effective data storage and retrieval.  To ensure the accuracy of the database, the College performs an annual audit to check key performance measures warehoused in the College database.  Besides ensuring security and reliability, the ITS department also acts as the primary customer service department dealing with issues of mass data distribution, systems support, and hardware support.  The IR department also assists by acting as a means for internal customers to get required data from the system.  Lastly, some departments have limited access to the data management system and can retrieve specific information provided by the limited access.   This data usually is tied to the specific function of the individual or department in question.

### 7R1-2. How CCC Collects and Analyzes Performance Measurements and Evidence of Effectiveness

CCC's effectiveness measurements of its data management system have increased as the demands on the system increases.  The measures largely have to do with the technology but the College also collects information regarding accuracy.  Several of these measures are shown Below:

| Measure |
| --- |
| Log of virus and attack activity on the system, capture rates and alarm notifications |
| 2008-09 CCC WAN  & internet bandwidth utilization **(see Figure 7R1-3)** |
| 2008-09 completed ITS managed Helpdesk requests **(see Figure 7R1-1)** |
| Network LAN/WAN uptime **(see Figure 7R1-2)** |
| Audit results of data contained in the system |
| System utilization including individual computer station utilization |

Figure 7R1-1

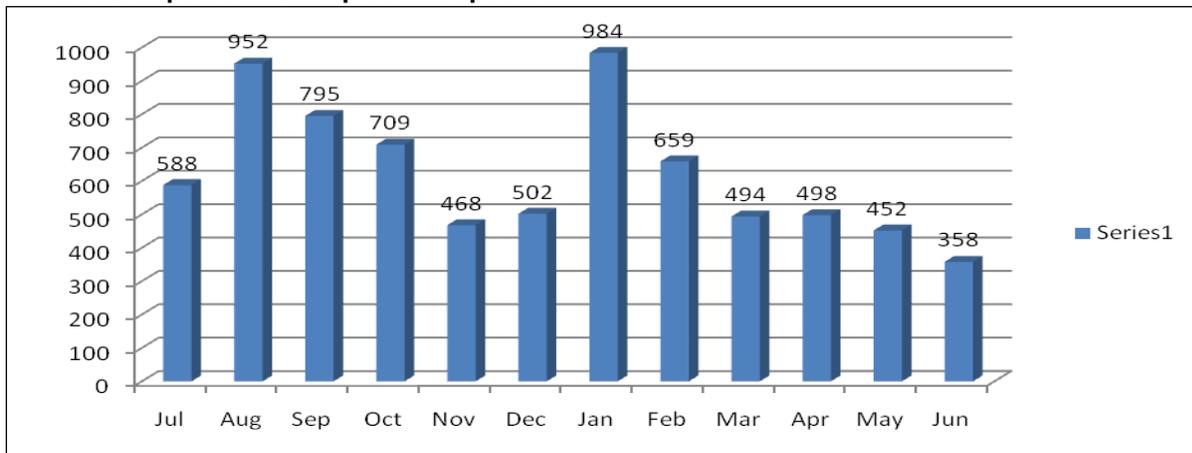**2008-09 Completed ITS Helpdesk Requests**



Figure 7R1-1

**2008-09 Network LAN/WAN Uptime**



Figure 7R1-2
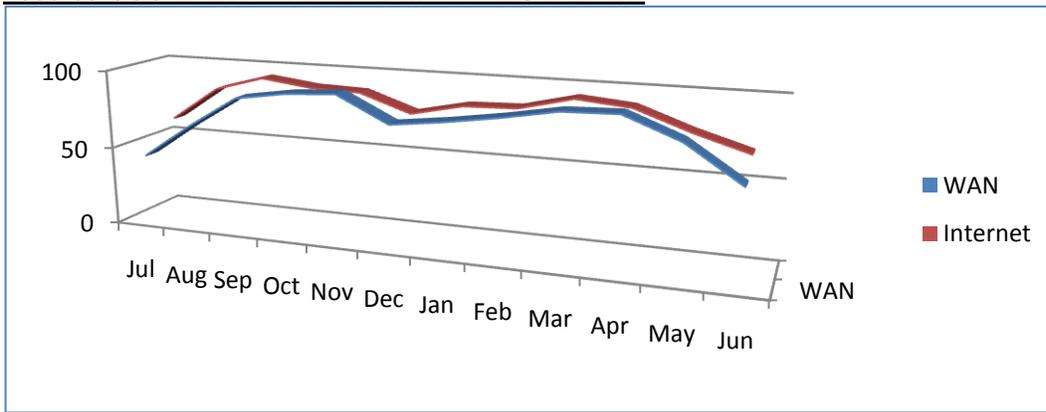
<u>**2008-09 CCC WAN & Internet Bandwidth Utilization**</u>



Figure 7R1-3

### <u>7R3. How CCC Measures the Results of  Effectiveness Compared With the Results of Other Higher Education Organizations</u>

As stated in the results sections of the other categories, CCC has access to perception data in the form of nationally normed surveys.   Table 7R3-1 represents several indicators collected in the 2009 CCSSE survey, believed to be good indicators as to the effectiveness/access of data/information  compared to peer institutions.   The College or independent functions indicated below are largely dependent on or require user access to timely and accurate information/data.

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| Item | CCC | Other Institutions participating in the study |
|---|---|---|
| **College Activities**<br>*1=low, 4=high* | | |
| Talked about career plans with an instructor or advisor | 2.17 | 2.03 |
| **Opinions About Your School**<br>*1=Very little, 2=Some, 3=Quite a bit, 4=Very much* | | |
| Helping you cope with your non-academic responsibilities (work, family, etc.) | 2.02 | 1.94 |
| Providing the financial support you need to afford your education | 2.54 | 2.43 |
| **Quality Relationships**<br>**1= unfriendly, unsupportive 7=friendly, supportive** | | |
| Relationships with administrative personnel and offices | 5.28 | 5.00 |
| **Student Services**<br>**Frequency 1=little, 2=some, 3= Quite a bit, 4=Very much**<br>**Satisfaction 0=N.A.,1=Not at all, 2=Somewhat, 3=Very** | | |
| Frequency: Academic advising/planning | 1.87 | 1.76 |
| Frequency: Financial aid advising | 1.99 | 1.81 |
| Frequency: Transfer credit assistance | 1.67 | 1.54 |
| Satisfaction: Career counseling | 1.48 | 1.43 |
| Satisfaction: Job placement assistance | 1.31 | 1.24 |
| **Educational and Personal Growth**<br>**1=Very little, 2=Some, 3=Quite a bit, 4=Very much** | | |
| Acquiring job or work-related knowledge and skills | 2.84 | 2.58 |
| Gaining information about career opportunities | 2.66 | 2.55 |

Table 7R3-1

**7I1. Recent Improvements in CCC's Measurement Processes and Systems**
Central Community College has taken several actions over the past year to improve its measurement systems:

- Hired an Institutional Research Coordinator to assist the current director in expanding data support services
- Started college-wide project to make key performance indicators more visible to internal and external stakeholders (academic and non-academic areas)
- Completed first phase of developing key performance measures for all non-academic programs
- Started the integration of the SharePoint system to increase direct access to measures and supporting data for all internal stakeholders
- Revised College web pages to include all major college report measures and all survey results (available to all stakeholders)

- Participated in both the Kansas Study and Community College Benchmarking Project to collect additional comparison data in support of day-to-day operations and the current Strategic Planning process
- Conducted the second iteration of SPARKS to assist in improving the understanding of existing performance measures

### 7I2.  How CCC's Culture and Infrastructure Aids in Setting Targets for Improvement

As stated in section 5P2, CCC uses a continuous quality improvement planning model as the primary process to develop new performance measures.  But as more employees participate in the College planning process, including SPARKS, action project teams, Strategic Planning, etc., the process of selecting new targets for improving college measures will continue to evolve.  The College has integrated three key groups to aid in setting targets for improvement in general and support quality improvement efforts directly.

The Continuous Quality Improvement Team consists of members who represent the various stakeholder constituencies in the institution. The team uses the expertise of the college stakeholders to advise and take action on opportunities for improvement. Presently, the team consists of employee stakeholder representatives, but plans are being developed to include input and representation from the student body and other community stakeholders.

http://www.cccneb.edu/igsbase/igstemplate.cfm?SRC=DB&SRCN=&GnavID=208&SnavID=388

Q**uality Improvement Teams (campaigns and projects)** consists of subject matter experts in the process or system being improved, and representation from other stakeholders who have a vested interest in changes to the system or process.   The teams usually include members from the primary full-service campuses and depending on the project from cross-functional areas in the College.

http://www.cccneb.edu/igsbase/igstemplate.cfm?SRC=DB&SRCN=&GnavID=208&SnavID=389

Strategic Planning Task Force (SPTF). is a group of 30-40 people responsible for the organization and completion of the new strategic plan. Greater than 50% of the SPTF are faculty members.  The team also consists of approximately 12-15 employees from each campus formed as a subcommittee.  Each campus subcommittee will have co-chairs, with one faculty member and one representative from administration or other employee group. These co-chairs will form the leadership team who will assist in guiding the process.