Community College Research Center
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

# Performance Accountability Systems for Community Colleges: Lessons for the Voluntary Framework of Accountability for Community Colleges

## Report to the College Board

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# EXECUTIVE SUMMARY

Policymakers, higher education associations, blue-ribbon commissions, and researchers are calling for a greater focus on institutional accountability. Thus, the American Association of Community Colleges and the Association of Community College Trustees, in partnership with the College Board, have launched an effort to develop a Voluntary Framework of Accountability (VFA) for Community Colleges to ensure that the effectiveness and contributions of these colleges are properly measured.

To facilitate the development of the VFA, the College Board commissioned the Community College Research Center (CCRC) to undertake a study that would identify the performance measures that states are already using for their community colleges, explore how well those measures articulate with the data demanded by IPEDS and the regional accrediting associations, and shed light on the experiences of state higher education officials and local community college leaders with the collection and use of state performance data. CCRC researchers therefore conducted a survey of state higher education officials and local community college leaders in 10 states and also reviewed publications by state agencies and national higher education policy organizations.

## Study Findings

### Commonly used indicators

The 10 states in CCRC's study together collect data on as many as 140 specific indicators of community college performance. The most common indicators are the following:

(1) *Input indicators*, such as total enrollments; populations served (for example, the proportion of area adults enrolled); and enrollments disaggregated by student demographics.

(2) *Process indicators*, such as tuition and fees; expenditures; faculty characteristics; and the extent of vocational, remedial, dual-enrollment, and online programming.

(3) *Output indicators*, such as rates of remedial and developmental education success; graduation from the community college; transfer to a four-year college or university; and employment after leaving the community college.

There is a relative dearth of indicators broken down by student background, particularly income, gender, age, and immigration status. This inattention to demographic breakdowns is particularly pronounced for output/outcome indicators. It is striking as well that overall student learning does not get more attention in the state performance accountability systems in the 10 states surveyed.

*Compatibility with IPEDS and regional accreditation demands*

Our state respondents perceived a relatively low fit between the data demands of state performance accountability systems and IPEDS. However, they perceived a stronger fit with the data demands of regional accreditors.

*Data reporting*

The state performance data are publicly reported in all 10 of the states, with publication on the internet as the preferred dissemination method. All 10 states break down the performance data by institution, but they differ in how they treat the resulting differences among colleges. Some states group the colleges by peer groups based on shared college characteristics and, sometimes, by community characteristics.

*Data collection issues*

Only a few of the state officials interviewed reported significant difficulties in securing performance data from the colleges. However, local community college officials have a more jaundiced assessment of the data collection process, focused on the difficulties of acquiring certain data that the state demands.

*Use of community college performance data at the state and local levels*

For the most part, state higher education officials stated that the performance data did not significantly affect state decisions. In fact, local community college officials noted that state use of performance data was characterized largely by a lack of substantial scrutiny of performance data from the colleges. Most of the local community college officials stated that they do use the data they report to the state in making local decisions. However, some colleges reported that they do not rely very much on the state performance data but instead rely much more on their own internally generated performance data. Our local respondents noted a number of impediments to their effective use of state performance data.

**Recommendations**

The findings from CCRC's study have definite implications for efforts to construct a Voluntary Framework for Accountability for Community Colleges.

*Performance indicators to consider*

Any indicator system should have a balanced combination of input, process, and output/outcome indicators for individual colleges and systemic indicators for the entire higher education system. The input indicators should provide incentives for maintaining a focus on enrolling less advantaged students. The process indicators should reward efforts to be accessible and to provide curricular and other programming that prepares students broadly and deeply. And the output/outcome indicators should stimulate colleges to focus on socially important outcomes for all students. Systemic indicators, meanwhile, would capture outcomes that are the product of the entire higher education system.

States should include among their *input indicators* measures for access by students of different backgrounds, including race/ethnicity, income, gender, age, and immigration status. The presence of such indicators can help counterbalance the incentive that graduation and job placement indicators create for colleges to focus on enrolling more advantaged students since they are more likely to graduate.

Four kinds of *process indicators* deserve attention:

(1) How accessible community colleges make themselves to less advantaged students, through, for example, low tuition and fees.

(2) Whether community colleges offer a broad range of programs addressed to a variety of student needs and interests, whether through high school completion (GED, etc.) programs, remedial education, preparation for transfer, or workforce development.

(3) Community colleges' provision of quality learning, indexed by such factors as degree of student academic engagement.

(4) Availability of resources for community colleges, such as sufficient funding per full-time equivalent (FTE).

The *output or outcome indicators* clearly should address eventual success as measured by graduation, transfer, and job placement. However, it also important to keep in mind that:

(1) Summary indicators of community colleges outcomes — such as total number of students completing — should include not just graduation but also transfer.

(2) Colleges need to be rewarded for how well they are doing on intermediate outcomes such as completion of GED and remedial education programs and passage of important gatekeeper courses such as college-level English and mathematics.

(3) There should be measures for how well students are completing, through indicators for post-transfer performance, passage of licensure exams, employer satisfaction with graduates, and long term job stability.

(4) Beyond specific measures of student learning, consideration should also be given to general student learning, with faculty playing an important role in the design of indicators and measures.

(5) Just as the input indicators need to be broken down by student background, so do the output or outcome indicators.

Finally, attention should be given to securing good indicators of *systemic performance:* that is, how well the entire higher educational system is creating cultivated citizens and technically prepared workers.

*Ways to better measure indicators*

In order to yield data that validly measure how community colleges are performing, it is important that the indicators above be properly measured and that the resulting information be put in the right context.

*Proper measurement*. It is important that the data collected pertain to the relevant students and fully cover their performance. Data should be gathered on all students and not just on those who are attending full time or begin their enrollment in the summer or fall. Moreover, it is important that the data on graduation rates pertain to students who are first-time students in community college and are indeed degree seeking. Also, every effort should be made to count all students who transfer to a four-year college: those transferring with or without a degree, to private as well as public colleges, and to out-of-state as well as in-state institutions. Finally, the time frame for tracking outcomes for students should be extended to at least six years after entry.

*Contextualization of data*. Community colleges vary greatly in student composition and the nature of their catchment areas. Therefore, performance indicators for community colleges need to be contextualized or benchmarked, either by comparing colleges to relevant peer groups or by statistically adjusting performance data for the entry characteristics of students. Some contextualization can be achieved by calculating separate completion rates for remedial and non-remedial students and comparing colleges within each category. In addition, performance measures must take into account local labor market differences, acknowledging the difficulties of some colleges — particularly in rural areas — in meeting demands for job placement in well-paying jobs. Finally, small colleges need to be cushioned against the distortive effects of small sample sizes, where changes in only a few students can have a dramatic effect on average performance. One way to counteract the effects of sampling fluctuation would be to utilize rolling averages (as is done in Tennessee and North Carolina).

*Ways to make collection of performance data easier for community colleges*

Community colleges identified the following initiatives by states would help address the problems in collecting and reporting performance data:

(1) Data requirements should be tailored as much as possible to data already collected for state student unit record systems.

(2) Community colleges would benefit from having the state itself take over more collection of data from graduate and employer surveys and from "third parties" such as the state university system and professional associations.

(3) For data that they must still collect and analyze for themselves, community colleges would benefit from state-provided technical assistance and training and help in acquiring better information technology capacity.

*Ways to encourage better use of performance data*

CCRC's interviews point to several ways that analysis of college performance data could be improved for the benefit of both the colleges and their stakeholders:

(1) Assistance for colleges in improving their information technology and institutional research capacity to analyze data.

(2) Incentives for college constituents — particularly faculty and middle managers — to pay greater attention to performance data.

(3) An increase in the number and skills of state staff members and officials who can analyze and comment on the performance data that colleges submit.

(4) Incentives to legislators and executive branch officials to make greater use of performance data when making policy decisions.

**INTRODUCTION**

Over the past three decades policymakers have become very concerned about finding ways to secure better performance from higher education institutions, whether in the form of greater access and success for less advantaged students, lower operating costs, or improved responsiveness to the needs of state and local economies. As a result, great effort has gone into designing incentives for improved college performance.

One of the key incentives that policy analysts have argued for and state governments have tried is a state performance accountability system, whether in the form of requiring reports on performance outcomes (performance reporting) or tying state funding to an institution's performance on specific indicators such as rates of retention, graduation, and job placement (performance funding and performance budgeting) (Alexander, 2000; Burke, 2004; Burke & Associates, 2002; Dougherty & Hong, 2006; Ewell & Jones, 2006; Wellman, 2002; Zumeta, 2001). Today, virtually all states have some form of performance reporting and some 15 states have performance funding (Burke & Minassians, 2003; Dougherty & Reid, 2007).[1]

We are now entering a period of renewed interest in college performance. A variety of prominent higher education commissions and researchers are calling for a greater focus on performance accountability, though often in forms different from past practice (Blanco, Jones, Longanecker, & Michelau, 2007; Callan, Ewell, Finney, & Jones, 2007; National Commission on Accountability in Higher Education, 2005; Shulock & Moore, 2005, 2007; U.S. Department of Education, 2006). Moreover, several states have recently enacted performance funding systems, including Texas and Washington (Blum, 2007; Dougherty & Natow, 2008; Southern Regional Education Board, 2007; Washington State Board for Community and Technical Colleges, 2007).[2]

Besides state performance accountability systems, another major approach to performance accountability involves the development of voluntary systems of accountability by several higher education associations. This strategy was largely prompted by the 2006 report of the Spellings Commission (U.S. Department of Education, 2006), which called for the development by states and higher education institutions, systems, and associations of "outcomes-focused accountability systems designed to be accessible and useful for students, policymakers, and the public, as well as for internal management and institutional improvement" (p. 24).

In 2007, the National Association of State Universities and Land-Grant Colleges (NASULGC) and the American Association of State Colleges and Universities (AASCU) launched the Voluntary System of Accountability (VSA). In this system, participating colleges and universities post on their websites a "College Portrait" that contains certain standard information: student and family consumer information (student characteristics, degree offerings, cost of attendance, living arrangements, rates of graduation and transfer, and student post-graduate plans); student experiences and perceptions; and learning outcomes (Fischer, 2007; Keller & Hammang, 2008; Miller, 2008).

Meanwhile, the American Association of Community Colleges and the Association of Community College Trustees, in partnership with the College Board, have launched an effort to develop a Voluntary Framework of Accountability (VFA) for Community Colleges. Driving this effort has been a concern that the aforementioned VSA and other systems of accountability — while useful — are tailored to four-year colleges and may not be wholly applicable to community colleges. In fact, the uncritical use of such measures might lead to "misperceptions of community colleges and an underestimation of their effectiveness and contributions" (American Association of Community Colleges, Association of Community College Trustees, & College Board, 2009, p. 1).

The Community College Research Center (CCRC) study presented here, commissioned by the College Board, has collected data to inform the development of the Voluntary Framework of Accountability for Community Colleges. CCRC researchers identified the performance indicators that states are already using for their community colleges and interviewed state higher education officials and local community college leaders on their experiences with the collection and use of such performance data. More specifically, CCRC examined:

- The content of state performance accountability systems, focusing on what performance indicators are most common across states.

- The extent of the compatibility of those state performance data with the data required by the Integrated Postsecondary Education Data System (IPEDS) and the regional accreditation associations.

- The ways that the states make public the performance data they collect on community colleges and how community colleges are compared to each other.

- The ways that the performance data are collected by states and the ways that state and local community college officials assess the data collection process.

- The ways that performance data are used by state and local community college officials in decision making and the ways that each assesses the data usage process.

This report lays out our findings on these questions and provides recommendations for the content of the Voluntary Framework of Accountability for Community Colleges. In particular, the report makes recommendations regarding which performance indicators to consider, how to better measure indicators, ways to make the collection of performance data easier for community colleges, and ways to encourage better use of performance data.

# RESEARCH METHODS

The data presented in this report are based on a survey of state higher education officials and local community college leaders in 10 states, conducted in May and June 2009. CCRC researchers selected the states in order to maximize variation across two criteria: type of performance accountability and region of the country (see Table 1 below). We included 5 states that have performance reporting alone and 5 that combine performance reporting with performance funding. Both performance systems involve the reporting of data on institutional performance to the state, but in the case of performance funding, the data affect state appropriations to community colleges. A small portion of the state appropriations to the community colleges — somewhere between 1 and 5 percent — is tied to institutional performance on specific indicators (Burke & Associates, 2002; Dougherty & Hong, 2006).[3] Region of the country was used as a sampling dimension in order to pick up differences in state political culture and socio-political conditions.

**Table 1.**
**States Analyzed**

| Region | States with Only Performance Reporting | States with Performance Funding As Well As Performance Reporting |
|---|---|---|
| New England | Massachusetts | |
| Mid Atlantic | Maryland | |
| Southeast | | Florida, North Carolina |
| North Central | Illinois | Ohio |
| South Central | | Louisiana [PF not funded] |
| Plains | Texas | |
| Northwest | | Oregon [PF suspended] |
| Southwest | California | |
| Note: In 2007, Texas established performance funding for its universities but not its community colleges. Hence, we have categorized it under performance reporting. | | |

Data gathering consisted primarily of interviews with state higher education officials and local community college leaders and a search of publications by state agencies and national higher education policy organizations. Within each state we aimed to interview a state official who has main oversight over the performance accountability system for community colleges and two local community college officials, one at a large college and one at a small one. The purpose for interviewing two local officials was to shed light on how the experiences of local community college officials in generating and using performance accountability data differ by size of community college.

We got a very good rate of response except in the case of Louisiana and Illinois. Due to the very tight time line for this report, we were not able to get data back from them in time. However, data on their performance accountability systems are included in Table 2 in the Findings section below and in the Appendix.

**FINDINGS**

Our analysis focuses on the content of state performance accountability systems for community colleges, their degree of fit with data demanded by IPEDS and the regional accrediting associations, the way that state performance data are collected and reported, the uses to which state and local officials put those data, and the difficulties that they encounter in collecting and using performance data. Its aim is to inform the design of the proposed Voluntary Framework of Accountability for Community Colleges.

**Indicators Used by State Performance Systems**

The study's 10 states collect a vast number of indicators. By indicators we mean specific characteristics of a community college that are deemed of interest, such as its enrollment of certain types of students or the number of students it graduates.[4] The 10 states together collect about 140 indicators and CCRC researchers grouped them into various categories (see the list in the Appendix). The indicators include input characteristics such as enrollments, process characteristics such as extent of vocational programming, and output characteristics such as graduation rates.

Focusing on the indicators that are considered in at least 3 of the 10 states, we find that states commonly have *input indicators* involving total enrollments; types of populations served (for example, the proportion of high school graduates enrolled); and enrollments disaggregated by some student characteristics.[5] The most common breakdown is by race/ethnicity, with breakdowns by income, gender, age, and immigration status being much less common.

With regard to *process indicators*, the most common are those concerning tuition and fees; expenditures (particularly on instruction); faculty characteristics; and the extent of vocational, remedial, dual-enrollment, and online programming. The measures for curricular programming primarily comprise enrollments in particular kinds of programs. Interestingly, only one of the 10 states has a measure for transfer-education programming, despite the importance of preparation for transfer to university baccalaureate programs as a community college mission.

Finally, with regard to *output indicators*, the most common are rates of remedial and developmental education success, graduation from the community college, transfer to a four-year college or university, and employment outcomes. They are followed by other indicators, such as attainment of a GED or other such degree for high school dropouts attending community college; the number of students earning a certain number of credits; the number of students passing certain specific courses, such as college-level math; retention and persistence rates; after-transfer performance; passing licensure exams; and student and employer satisfaction with community college services.

**Table 2.**
**Common Indicators in State Performance Systems**

| Indicator | # of States |
|---|:---:|
| Enrollments | 6 |
| Population served | 4 |
| Enrollments broken down by race/ethnicity | 8 |
| Enrollments broken down by income (primarily measure of financial aid receipt) | 6 |
| Enrollments broken down by gender | 3 |
| Enrollments broken down by age | 1 |
| Enrollment broken down by language status | 1 |
| **Process Indicators** | |
| Tuition and fees | 6 |
| Expenditures | 4 |
| Faculty characteristics | 3 |
| Vocational programming (enrollments, clients served, offerings) | 5 |
| Remedial or developmental education programming (enrollments) | 4 |
| On-line programming | 4 |
| Dual-enrollment programming (enrollments) | 5 |
| **Output/Outcome Indicators** | |
| High school completion | 4 |
| Remedial and developmental success | 8 |
| Credits earned | 4 |
| Specific courses passed (e.g. college level English or math) | 3 |
| Retention | 7 |
| Graduation from community college | 10 |
| Transfer to four-year colleges and universities | 9 |
| After-transfer performance | 5 |
| Employment | 7 |
| Passing licensure exams | 7 |
| Student satisfaction | 3 |
| Employer satisfaction | 4 |
| **Disaggregation of Outcome Indicators** | |
| Success broken down by race/ethnicity | 4 |
| Success broken down by income | 1 |
| Success broken down by gender | 2 |
| Success broken down by age | 2 |

Note: For more detail, see the Appendix.

It is noteworthy how rarely states break down their output/outcome indicators by student background, despite the many indicators included in the state performance accountability systems that we examined. Only 4 of the 10 states have output/outcome indicators broken down by race/ethnicity, only one state has an indicator broken down by income, only 2 break down indicators by gender, and only 2 states by age.[6]

It is also striking that the state performance indicators do not include more indicators for student learning. To be sure, we do find indicators for completion of remedial and developmental education (present in 8 states), passage of certain gatekeeper courses such as college-level mathematics and English (3 states), or attainment of a certain number of credits (4 states). However, these are not indicators for how effectively colleges are inculcating general knowledge and skills across the entire student body. Only one state (Florida) has had an indicator for general student learning over the course of college, measured in terms of passing rates on its College Level Academic Skills Test (CLAST).[7]

**Compatibility With IPEDS and Regional Accreditation**

In establishing performance accountability systems, states ask community colleges for a lot of data. Collecting this information could be made easier if the state data demands are fairly compatible with those put on colleges by the federal government through the Integrated Postsecondary Education Data System (IPEDS) (National Center for Education Statistics [NCES], 2009); and by the regional accrediting associations, such as the Southern Association of Colleges and Schools, the North Central Association of Colleges and Schools, or the Western Association of Colleges and Schools.

When we asked our state respondents for their perception of the degree of fit between state performance data demands and those of IPEDS and the regional accreditors, we found that they perceived a relatively low degree of overlap in the case of the first and a moderate degree in the case of the second. Tables 3 and 4 below summarize their responses. The coding into high, medium, and low degree of fit is our own.

*Fit with IPEDS demands*

Most of the data the IPEDS system asks from colleges are not concerned with college outputs or outcomes. In terms of outputs, IPEDS only asks for retention, transfer, and graduation rates for full-time, first-time students. Otherwise, it asks for data on enrollments, financial aid, number of degrees conferred, faculty and staff characteristics, and institutional finances (NCES, 2009). Given the many state performance indicators addressing institutional outputs, it should not be surprising that, for the most part, our respondents do not perceive a high degree of overlap between IPEDS and state performance accountability systems, as shown in Table 3 below.[8]

**Table 3.**
**Fit Between State Performance Indicators and IPEDS Data Requirements**

| Fit | Responses from State Officials |
|---|---|
| *High* | |
| NC | Unit record data used for both. The state reports to IPEDS from the statewide SUR [student unit record] data system. |
| *Medium* | |
| MA | For the most part it is the same. The colleges don't report the course completion rate to IPEDs or persistence data to IPEDS but they report it to state. But the performance accountability data are compatible and consistent with IPEDS. |
| TX | Try to match IPEDS when possible, but the IPEDS definitions change and we make sure data is consistent across years. |
| MD | Some overlap. There are some indicators that are not reported to IPEDS. The state measures break cohorts into needing developmental ed and taking it, needing development ed and not taking it, and college ready, but IPEDS does not track at that level of detail. |
| *Low* | |
| CA | Some overlap. Some of the descriptive data in the report matches the IPEDS–IC reporting but the graduation rates in the [state] ARCC [Accountability Report for Community Colleges] report do not match the IPEDS-GRS at all. Vastly different methodology. Many other things are collected in IPEDS (HR, finance, etc.) that are not covered in ARCC. |
| OH | IPEDS has limited outcomes measures. |
| OR | IPEDS does not fit community colleges. IPEDS is geared more to 4-year institutions and traditional students. State CC Board and the community colleges are unhappy the CC data are used — they feel it is misleading. |
| FL | Data reported to IPEDS and performance accountability data are completely different. |
| No Response | LA, IL |

Sources:  State higher education officials, sometimes supplemented by local community college officials.

### *Fit with regional accreditation association demands*

In the last 10 to 20 years, the regional accreditation associations have put greater emphasis on institutional performance and have shifted their accountability systems accordingly (Biswas, 2006; Terkla, 2001). But do our respondents perceive a close or loose fit between the data the accreditors are demanding and the data the state government requires? As Table 4 below shows, most of our respondents indicated a moderately close fit. Again, the categorization of perceived degree of fit as high, medium, or low is our own. Ohio provides an example of a state where the fit between the state performance data and the requirements of the regional accreditors appears to be in the middle range. As a local community college institutional researcher noted,

The fit is reasonably good — though the state level reporting indicators are not as rich as is required to truly meet the needs of our accrediting body. The primary indicators of success which, to date, are monitored by the Regents are as follows: 3-year persistence/graduation/transfer, year-to-year persistence, [and] remedial education requirements. These data are consistent with the requirements of our accrediting body, and they do provide us with a set of comparisons against which we can benchmark. In order to increase the success of our students, however, we find it necessary to conduct more detailed analyses than are available through this system.

**Table 4.**
**Fit Between State Performance Indicators and Regional Accreditation Standards**

| Fit | Responses from State Officials |
|---|---|
| *High* | |
| FL | There is a lot of overlap. Institutions use their performance accountability reports very frequently while going through accreditation process. |
| *Medium* | |
| OH | The fit is reasonably good though the state level reporting indicators are not as rich as is required to truly meet the needs of the accrediting body. The primary indicators of success monitored by the Regents are consistent with the requirements of the accrediting body, and they do provide us with a set of comparisons against which we can benchmark. However, in order to increase the success of students, colleges find it necessary to conduct more detailed analyses than are available through this system. |
| MD | [Following is the researchers' analysis]: The Middle States Commission on Higher Education (MSCHE) has 14 standards that institutions are expected to address. The Maryland Higher Education Commission (MHEC) Performance Accountability Report (PAR) for community colleges has a number of indicators that are directly or indirectly related to many of those MSCHE standards. |
| OR | State CC board has been told that the performance measures have come into good use for accreditation purposes. |
| NC | SACS requires colleges to address an issue they deem relevant and critical to student learning: a Quality Enhancement Plan (QEP). The accountability measures that are evaluated through the accountability process, such as success in developmental coursework, can be used for QEP. |
| MA | Many of the state goals are important to accrediting agencies. But accrediting agencies look at the data and analyze at a deeper level. They are much more interested in specific programs and they have a much more comprehensive view. |
| *Low* | None |
| No Response | LA, IL, TX, CA |

Sources:  State higher education officials, occasionally supplemented by local community college officials and our analysis of material produced by the states and by the accrediting associations.

**Data Reporting**

The impact of performance data depends in good part on whether the data are publicly reported and the way that they are reported. Performance data will have much less impact if they are not publicly reported, particularly by institution. At the same time, public reporting might lead to a misperception of real institutional performance if the differences between colleges in student composition, organizational resources, and conditions in their organizational environment are not taken into account.

*Extent of public reporting*

The state performance data are publicly reported in all 10 of the states we examined, with the preferred method being publication on the internet. Moreover, the data are usually reported to state officials, particularly state legislators, as shown in Table 5 below.[9]

**Table 5.**
**The Ways that State Performance Data Are Reported**

| Category of Data Reporting | States | # of States |
|---|---|---|
| Publication on the Internet | TX, CA, LA, OR, MA, MD, IL, FL, NC, OH | 10 |
| Print publication by the State Board | NC | 1 |
| Published in institutions' catalogues | NC | 1 |
| Report to the legislature | TX, OR, MA, MD, FL, NC | 6 |
| Report to governor's office | MA, MD | 2 |
| Report available on request | MD, FL | 2 |
| Report available in state library | MA | 1 |
| Report to institutions | OR, FL | 2 |

Sources: Interviews with state higher education officials.

*Extent and methods of disaggregation of data by individual institution*

All 10 of the states break down the performance data by institution. The logic for breaking down results by individual institution rather than just presenting data for the whole community college system is explained by an Oregon local community college official:

[In] previous legislative sessions, key performance indicators were not detailed by community colleges — they were for all community colleges in the state. Individual colleges never saw their own data relative to how the state performed; therefore there was not much interest at the individual level….[Then] the individual key performance measures were detailed by college…At that point on [they] took on deeper meaning and importance. There wasn't the same feeling of accountability when there were no benchmarks.

However, as Table 6 below shows, the states differ in how they treat the differences among their colleges. Many have argued that performance data for community colleges need to be corrected to take into account differences, such as in the proportion of disadvantaged students they enroll. Otherwise, many community colleges could appear to be performing badly, despite the fact that they may be actually doing comparatively well on a value added basis (Dougherty & Hong, 2006; Dowd & Tong, 2007; Erisman & Gao, 2006). To address this issue, some states, such as California and Texas, group the colleges by peer groups. California's system is particularly sophisticated in that it identifies different peer groups for each of the seven performance measures on which it is comparing the colleges. Hence, each college has seven different peer groups, one for each measure. The peer groups are created through cluster analysis, a statistical procedure to create groups on the basis of certain variables (California Community College, 2009).[10]

**Table 6.**
**Adjustments Made to Account for Differences in Institutional Capacity**

| Type of Adjustment | States | # of States |
|---|---|---|
| Institutions are grouped with their peers | CA, TX, MA | 3 |
| Adjustments are made to financial data on the basis of institutional characteristics | FL | 1 |
| No adjustments made | OR, MD, NC, OH | 4 |
| No Response | LA, IL | 2 |

Sources:  Interviews with state higher education officials, supplemented by state documents.

**The Data Collection Process**

Performance data are principally gathered by the state through the regular reports that the community colleges file with it on their enrollments, finances, and other characteristics. These reports are supplemented by additional reports submitted by the community colleges that provide information from surveys they conduct of employer satisfaction and their graduates' satisfaction and current circumstances, and data they gather on licensure pass rates (although the state sometimes secures these data on its own) and transfers to private colleges (the state usually gathers the data on transfer to public institutions).

How well this process works from the perspective of state higher education officials on the one hand and local community college leaders on the other is discussed next.

*State officials' assessment of the data collection process*

Only a few of the state officials we interviewed reported difficulties in securing performance data from the colleges and their complaints were not strong. They focused on difficulties in getting high quality data. A likely reason for this low rate of complaints is that, as noted above, the vast bulk of performance data are collected as part of the now highly routinized data collection that states conduct for enrollment, financial, and other information.

**Table 7.**
**Experiences of State Officials in Securing Performance Data**

| Type and Extent of Difficulties | States Reporting | # of States |
|---|---|---|
| **No Difficulties** | OR, MD | 2 |
| **Difficulties in Getting High Quality Data** | | 2 |
| Challenges include typical hindrances to centralized data collection such as different business practices and data capacities across the campuses. It is also difficult to initiate the collection of new data fields and to revise existing data fields. | MA | |
| Usually, the difficulties are related to the quality of data at the campus level. State has no problem getting the data. As long as colleges submit clean data and get the data in on time, the state is able to produce high quality reports. | FL | |
| **Other Difficulties** | | 1 |
| Delays in receiving data from some outside agencies and then mapping it to the unit records. This is not a problem from the colleges as annual reporting plan requires compliance or they hold the president's salary. | NC | |
| **Cannot Identify Difficulties Yet** (performance funding system just beginning) | OH | 1 |
| **No Response** | LA, IL, TX | 3 |

Sources: Interviews with state higher education officials.

*Local college officials' assessments of the data collection process*

But if state officials appear largely happy with the data collection process, local community college officials have a more critical assessment. The most common problem pointed out by local college officials with regard to collecting and reporting data to the state concerns the difficulties of acquiring certain data that the state demands, particularly information originating from surveys of employers, graduates of the colleges, and non-returning students (see Table 8 below). It is hard to get a high response rate on those surveys. In addition, it is sometimes difficult to get "third party" data in the form of

licensure pass rates or number of transfers to private colleges and universities. Other complaints made with less frequency are that it is hard to code certain state data and that there are not enough trained staff at the community college to properly collect the required data.

Our local respondents sometimes indicated that the size of a college made a difference in how easily a college could report data to the state. However, it is interesting that sometimes it was big size and sometimes it was small size that was an impediment to data collection (see Table 9 below). For small colleges, the hindrances lie in lack of organizational resources for institutional research. For large colleges, the impediments lie in how to capture in state data categories the complexity of the colleges' operations. One of our local respondents in North Carolina captured the countervailing effects of size on the requirements of collecting and reporting data to the state:

> Larger colleges often have superior resources in terms of sophistication and number of IR staff (though this can vary with the interest of the President in having the capability). On the other hand, simplistic data definitions can sometimes work against large colleges. Also, given the size of large college databases, more sophisticated data handling methods are necessary. (Some small colleges can literally do manual manipulations that are impossible for large colleges to handle.)

**Table 8.**
**Experiences of Local Officials in Collecting and Reporting Performance Data**

| Experience | States | # of States |
|---|---|---|
| **Few or No Problems** | | 1 |
| Collecting and reporting performance data are relatively easy since the measures are based on previously required data submitted each term or annually to the state system office. | CA | |
| **State Measures Are Hard to Collect** | MD, CA, NC, OR | 4 |
| The most difficult data to gather are the indicators that require the use of alumni surveys and employer surveys. Response rates on these instruments are typically very low, making it very difficult to draw any useful conclusions from these data. | MD | |
| The validity and reliability of data gathered from alumni and employer surveys are extremely questionable. | CA | |
| The employer satisfaction item is another "ought to" measure. However, the nature of firms (employ many occupations that are not specific to the firm's industry) and the fact that single employers may employ students from several of the colleges makes mass surveying impossible. Employers are also over-surveyed by all kinds of agencies. | NC | |

**Table 8.**
**Experiences of Local Officials in Collecting and Reporting Performance Data**

| Experience | States | # of States |
|---|---|---|
| The most difficult area is gathering non-returning student data....the response rates are not high enough to make the reports valid. Employer data is also hard to collect in a comprehensive way. Reasons why this is difficult include the response rate problem, finding the right person to respond for the business, and getting general data from an employer who may have both successful and unsuccessful former students as employees. | NC | |
| It is often difficult to receive completed surveys from the students. A prepaid, self-address envelope is provided; and it usually requires tracking returned surveys and requesting a 2nd, 3rd and even a 4th mailing for students who have not responded in order to meet a 50% response rate or better. | NC | |
| Some of the data required for the Performance Measures are difficult to track, such as the number of students who transfer to a four-year college or university. Students transferring to one of the sixteen (16) public state universities are tracked by the state, but students transferring to a private college or university must be tracked by each community college and reported to the System office if they are to be measured as part of the Performance of College Transfer Students. | NC | |
| Some 3rd-party data (licensing boards, employment department) [are] difficult to acquire. | OR | |
| Lack of access to data sources such as university and private college data. | NC | |
| **Hard to Code State Data** | | 2 |
| There is always a difference in definitions in regard to how the state might define retention or success rate vs. institutions. From an institutional effectiveness standpoint they look at more detailed measures, where the state is looking at the big picture. | OR | |
| Biggest problem arises as there is no agreed upon system for coding of coursework, especially for basic skills courses, in English, math and ESL. There is no uniform coding system statewide or district wide. Even among the 9 colleges in LA, there is no agreement.... It is therefore difficult currently to measure and analyze basic skills advancement and completion. There will be an effort this year to recode all the courses below freshmen level at all 110 colleges statewide. | CA | |
| **Lack of Enough Trained Staff to Accurately Report Data** | MA, OR | 2 |
| Data collection — staff needs more training especially in data entry. There are more offices entering data in the DataTel system now than before. Data entry is getting complicated so more training is needed. | MA | |
| Many of the colleges are understaffed; IT doesn't have the programming capacity to collect the data. | OR | |
| **Date by Which Data Are Required to Be Submitted Is Too Early** | MD | |
| **No Response** | LA, IL | |

Sources:  Interviews with local community college officials.

**Table 9.**
**Perceived Impacts of College Size on Collecting and Reporting Data for State**

| Type of Problem | States | # of States |
|---|---|---|
| **Small College Problems** | | |
| *Fewer Institutional Research Resources* | | 5 |
| Smaller colleges have fewer resources to devote to institutional research, so perhaps a smaller college would rely more on statewide reports without the benefit of conducting local research and analysis to dig deeper into specific areas. | CA | |
| Smaller colleges can be expected to have fewer staff resources and perhaps weaker technology, so they probably have more trouble producing their own performance data than larger colleges like us. | FL | |
| The management information systems used by smaller institutions are usually not as powerful and lack the capabilities of systems used by larger institutions. | MD | |
| Some smaller colleges are hindered by limited IT infrastructure which may make data extraction and retrieval more difficult than for their large-college colleagues. | MD | |
| Larger colleges often have superior resources in terms of sophistication and number of IR staff (though this can vary with the interest of the president in having the capability). | NC | |
| | | |
| **Big College Problems** | | |
| *More Complicated Data to Report* | | 3 |
| Simplistic data definitions can sometimes work against large colleges. Also, given the size of large college databases, more sophisticated data handling methods are necessary. | NC | |
| Biggest problem arises as there is no agreed upon system for coding of coursework, especially for basic skills courses, in English, math and ESL.... There is a bigger sensitivity to this issue of coding at the larger districts - those with only one school would not notice the problems with course coding. | CA | |
| Harder to get consensus on data. | MA | |
| Larger colleges do have more difficulty in meeting the response rate. | NC | |
| | | |
| **No Response** | LA, IL | 2 |

Sources: Interviews with local community college officials in 10 states.

**Use of Community College Data at the State Level**

Given the effort and expense involved in collecting performance data, it is important to know how extensively state officials use these data and whether they encounter significant problems with their analysis.

*Extent of data use*

One of the questions we asked state officials was what decisions are affected by the data they collected on the community colleges. For the most part, they stated that the data did not much affect state decisions. In fact, only one state indicated that the data were used to trigger policy reviews or changes. In Massachusetts, a state higher education official noted:

> Student success indicators…, indicators related to the contribution to the workforce…, and indicators related to higher education access…are all scrutinized by Board members, Department staff, and policy makers. In recent years issues related to these various indicators have led the Board to launch taskforces around state and community college graduations, transfer policies, and student financial aid. Taskforce outcomes have included revised transfer incentive policies, requests to the legislature for more financial aid support, new indicators for tracking student success, and new programs aimed to increase nursing and Science, Technology, Engineering, and Mathematics (STEM) degrees.

Instead, the most common pattern was one of lack of state scrutiny of and comment on performance data and little use of those data to craft state policy. A state official in California noted that it was difficult to get the legislature to use the state performance data. Local community college officials in Maryland and Florida also noted a lack of state use of performance data. In Maryland, a local community college official stated:

> Currently, there is not enough attention paid at the state and college level to these data — collectively or individually for the community colleges. We submit our reports and occasionally are questioned about progress toward a target ("benchmark"), but these queries are relatively benign.

An official at a Florida community college added: "If data [are] not utilized, it would be helpful not to have to report it." [11]

*Assessment of data usage at the state level*

Interestingly, only 2 states reported difficulties in analyzing the performance data they received from community colleges (see Table 10 below). This largely positive assessment could reflect the quality of those data but it may also reflect that the states are using the performance data primarily for compliance purposes rather than institutional diagnosis.

**Table 10.**
**Experiences of State Officials in Using Performance Data**

| Type of Problem | States | # of States |
|---|---|---|
| **No Major Problems** | | 4 |
| The process works fairly well as long as there is money. Otherwise there is usually no problem with data collection, analyses, creating reports etc. There is a committee with representatives from CCs and the members do their best when a problem occurs…. As long as colleges submit clean data and get the data in on time, the state is able to produce high quality reports. | FL | |
| There have been no substantial problems. Since the adoption of the current system, the Department has revised indicators, added new indicators, and altered the report format. All of this was done in collaboration with the Performance Measurement Taskforce to ensure campuses had sufficient input on the process. | MA | |
| No problems at all. PR system has been working well. | MD | |
| No problem reported | NC | |
| **Lack of Sufficient Data Analysis Resources** | | 1 |
| The funding shortage doesn't just occur to the CCs. Representatives at the state level who work with the data are grossly understaffed. They do not have the resources to provide the level of support to make this more effective [from local CC official]. | OR | |
| **Results are Varied and Difficult to Tie to any Causal Factor** | CA | 1 |
| **Cannot Identify Difficulties Yet** (performance funding system just beginning) | OH | 1 |
| **No Response** | LA, IL, TX | 3 |

Sources: Interviews with state higher education officials.

## Data Use at the Local Level

Particularly because the demands of data acquisition fall primarily on them, it is important to determine how useful community colleges find the data they report to the state governments and what suggestions they have for improving those data.

### *Extent of data use*

Most of the local community college officials we interviewed stated that they do utilize the data they report to the state in making local decisions. The modal pattern is one of heavier data use than is the case with state officials, though there is considerable variation in the extent of local use.[12]

The main areas of influence are instructional and student support policies affecting student retention and graduation, planning and budget decisions, and less so, human

resource policy (see Table 11 below). For example, an official of a Texas community college noted:

> The performance indicators at [the college] drive programmatic and curriculum changes as well as student support services. Data showing trends in gender, ethnicity, success, retention, financial aid, student age, and licensure pass rates have all contributed to decisions made regarding …community outreach programs….Procedures in enrollment management, certificate and degree completion, recruitment, retention, and success initiatives are based on these data. The [college's] Minority Male Initiative also based its direction and benchmarks on these data showing the trends in African American and Hispanic male enrollment and completions. The [college] Strategic Plan refers to these performance indicators to create a baseline of current employee demographics to project the recruitment and retention of faculty and administrators.

**Table 11.**
**Local Decisions That Performance Indicators Affect**

| Effect of Indicator | States | # of States |
|---|:---:|:---:|
| **Student Success (Instruction and Student Support) Decisions** | | 6 |
| Efforts to improve student success (e.g. retention and graduation) | MD, OH, CA, NC, TX, MA | |
| Efforts to improve student engagement | MD | |
| Minority enrollment and completion | TX, CA | |
| Support services for allied health students to pass licensure exams | NC | |
| Improvements to academic standards | MD | |
| **Planning and Budget Decisions** | | 6 |
| Planning and strategy | CA, TX, MD, NC | |
| Resource allocation and budgeting | MD, MA, OR | |
| **Human Resource (Faculty and Staff Policy) Decisions** | | 3 |
| Recruitment of faculty and administrators | MD, TX | |
| Enhance hiring of minority employees | MD, TX | |
| Faculty and staff compensation (bonus funds) | NC | |
| **No Report of Local Data Use** | FL | 1 |
| **No Response** | IL, LA | 2 |

Sources: Interviews with local community college officials.

At the same time, we must not overestimate the impact of the state data. Several colleges reported that they do not rely very much on the state performance data but instead rely much more on their own internally generated performance data. A local community college official in Ohio noted:

> Data provided to the Board of Regents are provided mainly for
> compliance purposes. The college generates a large amount of data to
> answer questions pertaining to student access and success. Data provided
> to the Regents do play some part in this analysis. However, the institution
> makes use of a wide range of data in addition to those provided to the
> Regents.

An official of a North Carolina community college added:

> State system data were initially less than useful for improvement
> purposes….State requirements do not include information based on
> cohorts, thus can be misleading. Colleges with their own internal data
> warehouses…are able to do much more accurate data mining to find the
> story behind the performance measures, and thus to develop
> improvements.

As the last remark indicates, part of the reason that local colleges do not rely on state data
as much as we would expect is due to problems with the content of those data. Let's now
turn to local officials' assessment of the factors affecting their degree of usage of state
data.

### Assessment of data use at the local level

Our local respondents noted a number of impediments to their effective use of state
performance data. As Table 12 below indicates, the most common complaints were that
the state data were not always timely, they did not give contextual causes of performance
differences, there were issues of measurement reliability, colleges lacked analytic
capacity, and they lacked the necessary commitment to a culture of evidence.

The criticism about timeliness of data turned on the fact that by the time the state reported
the data the students involved had moved on and circumstances had changed. Those
noting problems with contextual causes contended that the state data did not take into
account geographical, financial, and other factors that might help explain seeming
differences in performance.

Measurement reliability was an issue particularly for local community college officials
from small colleges who were concerned that state data definitions (such as focusing on
first-time, full-time students) resulted in very small samples at small colleges. As a result,
the findings for those colleges were unreliable because a shift in only a couple of cases
could greatly skew the data.

Local community college officials also turned inward in explaining limits to their
analysis of performance data. They noted that colleges not infrequently lacked enough
staff with the requisite skills to adequately analyze the data. Moreover, they pointed to a
lack of a strong culture of evidence or inquiry that would support the in-depth analysis of
data for purposes of informing practice. On this last point, a respondent from North
Carolina noted: "It takes a lot of inclusion in the process, ownership of the questions to
be answered, training in using data to improve, and assurance that actions will be taken,

and resources will be available, to help overcome the issues that result in poor performance."

**Table 12.**
**Main Local Problems with Utilizing State Performance Data**

| Problem | States | # of States |
|---|---|---|
| **State Is Not Collecting Important Data** | | 2 |
| Lack of comprehensive data on employment outcomes for leavers and graduates and current students….The changes I would make for the state would be to link relevant information from other state databases (Unemployment wage records; state tax returns…) so that community colleges can receive credible, comprehensive data on how effectively we're developing the regional workforce. | MA | |
| I would like to see additional information from the University System about students who failed there, returned home and enrolled in [our college], and returned later to the University. These students are currently not included in performance measures and they are often turn-around stories. | NC | |
| **Collected Data Are Not Always Timely** | | 3 |
| Some data is "old" by the time it is incorporated into the reports — cohort tracking data, for example, of necessity is reporting on students who began four and five years ago....It is a struggle to convert some performance report data into courses of action because by the time the data are analyzed, the students on which the data are examined have already gone through the system. | MD | |
| The exact methods the state uses to calculate performance is usually a year or two later than we can produce ourselves. Therefore, I would say the biggest issue is the lag time to obtain state reports and benchmarks that are too old compared to the more timely measures we can produce on our own performance. | FL | |
| You have a new group with different goals every year but your data is not up-to date (2 years old) and it is being a problem. | MA | |
| **State Data Do Not Give Contextual Causes of Performance Differences** | | 4 |
| Within the community college sector, performance rates do differ significantly. A weakness of these [state] reports is that they do not contain any data that might be used to help explain differences in these rates across institutions within the same sector. | OH | |
| Perhaps some index of the at-risk population should be used to weight data. | NC | |
| State measures don't incorporate local factors (geographic location, finances, etc.). Example of transfer rates. [Our college] has higher transfer rates than other Oregon CCs because they are near many 4-year colleges, but many of their students often transfer before they have received their award, which pulls down their graduation rate. | OR | |

Table 12.
**Main Local Problems with Utilizing State Performance Data**

| Problem | States | # of States |
|---|---|---|
| It does not address the local variations….The ARCC is too macro to be useful at the local level. By adding a peer grouping reporting, some of these problems have been mitigated, but again, these data become less useful at the local level. | CA | |
| **Measurement Reliability Issues** | | 4 |
| This college is very small and has a primarily non-traditional student population. Therefore, state cohorts that are based on fulltime degree-seeking, first time in college students result in very small numbers for the college. | FL | |
| Our college is very small and given a small "N [number of respondents]," percentage figures are more volatile than for larger populations. | OR | |
| The number of EMT [Emergency Medical Technician] and/or BLET [Basic Law Enforcement Training] students testing is low so just one failure affects the pass rate percentage. | NC | |
| One area in which the data warehouse has been a problem is graduation rates. The programming has left out a group of students that accounted for 15-20% of our graduates. It's important for IR people at the college level to have access to programming details so that they can see where the errors might be, and that the programmers listen to the IR people and make the corrections in a timely fashion. | NC | |
| The success or lack of success in basic skills is skewed by the lack of common measures in such things as different cut scores and different placement testing instruments, and colleges and faculty are free to set multiple measures. A common measure or assessment requirement would face resistance from the faculty. | CA | |
| **Inadequate Resources for Analysis** | | 3 |
| Superficial analysis, often because the analytic capability and/or access to additional data elements is restricted. | NC | |
| Budget cuts mean colleges may be understaffed. Also the lack of funding limits the IT resources to improve things. In Oregon, very few CCs have fully developed degree audit systems whereas other states might. | OR | |
| The changes I would like to see in the [state] data warehouse would involve making more of the data we submit accessible through the warehouse…. I would like to have either more drop-down menus or else greater expertise (and possibly greater access) with the [state] warehouse. | MA | |

**Table 12.**
**Main Local Problems with Utilizing State Performance Data**

| Problem | States | # of States |
|---|---|---|
| **Lack of Culture of Evidence or Inquiry** | | 3 |
| We have work to do at our own institution to make the report and the data more regularly used in planning, budgeting, and decision-making. | MD | |
| Resistance of faculty, staff, and administrators where there is not a culture that permits self-examination. It takes a lot of inclusion in the process, ownership of the questions to be answered, training in using data to improve, and assurance that actions will be taken, and resources will be available, to help overcome the issues that result in poor performance. Rewards help. | NC | |
| Some institutions are dead serious about compliance reporting, generating (and using) timely, accurate data. Some institutions have other values and priorities. | MA | |
| **No Response** | LA, IL | 2 |

Sources: Interviews with local community college officials in 8 states.

# CONCLUSIONS AND RECOMMENDATIONS

Below we summarize the principal findings from the study, commissioned by the College Board and conducted by the Community College Research Center (CCRC), to collect data useful in the development of the Voluntary Framework of Accountability (VFA) for Community Colleges. We also provide recommendations for the elements that need to be considered when designing a performance accountability system for community colleges.

## Principal Findings

### *Commonly used indicators*

The 10 states in CCRC's study together collected data on some 140 indicators to assess their performance (see the Appendix). If we focus on the indicators that at least 3 of the 10 states use, the most common *input indicators* concern total enrollments, proportion of population served, and enrollments broken down by race/ethnicity and income. Only 3 states have enrollment indicators broken down by gender, only one has an indicator broken down by age, and only one has an indicator broken down by language status (enrollment in English as a Second Language courses).

The *process indicators* used in 3 or more states are those involving tuition and fees; expenditures (particularly on instruction); faculty characteristics; and extent of vocational, remedial, dual-enrollment, and on-line programming (largely measured in terms of enrollments). Only one state has an indicator for the extent of transfer-preparation course programming.

Finally, with regard to *output/outcome indicators*, the most common are rates of graduation from the community college, transfer to a four-year college or university, and remedial and development success. They are followed by other indicators such as high school completion, the number of students earning a certain number of credits, the number of students who pass certain courses such as college level math, retention and persistence, after-transfer performance, employment outcomes, passing licensure exams, and student and employer satisfaction with community college services.

It is striking that student learning does not get more attention despite the many different output/outcome indicators that populate state performance accountability systems in the 10 states surveyed. There are indicators that touch on learning but it is in the rather indirect form of remediation completion, enrollment in certain gatekeeper courses such as college-level mathematics and English, or attainment of a certain number of credits. Only one state (Florida) has had an indicator that deals more generally with learning during the college years, in the form of pass rates on a rising junior exam.

Moreover, we have noted the relative dearth of indicators broken down by student background: race/ethnicity, income, gender, or age. This inattention is particularly pronounced in the case of income, gender, and age and for output/outcome indicators. We expand on this point below in our recommendations.

*Compatibility with IPEDS and regional accreditation demands*

We found that our state respondents perceived a relatively low fit between the data demands of state performance accountability systems and IPEDS. However, they perceived a stronger fit with the data demands of regional accreditors. Given the many state performance indicators addressing institutional outputs, it should not be surprising that our respondents generally do not see a high degree of overlap with IPEDS, which only asks for retention, transfer, and graduation rates.

*Data reporting*

The impact of performance data depends in large part on whether and how they are publicly reported. The state performance data are publicly reported in all 10 of the states, with publication on the internet as the preferred dissemination method. All 10 states break down the performance data by institution, but they differ in how they treat the resulting differences among colleges. Some states group the colleges by peer groups based on college characteristics (e.g., size, student composition, mission) and, sometimes, community characteristics (e.g., area median household income, poverty rate), but most of the states do not contextualize the data.

*Data collection issues*

The state performance data are principally gathered by the state through the regular reports that the community colleges file with the state on their enrollments, finances, and other characteristics. Only a few of the state officials we interviewed reported difficulties in securing performance data from the colleges. Their complaints were not strong and they focused on difficulties in getting high quality data. However, local community college officials have a more jaundiced assessment, focused on the difficulties of acquiring certain data that the state demands, particularly data collected from surveys of employers, graduates of the colleges, or non-returning students. Our local respondents sometimes indicated that the size of a college made a difference in how easily a college could report data to the state, with small size and big size bringing different disadvantages.

*Use of community college performance data at the state and local levels*

For the most part, state higher education officials observed that the performance data did not significantly affect state decisions. Instead, as local community college officials noted, the most common pattern was characterized by a lack of substantial scrutiny of and comment on performance data by state officials. This lack of scrutiny did not seem to stem from the perception of state officials that the state performance accountability data were bad. Only 2 states reported difficulties in analyzing the performance data received from community colleges.

Most of the local community college officials we interviewed stated that they do use the data they report to the state in making local decisions. The main decisions influenced by the data involve instructional and student support policies that affect student retention and graduation; planning and budget decisions; and, less so, human resource policy. At the

same time, some colleges reported that they do not rely all that much on the state performance data but instead rely much more on their own internally generated performance data. Our local respondents noted a number of impediments to their effective use of state performance data. The most common complaints were that the state data are not always timely, they do not give contextual causes of performance differences, there are issues of measurement reliability, colleges lack analytic capacity, and they have an insufficient commitment to a culture of evidence.

**Recommendations**

The findings from CCRC's study have definite implications for efforts to construct a Voluntary Framework for Accountability for Community Colleges. They fall into four areas: performance indicators that should be considered, ways to better measure indicators, ways to make collection of performance data easier for community colleges, and ways to encourage community colleges and state officials to make better use of the data.

*Performance indicators to consider*

Any indicator system should have a balanced combination of input, process, and output/outcome indicators. The input indicators should provide incentives for maintaining a focus on enrolling less advantaged students. The process indicators should reward efforts to be accessible and to provide curricular and other programming that prepares students broadly and deeply. And the output/outcome indicators should stimulate colleges to focus on socially important outcomes for *all* students. These indicators applied to individual colleges should be balanced with systemic indicators of the performance of the community college sector and the higher education system as a whole.

*Input indicators*. States need to include indicators for community college access for students of different backgrounds. As noted above, the performance accountability systems in the 10 states we examined often do not include indicators for access for disadvantaged students, including racial minorities, recent immigrants, low-income individuals, or women.[13] This finding is significant, because the presence of such indicators can help counterbalance the incentive that graduation and job placement indicators create for colleges to focus on taking in more advantaged students since they are more likely to graduate (Dougherty & Hong, 2006; Erisman & Gao, 2006).[14]

In paying attention to income, an indicator system must not simply focus on whether or not students are receiving financial aid. Such information is important but performance systems should also look at how access varies by different income levels. Collecting information on students' income is difficult and characterized by high rates of nonresponse and misreporting. However, a useful proxy is the average income of a student's neighborhood (more specifically, census tract), which can be simply determined by zip code.

Indicators pertaining to age should focus particularly on access for part-time, non-degree seeking adults who are coming to higher education for job retraining or other mid-life

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course corrections (Erisman & Gao, 2006). Including such indicators in performance accountability systems has particular importance today — a time of high unemployment and economic restructuring that is likely to go on for a considerable time (Bartels, 2008).

*Process indicators*. Four kinds of process indicators are worthy of attention. One type measures how accessible community colleges make themselves to less advantaged students. At the very least this should include an indicator for how community college tuition and fees compare with the median household or family income in the college's district (Carey & Aldeman, 2008).

A second type of process of indicator should address whether community colleges offer a broad range of programs addressed to a variety of student needs and interests. These needs range from high school completion (GED, etc.) and remedial education to preparation for transfer and workforce development. Our 10 states offer a number of different examples of these indicators but one is quite undeveloped: transfer preparation. Given the increasingly important role that community colleges are playing in access to the baccalaureate in recent years, the development of good measures for the extent and quality of transfer preparation is important. One such measure could be the proportion of transfer students who, prior to transfer, complete a specified range of courses, such as a general education core that the state may have mandated should be given guaranteed transfer credit (Dougherty & Reid, 2007).

But extensive programming can be vitiated if it is not of high quality. Hence, the third process indicator that should be given close attention is provision of quality learning. It can be indexed by such things as degree of student academic engagement (Carey & Aldeman, 2008). The measures in the Community College Survey of Student Engagement (2008) provide a useful way of assessing degree of student academic engagement.

Finally, an important process indicator is the availability of resources for community colleges (Erisman & Lao, 2006). How well are colleges funded on an FTE basis, particularly taking into account the needs of their student bodies, which are less advantaged on average than those of four-year colleges?

*Output/outcome indicators*. The main necessary elements of a community college's curriculum and programming should be matched by output or outcome indicators that measure their ultimate effectiveness. A comprehensive system of indicators needs to address eventual success as measured by graduation or transfer and job placement.

However, for community colleges it is particularly important that summary indicators of community colleges outcomes — such as total number of students completing — include not just graduates but also those transferring. Just focusing on graduates will miss the many community college students who benefited from their time there but are transferring without a degree (Dougherty & Hong, 2006; Jobs for the Future, 2008).

In addition, colleges need to be rewarded for how well they are doing on *intermediate outcomes* that not only are under greater control by colleges but also presage future

student success, such as achieving gains in remedial education and adult basic education, passing important gatekeeper courses such as college-level English and mathematics, or earning college credits at a certain rate (Jobs for the Future, 2008; Leinbach & Jenkins, 2008; Moore, Shulock, & Offenstein, 2009; Prince & Jenkins, 2005). Analyzing performance on intermediate outcomes can be very helpful to colleges to better understand and intervene in the processes that shape more ultimate forms of performance (Jobs for the Future, 2008). Washington State has pioneered the use of such intermediate outcomes in its Student Achievement Initiative for community colleges (Jenkins, Ellwein, & Boswell, 2009).[15] Much the same indicators are being tested by six states participating in the Cross-State Data Work Group of the Achieving the Dream initiative (Jobs for the Future, 2008).

Beyond graduation, transfer, and job placement, it is also important to measure *how well* students are completing. Performance data should include indicators for post-transfer performance, passing licensure exams, employer satisfaction with graduates, and long term job stability.

While indicators for specific kinds of learning are important, consideration should also be given to general student learning. Indicators of general learning are important to provide colleges with an incentive to foster students' general education and avoid dealing with completion demands by watering down curricular requirements or engaging in grade inflation (Dougherty & Hong, 2006). Moreover, the inclusion of direct measures of learning may be an important means to impart greater legitimacy to the Voluntary Framework of Accountability for Community Colleges, as it has had for the Voluntary System of Accountability for four-year colleges. Needless to say, devising reasonable measures of student general learning is very difficult, but it is clear that this issue will not go away, after having been forcefully put on the agenda by the Spellings Commission and numerous other commentators (Erisman & Gao, 2006; Ewell & Jones, 2006; National Commission for Accountability in Higher Education, 2005; U.S. Department of Education, 2006). Determining how best to measure general student learning is a contentious issue and may account for the absence of general learning indicators in state performance accountability systems. To best address this matter, those developing student learning indicators and their measures should make every effort to involve faculty in their design. Faculty are both key carriers of curricular and pedagogical expertise and key implementers of any learning program. Failure to involve them increases the probability of indicators and measures that lack legitimacy and technical rigor.

Finally, just as the input indicators need to be broken down by student background, so do the output or outcome indicators. As noted in our findings, this is an area where the performance indicators in our 10 states are particularly deficient. Only 4 states disaggregate outputs by race/ethnicity and even fewer do so by gender, income, age, or language status. Again, including indicators that take into account less advantaged students is important in order to counteract any incentive community colleges might have to improve their outputs by focusing on more advantaged students (Dougherty & Hong, 2006). Moreover, including such indicators avoids penalizing colleges that take in many disadvantaged students and have to invest in more extensive student support programs.[16] All this said, it should not be extremely difficult for states to disaggregate at least some

outcomes by student background. A national survey by the National Center for Higher Education Management Systems in 2006 found that 62 percent of states had state student unit record data systems that contained longitudinal data for individual students giving their race/ethnicity, gender, credit completion, and graduation (Ewell & Boeke, 2006).[17]

*Systemic indicators*. Beyond these issues of selecting the right indicators of the performance of individual colleges, attention should also be given to securing good indicators of systemic performance. An important lesson that has emerged in recent years is the importance of indicators that capture the performance of the entire higher education system (Erisman & Gao, 2006; Ewell & Jones, 2006; National Commission on Accountability in Higher Education, 2005; Shulock, 2003; Wellman, 2006). Performance accountability systems need to measure not just how individual colleges are performing but also how well the entire higher educational system — community colleges and universities combined — is creating cultivated citizens and technically prepared workers. Such measurement is particularly important in the case of transfer to universities, where rates of transfer are shaped not just by what community colleges do to prepare students but also what the universities do to admit students.

### Ways to better measure indicators

In order to yield data that validly measure how community colleges are performing, it is important that the indicators above be properly measured and that the resulting data be put in the right context.

*Proper measurement*. In terms of proper measurement, it is important that the data pertain to the relevant students and fully cover their performance. Data should be gathered on all students and not just on those who are attending full time or began their enrollment in the fall. Moreover, for data on degree completion, it is important that the data pertain to students who are first-time students in community college and are indeed degree seeking. Finally, every effort should be to count all students who transfer to a four-year college: those transferring with or without a degree, to private as well as public colleges, and to out-of-state as well as in-state institutions (Offenstein & Shulock, 2009).[18]

Another key consideration in producing data that fairly represent community colleges is extending the time frame for tracking outcomes for students. Many students attend community colleges part time or have to begin by taking noncredit remedial courses and therefore do not complete a degree or demonstrate other successful outcomes within the three years mandated by the federal Graduation Rate Survey.[19] When students are instead followed up six years after entry, completion rates go up sharply (Jobs for the Future, 2008; Offenstein & Shulock, 2009).

*Contextualization of data*. Community colleges vary greatly in their student composition and the nature of their catchment areas. Hence, seeming differences in performance may be due in good part to differences in the characteristics of entering students. In order to better understand how community colleges are really performing, performance indicators for community colleges need to be contextualized or benchmarked, either by comparing

colleges to relevant peer groups or by statistically adjusting performance data for the entry characteristics of students (Carey & Aldeman, 2008; Dougherty & Hong, 2006; Dowd & Tong, 2007; Erisman & Gao, 2006; Zumeta, 2001).[20] As noted above, 3 of our 10 states provide peer group comparisons but it would be very helpful to have such comparisons be the norm. California and Oklahoma provide useful examples of how performance data can be benchmarked (California Community Colleges, 2009; Oklahoma State Regents for Higher Education, 2009). In addition, some contextualization can be achieved by calculating separate completion rates for remedial versus non-remedial students and comparing colleges within each category. Doing so will tend to remove the penalty that colleges with high remedial populations suffer in their reported completion rates (Offenstein & Shulock, 2000).

In addition, performance measures must take into account local labor market differences. They must acknowledge the difficulties of some colleges — particularly those in rural areas — in meeting demands for job placement in well-paying jobs (Dougherty & Hong, 2006).

Finally, data contextualization is needed to cushion small colleges against the distortive effects of small sample sizes, where changes in only a few students can have a dramatic effect on average performance. One way to counteract the effects of sampling fluctuation would be to utilize rolling averages (as is done in Tennessee and North Carolina).

### *Ways to make collection of performance data easier for community colleges*

The responses from the community colleges we surveyed concerning the problems they encounter in collecting and reporting performance data to the state suggest that certain initiatives would be helpful.

First, data requirements should be tailored as much as possible to data already collected for state student unit record systems, which were present in 40 states as of 2006 (Ewell & Boeke, 2006).

Second, community colleges would benefit from having the state itself take over more data collection tasks. Graduate and employer surveys might be better done by the state, given their high cost and the state's greater resources for getting responses.[21] Similarly, the colleges would be helped if the state collected information from "third parties," such as the state university system (transfer data) and professional associations (licensing pass rates).[22]

Third, for data that they must still collect and analyze for themselves, community colleges would benefit from state-provided technical assistance and training, particularly in collecting data requiring surveys of graduates, employers, and others.[23] Moreover, many community colleges — particularly the smaller ones — could use assistance in acquiring better information technology capacity (Dougherty & Hong, 2006). As a Maryland local community college official noted, "some smaller colleges are hindered by limited IT infrastructure which may make data extraction and retrieval more difficult than for their large-college colleagues."

*Ways to encourage colleges and state officials to better use performance data*

*Community colleges.* Our interviews point to several ways that community colleges can be helped to do a better job of analyzing data on their performance. First, they need assistance in improving their information technology and institutional research capacity (in the form of better equipment and more and better trained staff) to do high quality data analysis (Morest & Jenkins, 2007).

Second, community college constituents — particularly faculty and middle managers, who often ignore or are unaware of performance data — need to have incentives for paying greater attention to performance data. States could encourage the use of the Evidence Based Inquiry Councils that Alicia Dowd and Estela Bensimon have been calling for. Organized on the basis of consortia of community colleges, these councils could play an important role in fostering the skills and attitudes that aid community colleges in analyzing their performance, considering new programs to improve their performance, and testing how well those new programs work (Dowd & Tong, 2007). In addition, Joseph Burke and his associates have suggested that colleges be encouraged to require performance reporting by departments and other organizational sub-units. Moreover, colleges could be rewarded financially for taking performance data into account by having their use in internal budgeting be an indicator in state performance funding systems (Burke & Associates, 2002; Burke & Minassians, 2002).[24]

Third, local community colleges would benefit from more detailed commentary from state officials on the data that the colleges submit to the state. As a local official in Maryland noted,

> [W]e would like to see…more substantial review, feedback, analysis, and observation from the state and within the college on our reports and our performance….It would be informative if the state would provide an indication of its expectations for the community colleges as a whole on some of the indicators that are tied to the State Plan for Higher Education.

All of these resources for community colleges are made more effective if performance indicators are kept stable over several years. This stability allows local and state community colleges to better learn how well particular performance indicators are capturing the key educational processes of interest and how to respond programmatically to those findings (Dougherty & Hong, 2006; Erisman & Gao, 2006).

*State officials and other external stakeholders.* One way to encourage state officials to make better use of performance data is to improve the number and skills of staff members in state offices who can analyze the data. But it is also important to get legislators and executive branch officials to pay more attention to data. It has been proposed that state officials be mandated to acknowledge that they have read and responded to state accountability information. In fact, state officials could be asked to detail precisely how they have taken performance data into account in improving policy and performance and how they will use them in the future (see Burke & Minassians, 2002).

# NOTES

[1] Since the Dougherty and Reid (2007) report, Texas added performance funding for the state universities (Southern Regional Education Board, 2007) and Washington has done the same for community colleges (Davis, Ellwein, & Boswell, 2009; Washington State Board for Community and Technical Colleges, 2007). Arguably, the number of states with performance funding should not include those states that have established systems but have not funded them. Omitting those states would remove Louisiana and Oregon from the list and reduce the number to around 13.

[2] Washington State had a short-lived performance funding system between 1997 and 1999 (Dougherty & Natow, 2009).

[3] Today, about one quarter (15) of the states have performance funding, in which a portion of state appropriations are tied to institutional performance on specific indicators. Virtually all the states have performance reporting (Dougherty & Reid, 2007; Southern Regional Education Board, 2007).

[4] We differentiate indicators from measures. By measures we mean the particular way that an indicator is operationalized. For example, does the graduation indicator take the form of the gross number of graduates or of the rate of graduation? If the measure is the graduation rate, what is the denominator: all entrants to the community college or just those who have reached a certain milestone?

[5] Enrollments are not always present in state performance data systems because of the focus on outputs and outcomes.

[6] Arguably, we are actually overestimating the actual incidence of states breaking down performance data by student background. For example, we are taking enrollment in English as a Second Language programs as an example of breaking enrollments down by language status. Clearly, this is only a rough approximation to such a breakdown. See the Appendix for additional information.

[7] The CLAST was done away with in the last legislative session due to budget issues.

[8] The "High" response from North Carolina seems to be more a product of the fact that the state can easily report IPEDS data from its state unit-record system rather than an assessment of the degree to which the state performance data overlap the IPEDS data.

[9] However, it should be noted that, even when states publicly report performance data, these data may only comprise a subset of the total performance data collected. For example, Florida reports certain performance data only to the community colleges themselves and not to the public or to the legislature (Dougherty, Reid, & Nienhusser, 2006).

[10] The variables used for the cluster analysis vary by the indicator. For example, to determine the peer groups on the indicator for persistence, the cluster analysis used these three variables for each community college: student headcount enrollment; proportion of students age 25 and older; and median household income in a college's Economic Service Area. Meanwhile, to determine the peer groups for the basic skills course completion indicator, the variables used for the cluster analysis were student headcount, $75^{th}$ percentile math SAT score at the nearest campus of the California University System, and the poverty rate in a college's service area (California Community Colleges, 2009).

[11] A study of state community college policy in 5 states corroborated this, finding very limited state use of performance data to craft state policy in 4 of the 5 states (Dougherty et al., 2006).

[12] This variation shows up as well in the reports of local community college officials interviewed as part of a study of state community college policies in the first five Achieving the Dream states. Some colleges reported moderate to heavy use of state performance data; others reported little use. However, the modal pattern is of heavier use than at the state level (Dougherty et al., 2006).

[13] To be sure, 8 of the states we examined do break down enrollments by race and ethnicity and five by income, but only three do so by gender and one each by age and language status.

[14] That said, breaking data down more often by student background is not always easy. There are reports of students increasingly refusing to report their ethnicity when asked. Also, income information is hard to collect because students feel it is intrusive to be asked about it.

[15] The Student Achievement Initiative of the Washington State Community and Technical College system has four intermediate achievement indicators. Two measure first year college-level progress in terms of the number of students earning the first 15 and first 30 college-level credits. Another indicator measures the number earning the first 5 college-level credits in a math class that meets the requirement for computation (applied degree) or quantitative reasoning (transfer degree). The fourth indicator measures gains in skill for students taking adult basic education or remedial education (Washington State Board for Community and Technical Colleges, 2007).

[16] In a study of the first year of the Student Achievement Initiative in Washington, community college respondents voiced concern that — because the Initiative does not have such indicators that take student background into consideration — colleges that take in more disadvantaged students are penalized (Jenkins et al., 2009).

[17] The figures are for states that collect data for the following variables defined as "set 2": Sex, Race/Ethnicity, Date of Birth, Geographic Origin, Program/Major, Full-time/Part-time Status, Credits Attempted, Credits Earned, Degree Awarded (Ewell & Boeke, 2006, Table 3).

[18] In order to determine whether students are first-time to a community college, it has been recommended that gathering this information not be left to self report but rather checked in a national database, such as the National Student Clearinghouse. Similarly, determining degree intentions should also not be left to student self report but determined by whether students exhibit a combination of having taken more than six credits in the first year and enrolled within the first two years in a course (such as college math or English) that is usually taken only by degree seeking students. Finally, in order to capture all transfer students, it is also recommended that the National Student Clearinghouse be used, rather than relying just on reports from in-state public four-year colleges and universities (Offenstein & Shulock, 2009).

[19] IPEDS is now collecting data on outcomes four years, as well as three years, after community college entrance.

[20] The Job Training Partnership Act used such a system of statistical adjustment to set standards for service delivery areas (SDAs) (Bailey, 1988). However, a warning is necessary here. Though many students at community colleges do not aspire to a degree, colleges should still aim strongly to "warm up" aspirations, especially those of less-advantaged students. Adjusting retention and graduation measures for student body composition must not become a substitute for vigorous action to reduce rates at which students leave college without a degree or transferring to another institution. One way to encourage such vigorous action is to gradually increase the expected standard for retention and graduation, so that colleges are pushed to warm up student aspirations.

[21] This is no panacea, however. State agencies also run into significant problems in getting adequate responses rates to their surveys.

[22] However, this means that state governors and legislators have to become more committed to providing state community college boards with more funds to improve their data gathering and analysis capacities.

[23] The importance of technical assistance has also been noted by Dougherty and Hong (2006), Grubb and Badway (2004), and Petrides (2002).

[24] That said, it should be noted that states can expect significant resistance to indicators of intra-institutional use of performance data. Many community colleges may react to the suggestion in the text as badly exacerbating what they already perceive to be overly heavy reporting requirements.

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# APPENDIX:
## GENERAL AND SPECIFIC INDICATORS IN STATE PERFORMANCE REPORTING AND FUNDING SYSTEMS IN 10 STATES

| General Indicator | Specific Indicator | States |
|---|---|---|
| **Input Indicators** | | |
| Enrollments | Fall headcount | TX, MA, MD |
| Enrollments | Annual unduplicated enrollment | TX, CA, MA, LA, NC, MD |
| Enrollments | Enrollment by semester | TX |
| Enrollments | Recent high school graduates: Number | NC |
| Population served | Population served (CA: system wide) | IL, CA |
| Population served | Percentage of recent high school graduates enrolled in college | FL, MD |
| Population served | Market share of first-time, full-time freshmen | MD |
| Population served | Percentage of high school tech prep students enrolling in a community college | NC |
| Population served | Percentage of adult population enrolled | NC |
| Population served | Percentage of high school dropouts served by basic skills courses | NC |
| Enrollment by race | Enrollments: Number by race | CA, MD, IL, TX, MA, NC, FL |
| Enrollment by race | Population served: Rate by race (CA: system wide) | CA, OR |
| Enrollment by race | Enrollment share of races compared to population share | TX, MA, MD |
| Enrollment by language status | Enrollments: Number in English as Second Language courses | MD |
| Enrollment by income | Students receiving financial aid: Number | TX, IL, LA, MD, NC, FL |
| Enrollment by income | First generation college students: Number | IL |
| Enrollment by gender | Enrollments: Number by gender | IL, CA |
| Enrollment by gender | Population served: Rate by gender (CA: system wide) | CA |
| Enrollment by gender | Enrollment share compared to population share | TX |
| Enrollment by age | Enrollments: Number by age | CA |
| Enrollment by age | Population served: Rate by age (CA: system wide) | CA |
| Enrollment by disability status | Enrollments: Number by disability status | IL |
| Enrollment by academic preparation | Mean ACT Composite Score | LA |
| Enrollment by developmental needs | Enrollments: Number by developmental education needs | MD |

| General Indicator | Specific Indicator | States |
|---|---|---|
| **Process Indicators** | | |
| Tuition and fees | Tuition and fee revenue for 30 semester credit hours | TX |
| Tuition and fees | Tuition and basic fees for a full-time in-district student | IL |
| Tuition and fees | Undergraduate mandatory attendance fees (resident and non-resident) | LA |
| Tuition and fees | Tuition and fees as a percent of tuition and fees at public four-year institutions | MD |
| Tuition and fees | Tuition and fees as a percent of median family income | MA |
| Tuition and fees | Tuition and fees compared to community colleges within geographic region | OR |
| State funding | State dollars per FTE | LA |
| Expenditures | Percentage of expenditures on instruction | MD |
| Expenditures | Percentage of expenditures on instruction and selected academic support | MD |
| Expenditures | Percentage of expenditures on institutional support | TX |
| Expenditures | Expenditure per student | MA, LA |
| Financial other | Fundraising from private sources | MA |
| Financial other | Projects and initiatives that result in cost savings and more efficient use of system resources. | MA |
| Financial other | Review of fiscal health: Measure of how long community college could operate using only reserve funds, if all other revenues stopped. | MA |
| Financial other | Independent annual audit of institutional fiscal practices | MA |
| Faculty characteristics | Full-time faculty: Number and percentage of all faculty | TX |
| Faculty characteristics | Contact hours: Percentage taught by faculty | TX |
| Faculty characteristics | Faculty: Breakdown by race | MD, IL |
| Faculty characteristics | Administrative and professional staff: Breakdown by race | MD, IL |
| Faculty characteristics | Baccalaureate/transfer faculty preparation | IL |
| Faculty/student ratio | Faculty/student ratio (TX). Average class size (IL) | TX, IL |
| Transfer education programming | Number of general education and major specific courses included in the Illinois Articulation Agreement | IL |
| Vocational programming | Enrollment in workforce development courses | MD, MA, NC |
| Vocational programming | Enrollment in continuing professional education leading to government or industry-required certification or licensure | MD |
| Vocational programming | Number of courses/workshops conducted by business and industry center | IL |

| General Indicator | Specific Indicator | States |
|---|---|---|
| Vocational programming | Enrollment in contract training courses and/or small business development | MD, TX, NC, IL |
| Vocational programming | Number of business organizations provided training and services involving contract training and/or small business development | MD, IL, NC |
| Teacher preparation | Teachers, administrators, and paraprofessionals trained: Number | IL |
| Teacher preparation | Course sections given: Number | IL |
| Teacher preparation | Collaborative partnerships with university teacher education programs or K-12 schools: Number | IL |
| Non-credit programming | Enrollment in non-credit coursework | IL, MD |
| Remediation programming | Enrollment in developmental, basic skills, and literacy courses: Number | IL, MD, TX, NC |
| GED programming | Enrollment in General Equivalency Diploma program | TX |
| Online programming | Enrollment in online courses | LA, IL, MD, NC |
| Online programming | Number of distance learning courses | LA, IL |
| Dual enrollments | High school students served through dual enrollment courses: Number | OR, IL, TX, OH, FL |
| **Output/Outcome Indicators** | | |
| HS completion | General Equivalency Diplomas (GEDs) and Adult High School diplomas awarded: Number | FL, NC |
| HS completion | GED certificate applicants successful: Rate | OR, IL |
| HS completion | GED completers enrolling in college level coursework: Number | IL |
| Remediation success | Adult Basic Education Literacy Completion Points awarded: Number | FL |
| Remediation success | Students who complete basic skill/ESL: Rate | OR |
| Remediation success | Progress of basic skills students: Increase in level of basic skills: Number (CA, IL); Rate (CA, NC) | CA, IL, NC |
| Remediation success | Students who completed some remedial student credit hours in the current year: Number | OH |
| Remediation success | Students who completed developmental education: Number | FL |
| Remediation success | Students who completed developmental education: Rate | TX, FL, IL, MD, NC |
| Remediation success | Success rate of developmental students in subsequent college level course: Rate | NC |
| Remediation success | Remedial credits earned versus attempted | IL |

| General Indicator | Specific Indicator | States |
|---|---|---|
| Credits earned | Students who earned at least 15 semester credit hours at institution in current year: Number | OH |
| Credits earned | Students who earned at least 30 semester credit hours: Number (MA, OH), Rate (CA) | MA, CA, OH |
| Credits earned | Students who earned at least 45 semester credit hours in the current year: Number | OH |
| Credits earned | College preparatory retention and success rates: Rate of AA degree seeking student who completed at least 18 college credits during the tracking period and completed all college preparatory requirements. | FL |
| Specific courses passed | Students earning first 5 semester student credit hours of General Studies level math courses at institution in current year: Number | OH |
| Specific courses passed | Students who successfully complete college level course in math, reading, and writing: Rate | TX |
| Specific courses passed | Students who successfully complete credit vocational, basic skill, ESL courses: Rate | CA |
| Course completion | Students enrolled in credit courses who earned the credit(s): Rate | MA, TX |
| Skill and knowledge acquisition | Passed College Level Academic Skills Test after completing 60 or more college credit hours: Rate | FL [suspended this year] |
| Skill and knowledge acquisition | Marketable skills awards completers: Number | TX |
| Skill and knowledge acquisition | Occupational Completion Points generated | FL |
| Retention | Persistence/retention rate | MD, MA |
| Retention | Retention: Fall to spring | MA |
| Retention | Retention: Fall to fall: Rate | TX, LA, CA, MA, NC, FL |
| Retention | Retention: Second Year: Rate | TX, LA |
| Graduation from CC | Three, four, and six-year graduation: Rates | TX, LA |
| Graduation from CC | Associate degrees and certificates awarded: Rate | TX, CA, MA, LA, OR |
| Graduation from CC | Associate degrees and certificates awarded: Number | TX, FL, NC, OH |
| Graduation from CC | Occupational program degrees and certificates: Number | IL, MD, OR |
| Graduation from CC | Nursing and allied health: Number (TX, LA); Rate (OR) | TX, OR, LA, FL |
| Graduation from CC | Associate of Arts in Teaching: Number | TX |
| Graduation from CC | Completers of Educator Preparation Institutes: Number | FL |
| Graduation from CC | Awards in Closing the Gaps critical fields: Number | TX |

| General Indicator | Specific Indicator | States |
|---|---|---|
| Graduation from CC | Graduated or still enrolled in college: Rate | TX, FL, CA, MD, NC |
| Continuing education | Continuing education after community college (not restricted to transfer to senior institution): Number | FL, NC |
| Transfer | Transfer to senior institution: Number | CA, FL, NC, OH, TX |
| Transfer | Transfer to senior institution: Rate | TX, CA, OR, IL, MA, MD |
| Transfer | Students graduating from University of CA and CA State Universities who began at community colleges: Number | CA |
| Transfer readiness | Students who took necessary courses to prepare to transfer: Rate | CA |
| Transfer readiness | Students who attempt one year of semester credits followed by transfer to an University System of Ohio university or branch in the current year: Number | OH |
| After-transfer performance | Student academic performance at transfer institutions: Rate | MD, FL, NC |
| After-transfer performance | BA graduation of students who attended community college and transferred to Univ. of CA or CA State Univ.: Number | CA (system wide) |
| After-transfer performance | Transfer to senior institution and return for a 2nd year | OR |
| Time to degree | AA graduates who complete in 72 credit hours or less: Number | FL |
| Employment | Graduates employed after graduation: Number | FL |
| Employment | Graduates employed after graduation: Rate | FL, TX, NC |
| Employment | Graduates employed or enrolled in further education: Rate | IL, TX |
| Employment | Income after graduation | CA (system wide) |
| Employment | Career program graduates employed in a related field: Rate | MD, FL |
| Employment | At-risk youth employed after community college: Rate | OR |
| Employment | Current/incumbent workers who retained employment after exiting community college: Rate | OR, IL |
| Employment | Adult clients employed after adult workforce programs: Rate | OR |
| Employment | Dislocated workers who obtained employment with at least 80% of prior earnings: Rate | OR |
| Other economic outcomes | Small Business Development Center pre-venture/start-up entrepreneurs with a completed business plan who start a business: Rate | OR |
| Other economic outcomes | Businesses attracted or retained through college business and industry centers: Number | IL |

| General Indicator | Specific Indicator | States |
|---|---|---|
| Passing licensure exams | Licensure/certification exam pass: Rate | TX, MD, MA, OR, IL, NC, FL |
| Student satisfaction | Student leavers (graduates and/or non-graduates) reporting that primary reason for attending was met: Rate | MD, NC |
| Student satisfaction | Student leavers' (graduates and/or non-graduates) satisfaction with college quality (job preparation and/or preparation for transfer): Rate | MD, IL, NC |
| Employer satisfaction | Employer satisfaction with career program graduates: Rate | MD, IL, NC |
| Employer satisfaction | Employer satisfaction with contract training: Rate | MD, NC, OR |
| Customer satisfaction | Customers rating their satisfaction with college's customer service as "good" or "excellent": Rate | OR |
| Accreditation | Academic program accreditation: Rate | LA |
| College honors and activities | Numbers of members of Phi Beta Kappa, awards to school, participants in service learning programs | TX |
| Success by race | GEDs, Adult High School diplomas, Adult Basic Education Literacy Completion Points: Number by race | FL |
| Success by race | Remediation passing: Rate by race | FL |
| Success by race | Retention: Rate by race | TX, MD |
| Success by race | Graduates of degree and certificate programs: Number by race | TX, FL |
| Success by race | Graduates of degree and certificate programs: Rate by race | MD, IL, TX |
| Success by race | Marketable skill award completers: Number by race | TX |
| Success by race | Graduation or continuation of education: Rate by race | TX |
| Success by race | Transfer: Rates by race | MD, TX, FL |
| Success by race | Job placement: Rate by race | TX |
| Success by race | Licensure passing for teachers: Rate by race | TX |
| Success by income | GEDs, Adult High School diplomas, Adult Basic Education Literacy Completion Points: Number by income | FL |
| Success by income | Graduates of degree and certificate programs: Number by income | FL |
| Success by gender | Graduates of degree and certificate programs: Number by gender | TX |
| Success by gender | Graduates of degree and certificate programs: Rate by gender | IL |
| Success by gender | Marketable skill award completers: Number by gender | TX |
| Success by gender | Graduation or continuation of education: Rate by gender | TX |
| Success by age | At-risk youth: Enrolled at-risk youth who remained in or returned to school, or obtained their high school diploma/equivalent upon exiting the program: Rate | OR |

| General Indicator | Specific Indicator | States |
|---|---|---|
| Success by age | Current/incumbent workers who retained employment after exiting community college: Rate | OR, IL |
| Success by age | Adult clients employed after adult workforce programs: Rate | OR |
| Success by age | Dislocated workers who obtained employment with at least 80% of prior earnings: Rate | OR |
| Success by language status | GEDs, Adult High School diplomas, Adult Basic Education Literacy Completion Points: Number who tested into English for Academic Purposes | FL |
| Success by language status | Graduates of degree or certificate programs: Number who tested into English for Academic Purposes | FL |
| Success by disability status | GEDs, Adult High School diplomas, Adult Basic Education Literacy Awards: Number disabled | FL |
| Success by disability status | Graduates of degree or certificate program: Number disabled | FL |

**Sources**

California        California Community Colleges (2009).

Florida          Florida Community College System (2007, 2009);
                 Dougherty, Reid, & Nienhusser (2006)

Illinois         Illinois Community College Board (2009)

Louisiana        Louisiana Division of Administration (2009)

Maryland         Maryland Higher Education Commission (2008)

Massachusetts    Massachusetts Department of Higher Education (2008)

North Carolina   North Carolina Community College System (2008);
                 Dougherty, Reid, & Nienhusser (2006)

Ohio             Ohio Board of Regents (2009)

Oregon           Oregon Department of Community Colleges and Workforce
                 Development (2008)

Texas            Texas Higher Education Coordinating Board (2009);
                 Dougherty et al. (2006)