Basic Skills Outcomes Capacity (BSOC) Project
A study on the use of evidence in California community colleges

July 2009

The RP Group

The RP Group seeks to build a community college culture that views planning, evidence-based decision-making, and institutional effectiveness as key strategies for student success. We use an integrated model of research and evaluation services, professional development, and statewide projects to achieve these goals within the California community college (CCC) system.

At the core of RP's approach is an effort to expand the definition of research. More than gathering information, we envision a process that also encompasses dissemination, interpretation, action, and ongoing evaluation of practice.

The California community college system, with 110 colleges and 2.9 million students, is the largest system of higher education in the world. Growing from its roots as a professional association for research and planning staff within this system, RP now works on multiple levels to facilitate the transformation of how evidence is understood and integrated into the classroom, the institution, and the system as a whole.

Gathering institution- and system-wide data from an insider's perspective. Most research conducted on community colleges is instigated by four year institutions. The RP Group is unique because its research projects are generated by questions from within the system and conducted by teams of community college faculty, administrators, institutional researchers, and student services staff who can gather more nuanced information. Furthermore, our teams are able to contextualize research results so they can be used by practitioners to better understand and take action on issues at their own colleges. For example, an RP research report popularly known as *The Poppy Copy* became an organizing framework for local efforts and statewide funding for basic skills. Our key research topics include workforce training, transfer, and basic skills. RP also provides evaluation services to colleges, funders, and statewide initiatives.

Providing venues for sharing and analyzing information. Given the size and diversity of the CCC system, practitioners may be unaware of work being done at other colleges. Therefore, RP offers a range of opportunities for practitioners to engage research findings, build skills, and share information from their own colleges, including large state-wide conferences, multi-day institutes, regional networks, and internet-based exchanges. In addition, RP serves as a neutral convener of stakeholders in order to facilitate planning and consensus-building on statewide issues. For example the RP Group has helped shape revisions in the structure of the Basic Skills Initiative, recommended consistent measures for statewide accountability, and strengthened implementation of student learning outcome assessment.

Building a stronger understanding of the use of information in California community colleges. Although data has traditionally been perceived as the purview of institutional research offices, the increased focus on accountability requires that faculty, administrators, and student services staff engage with gathering, analyzing, and acting on information as well. The RP Group helps facilitate this shift through tailored support, often in partnership with other organizations. For example, RP offers workshops and conference sessions for administrators in conjunction with CCLC and ACCCA and collaborates with the statewide Academic Senate to train and support student learning outcome coordinators. By incorporating faculty, staff, and administrators in our research projects and partnering with other organizations to tailor and disseminate research results, we also help build expertise and confidence in research. Finally, RP works with institutional researchers to build their skills in providing data coaching and support.

Project Summary

The Basic Skills Outcomes Capacity (BSOC) project focused on two related issues: 1) the identification of practical measures for basic skills success and 2) the institutional research structures and capabilities necessary to effectively drive a data-informed strategy. This report summarizes findings from the second portion of the project—the use of evidence in California community colleges and the relationship between institutional research practices and a college's ability to effectively pursue outcomes-based strategies. Funding for this project, which was conducted during 2008-2009, was provided by the William and Flora Hewlett Foundation.

The information gap

In an effort to better understand the types of evidence colleges are collecting and how it is being used, this study surveyed representatives from over 100 California community colleges. At each of these institutions, information was gathered from a broad range of professionals including CEOs, chief instructional officers, deans, managers, faculty, and institutional researchers. The opportunity to map data flows across the institution from multiple frames of reference provided insight into how research could be more strongly linked to practice at all levels of the institution.

The survey found that:
- Colleges are data rich and information poor. Although many colleges are successfully tracking metrics ranging from enrollments to student learning outcomes, few have the capacity to analyze the data and use them to inform decision making.
- There is a perception gap between administrators and faculty regarding the availability and use of assessment data. Furthermore, college administrators believe that information is more widely available and integrated into planning than those who work more closely with students.
- Although institution-level data is being reviewed regularly, data at the intervention level is used less frequently and by fewer individuals.

Respondent identified several areas where support is needed to foster the use of evidence:
- Assistance with interpretation and use of data and information
- Additional staff to support the increased demand for research
- Increased access to data and information

Finally the study indicated that there is a correlation between established research practices and a consistent integration of evidence throughout the college. Examples include:
- An established research office where staff serve on numerous college-wide committees
- Widely available information and analysis through online systems and training on using evidence
- Established mechanisms for requesting data and information, coupled with policies and protocols for conducting and using research on campus
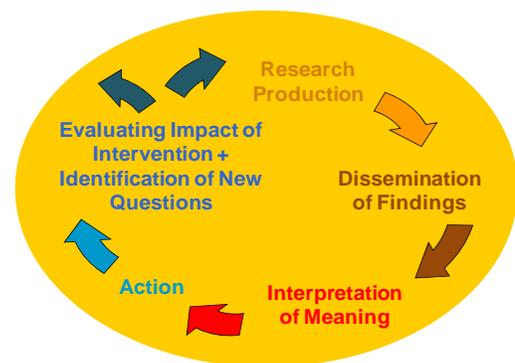
Redefining the research function

The gap between the collection and use of evidence, the disconnect between institutional and student-level assessment, and the need for greater sharing and interpreting of

information suggests that a redesign of the research function may be warranted. Most community college research offices have been explicitly engineered to support the collection of outcome data to facilitate the preparation of state mandated reports and strategic benchmarking activities. While analysis of enrollment management, productivity, and efficiency are key foundational pieces of information for college operations, they are somewhat removed from the core mission of the college – to optimize conditions for student learning, both in the classroom and through programs and services that enhance learning. It appears that a better balance might be struck between the various types of research, with an increased focus on research, analysis, and consultation that is closer to the practitioner level and more directly addresses student learning.

As a an interventionist discipline, institutional research must evolve to meet the emerging demands on community colleges to build data support processes that inform decision making at every layer of the institution. The path to ongoing innovation and a pervasive culture of inquiry requires that colleges broaden their definition of research to include the following five activities:

1. **Production** - gather and collect data, conduct analyses and write research reports that are both clear and informative.

2. **Dissemination** – have an infrastructure in place for the dissemination of data and information to appropriate stakeholders throughout the college and to the public.

3. **Interpretation** – help administrators, faculty and staff analyze and interpret the data and information and in so doing, assist them in evolving their research and inquiry skills.

4. **Translating Evidence into Action** – assist administrators, faculty and staff in using data and information to drive improvement and planning decisions.

5. **Closing and Widening the Loop** – ensure that decision making is translated into action and action is widely evaluated and based on data.

A recasting of research along these lines will require an expanded set of capabilities. First, the capacity and skills of institutional research offices must be expanded so that they can work more closely with practitioners. Second, faculty and student services professionals must become more fluent in understanding and acting on information, so that their expertise can be lent to defining research questions, interpreting data, and formulating action steps.

Research Production

Evaluating Impact of Intervention + Identification of New Questions

Dissemination of Findings

Action

Interpretation of Meaning

In order to facilitate this reformulation of research, the RP Group also recommends:

- o Increasing the efficiency of institutional research offices to handle growing workloads
- o Developing online and regional professional development structures that facilitate building cultures of evidence

- o   Providing college-specific assistance that enables a number of campuses to work more effectively with data and information

These recommendations form the structure for the Bridging Research, Information, and Culture (BRIC) program, which the RP Group launched in Fall 2009 with funding by the Hewlett Foundation.

Conclusion

The California community college system is at a crossroads. Faced with deep budget cuts and skyrocketing enrollments, colleges will need to restructure themselves to prepare students for college-level work, retrain adults who have lost their jobs, integrate the fast-growing immigrant population, and respond to heightened accountability requirements. The BSOC project gives a snapshot of this transition, highlighting the need to ramp up the role of research to enable colleges to make their transformations based on solid evidence. This research shows that developing the capacity to understand and act on information has been difficult even in the relatively generous funding environment of the past three years. It will be imperative going forward that colleges are able to streamline their reporting, enhance access and ability to understand data, and ensure that this information helps to shape future efforts. Ultimately this project, together with the new BRIC program, strive to formulate a roadmap for organizational change using key outcomes measures to facilitate improved success for the system's 2.9 million students.
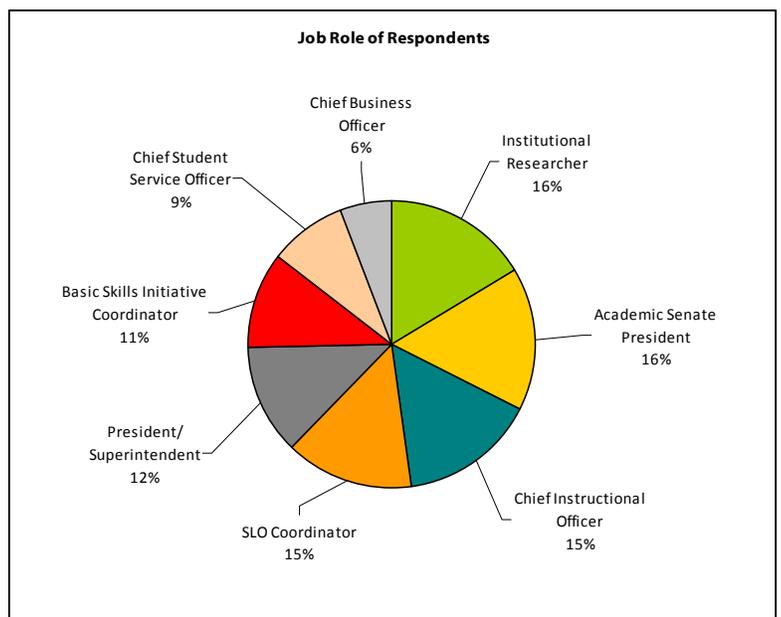
Analyzing Research Capacity

In 2009, California community colleges have more data and evidence at the campus level than that at any point in the system's history. Calls for accountability from legislatures, accrediting agencies, employers, and the general public have had the effect of rapidly escalating the demand for data and evidence and their integration into campus decision making and planning processes. One significant question that has accompanied this shift is whether the colleges have the ability to meet this increased set of needs. Have the colleges been able to expand their research capacity from traditional roles—such as crunching numbers and producing reports—to the activities of interpretation, translating evidence into action, and closing the feedback loop?

In order to find out, an Institutional Research Usage Survey was developed by a team of California community college personnel, including a chief instructional officer, chief student services officer, faculty, and research and planning professionals. In addition to documenting current research capacity and practices for understanding and utilizing student performance and outcomes measures, the survey investigated a range of capacity building options including the concept of data coaching. The survey was sent to chief executive officers, chief instructional officers, chief student services officers, chief business officers, institutional researchers, Academic Senate presidents, Basic Skills Initiative coordinators, and student learning outcome coordinators during Spring 2009.

The response to the survey was strong —323 respondents representing 110 district offices and colleges, with over 100 individual colleges represented in the responses. These responses represented a balanced cross-section of constituencies. The employment classification of the respondents ranged from 138 executive, managerial, or administrative and 136 full-time faculty to 29 middle management/administrators, 14 full-time classified staff, and 6 other classifications. More than 60% of the respondents had worked at their institution for six or more years. Less than 10% of the respondents had worked at their institution for less than one year.

The survey results yielded useful information for determining where the greatest needs for research and

Job Role of Respondents

Chief Business Officer 6%
Institutional Researcher 16%
Chief Student Service Officer 9%
Academic Senate President 16%
Basic Skills Initiative Coordinator 11%
Chief Instructional Officer 15%
President/ Superintendent 12%
SLO Coordinator 15%

research capacity lie within the California community college system. The survey also yielded keen insight into the inconsistencies and gaps in processes, procedures, and usage of data and information within any given college.

Use of Information

Respondents were asked about the degree to which their college used a variety of information such as enrollment, environmental scans, and student outcomes. Nearly every respondent felt that data were used at least occasionally across every information category. However, tools associated with planning activities were labeled as having frequent levels of use while several tools associated with context-specific analysis and assessment—namely, surveys, SLOS, and focus groups—were more often associated with "occasional" as opposed to "frequent" use. ***The difference in perceptions suggest that data are used to support planning more so than they are to support performance improvements.***

Type of Information	Frequent	Occasional	No Use
Enrollment	92%	6%	1%
Productivity and Efficiency	84%	15%	0%
Student Characteristics	73%	24%	2%
Student Outcomes	71%	28%	1%
Surveys	49%	49%	1%
SLO and Assessment	46%	49%	5%
Environmental Scan	33%	62%	4%
Focus Groups	10%	76%	13%

The next question focused on the extent to which the college or district research office works with various constituency groups on campus. While more than three-quarters of respondents agreed or strongly agreed that the research office provides data to entities throughout the college, ***considerably fewer respondents thought the research office provided assistance on use of data to constituencies other than the president.***

The research office provides …	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
Specific data to president and executives	63%	21%	5%	3%	3%
College-wide data on a regular basis	47%	33%	6%	8%	5%
Assistance to president on use of data for planning	46%	27%	8%	7%	4%
Specific data to faculty or faculty groups	40%	35%	8%	8%	6%
Specific data to college-wide committees	38%	35%	14%	8%	3%
All groups consultation on use of data	31%	35%	15%	11%	6%
Assistance to faculty on using data	29%	36%	14%	11%	7%
All groups assistance with research design	26%	31%	21%	11%	7%
Assistance to staff on using data	23%	28%	21%	10%	7%

Next, respondents were asked to indicate the frequency with which data and information are used at their college for planning and decision making. In contrast to our findings on dissemination of data from the IR office, while data use appears to be fairly high across the institution, we find that *the use of data in decision making is more concentrated in activities related to enrollment planning and broader strategic activities than it is in classroom and student level analysis*.

Data and information are used to …	Always	Usually	Sometimes	Seldom	Never
Analyze enrollment/decisions regarding offerings	27%	44%	20%	6%	1%
Track student progress at program level	22%	41%	27%	8%	0%
Track progress through basic skills	19%	40%	31%	7%	1%
Analyze overall institutional effectiveness	18%	45%	31%	6%	0%
Assess program and service effectiveness	18%	41%	32%	8%	0%
Measure and report institutional quality	17%	46%	27%	8%	1%
Assess student learning outcomes	15%	32%	38%	11%	2%
Analyze student progress in a program	12%	34%	39%	11%	1%
Assess needs of community/planning	6%	33%	38%	17%	3%

Respondents were also asked to indicate the level at which various individuals or groups are involved in the use of data and information to make planning and improvement decisions. These responses reveal a sharp divide in the use of data in making decisions. Respondents felt that college administration were far more likely to use data than faculty or service area experts. This finding reinforces those in previous tables suggesting that *IR office activities tend to be more aligned with the data demands of administration than those of faculty and staff*. This most likely reflects both the typical college reporting structure whereby IT reports to the CEO or CIO as well as the growing difference in data support needs felt by these two constituencies.

How involved is (are) … in use of data	Extremely Involved	Very Involved	Somewhat Involved	Not Very Involved	Not Involved	Don't Know
Institutional Researcher	64%	15%	7%	3%	2%	8%
Chief Instructional Officer	56%	26%	8%	2%	0%	8%
President/Superintendent	46%	29%	10%	2%	1%	13%
Chief Student Services Officer	36%	30%	17%	4%	1%	12%
Instructional Deans	34%	40%	14%	2%	1%	10%
SLO Coordinator	33%	31%	17%	4%	2%	12%
Basic Skills Initiative Coordinator	30%	34%	19%	4%	2%	11%
Academic Senate President	22%	30%	26%	9%	2%	11%
Department Chairs	11%	32%	33%	8%	4%	12%
Counseling Faculty	3%	19%	38%	16%	3%	20%
Classroom Faculty	2%	15%	52%	21%	3%	7%

Survey Results by College Role

Given the gaps in how information is used by different groups, the results were analyzed based on whether respondents came from administration (president, chief instruction officer, chief student services officer, and institutional researcher) or faculty (Academic Senate president, Basic Skills Initiative coordinator, and student learning outcomes coordinator).

The administration and faculty groups perceived the frequency of use of data and information similarly, except for surveys, student characteristics, and environmental scans. In this case, the administration group used data and information more frequently than did the faculty group. The table below illustrates the differences with respect to the metric of student characteristics – namely that administration felt that the use of this data was frequently used much more often than did faculty (83% vs. 62%).

Role Group	Frequent	Occasional	No Use
Administration	83%	17%	0%
Faculty	62%	33%	5%
Total	74%	24%	2%

A clearer divide appeared in response to the provision of data, information, or services by the research office. In every case, *a significantly greater percentage of the administration group responded that they agreed or strongly agreed that the research office provides data, information, or services than did the faculty group*.

The research office provides …	Administration	Faculty	Difference
Specific data to president and executives	91%	74%	17%
College-wide data on a regular basis	88%	68%	20%
Specific data to faculty or faculty groups	84%	66%	18%
Specific data to college-wide committees	83%	59%	24%
Assistance to president on use of data for planning	81%	62%	19%
Assistance to faculty on using data	79%	49%	30%
All groups consultation on use of data	75%	52%	23%
All groups assistance with research design	70%	51%	19%
Assistance to staff on using data	68%	30%	28%

The administration and faculty groups also had differences in their perception of the frequency with which data and information are used for planning and decision making. *The administration group responses indicate a belief that data and information are used for planning and decision making much more than is believed by the faculty group.*

Data and information are used to …	Administration	Faculty	Difference
Analyze enrollment/decisions regarding offerings	79%	65%	14%
Analyze overall institutional effectiveness	72%	54%	18%

Track student progress at program level	72%	53%	19%
Assess program and service effectiveness	70%	47%	23%
Track progress through basic skills	68%	48%	20%
Analyze student progress in a program	64%	36%	28%
Measure and report institutional quality	59%	56%	3%
Assess student learning outcomes	53%	43%	10%
Assess needs of community/planning	43%	36%	7%

Finally, the fourth set of questions focused on the use of data by individuals in each of the roles. ***The administration group was much more likely to respond that specific roles were very involved or extremely involved in the used of data and information to make planning and improvement decisions at the colleges.*** The faculty group less likely to agree, often by a margin of more than 20%.

How involved is (are) … in use of data	Administration	Faculty	Difference
Chief Instructional Officer	91%	69%	22%
President/Superintendent	88%	62%	26%
College Researcher	87%	71%	16%
Instructional Deans	83%	66%	17%
Chief Student Service Officer	80%	49%	31%
SLO Coordinator	78%	53%	25%
Basic Skills Initiative Coordinator	74%	55%	19%
Academic Senate President	57%	49%	8%
Department Chairs	50%	36%	14%
Counseling Faculty	28%	16%	12%
Classroom Faculty	24%	10%	14%

As colleges pursue strategies to develop more widespread use of data in decision making, we would expect evidence of culture of inquiry to be revealed in this area of organizational assessment. Institutions having pervasive cultures of inquiry are likely to have greater agreement by all groups on the use of data in guiding decision making.

Conclusions
While it is clear that data are widely available, there are significant differences in perception between the individuals in administration roles and individuals in faculty roles. For the most part, those in administration roles perceive that data and information are used more frequently than is perceived by those in faculty roles. Administrators also perceive the research office to provide information more frequently than do faculty—likely because they are the most frequent recipients of this information.

This finding also underscores an important behavioral tendency: when one's actual experience of data support is insufficient to the need, the perception is often that data is being underused more broadly throughout an institution. A message here is that as

colleges embark on efforts to institutionalize cultures of inquiry, it is important that they assess the degree of agreement on perceptions of that culture. To the degree that certain constituencies feel marginalized in the broader culture, that culture will always struggle at becoming self-sustaining.

There are also significant differences in the frequency with which both administrators and faculty see different types of data being used, with administrative data, (e.g., enrollment management, productivity and efficiency, and overall college effectiveness in traditional student outcomes) being used regularly and by more individuals and data concerning student progress through programs and student learning outcomes being used less frequently and by fewer individuals.

This last finding suggests that a shift in the colleges' approach to research may be warranted. While analysis of enrollment management, productivity, and efficiency are key foundational pieces of information for college operations, they are somewhat removed from the core mission of the college – to optimize conditions for student learning, both in the classroom and through programs and services that enhance learning. It appears that a better balance might be struck between the various types of research, with an increased focus on research, analysis, and consultation that is closer to the practitioner level and more directly addresses student learning.

Understanding Cultures of Evidence

The previous section described the items from the capacity survey where respondents rated their responses on a variety of Likert-type scales. These quasi-quantitative data are valuable because they provide the researcher the ability to quickly analyze the information and allow the reader to view results in tables where it is easy to compare responses. In order to better understand participants' responses, though, it is helpful to include qualitative, open-ended questions. These questions have the advantage of allowing more detailed responses, which often tell powerful stories and produce illuminating results. While one must take caution that individual qualitative responses not be automatically generalized to the broader population, common themes can emerge from the responses. Below are summaries of responses to the three open-ended questions asked on the survey, each of which documents a process that is necessary for building cultures of evidence and inquiry.

The Research Process

"Briefly describe the process your college uses to establish the research needs and priorities for the college. Include details about who is involved in the process and how these research needs are established and prioritized."

There were a total of 275 responses to this question, with more than 100 community colleges represented in the comments. Most of the colleges had more than one person responding to this question. The responses to this question were largely inconsistent within any given set of a college's responses. Often, the college leadership provided one perspective that was contradictory or different from that of the institutional researcher, which was different from the perspective of the SLO coordinator and the BSI coordinator.

This lack of respondent reliability is an indication that the *processes used at the colleges to establish the research needs and priorities are not well defined, nor widely communicated or fully implemented*. Furthermore, it is unclear from the comments as to how research is tied to budget decisions and to what degree the research drives or informs planning decisions. *There is little evidence from the comments that colleges are using research in a systematic fashion throughout the institution at all levels* (e.g., identifying needs, analyzing outcomes, taking action on the outcomes, and identifying further needs).

Most of the comments provided information as to who or which group established the research needs and set priorities, and many comments described the use of a college research and planning committee or advisory group. However, there was very little mention about systematic processes, procedures, or protocols for identifying research needs and prioritizing them. This absence of information may be due in part to the nature

of a survey, which by definition limits the level of response. Further investigation is warranted in order to flesh out the true nature of processes and systems that are used at the colleges for establishing research needs and priorities.

The following six themes were extracted from the comments regarding how college research agendas are set.

College research and planning committee
Numerous comments were made about college planning committees. These committees are used as advisory groups to help establish the college's research agenda and/or to set research priorities for the college. The planning committees were generally shared governance committees comprised of the various constituency groups on campus (e.g., Academic Senate, administration, and classified staff) and often included budget, research, and strategic planning as part of the committee's roles and responsibilities.

> "The Roundtable for Planning and Budget reviews college-wide priorities and research needs. When institutions are going through accreditation, most of the research is related to surveys and the standards."

Institutional researcher
Many comments stated that the institutional researcher was responsible for determining the research needs of the college. Often this person or office determined the research agenda, if the college had one, and provided recommendations for research priorities to the college leadership and shared governance committees. In some instances, the institutional researcher gathered input from various departments and groups to determine the needs. In other instances, the institutional researcher worked with a taskforce to establish the research agenda, which was then submitted to the shared governance groups or committees for review and feedback.

> "Research needs and priorities stem from the college's strategic planning, discussions with constituent leaders, administrators, and executive staff. The CIO is the lead exec working closing with the researcher to establish the draft research agenda for college-wide discussions. The researcher is intimately engaged in these conversations. The final agenda is established through the Institutional Planning Committee and the CIO and forward to the college president."

President and executive leadership team
A number of comments explained the role that the college president and the executive leadership team (e.g., chief instructional officer, chief student services officer, chief business officer, and director of institutional research) had in identifying the research needs and setting the college research agenda. More often than not the president and the executive leadership team reviewed the needs that had been submitted to them via committees, division deans, and coordinators of major college initiatives. In some instances, the institutional researcher identified the needs through interaction and involvement with the various departments, groups, and committees and then brought recommendations for research to the president and the leadership team. There were also a number of comments about the institutional researcher working solely with the president or chief instructional officer to determine the research priorities of the college.

> "The president and vice president of instruction prioritize the research jobs of the IR office of one. Mandated reporting, accreditation needs, and research for planning take priority. The college has district research assistance for many tasks and forms are available for requesting research office services."

Strategic/master planning and enrollment management

Several comments were made about the link between the college's strategic or master plan and the research agenda. These colleges claimed that the research needs and priorities were based on the goals and strategies indicated in the college's plans, which for the most part were developed through a shared governance process. The implication was that the research needs represented the various departments and constituency groups as a result of inquiry and feedback from these groups.

> "The research needs were identified through the strategic planning process and rolled into the master planning document and its accompanying committee processes. "

Initiatives and mandates

A number of comments were made regarding the college's reaction to external mandates (e.g., accreditation, student learning outcomes, Basic Skills Initiative, program review, matriculation and Accountability Reporting for the Community Colleges) as the stimulus for identifying all or some of the research needs and for prioritizing research. In these instances, the respondents stated that research at the college was done in order to satisfy external requirements. In most instances, these requirements had become internally imposed and viewed as integral to doing business and for maintaining the quality of programs and services.

> "Any group may request research help from our Planning and Research Office, and they are eventually addressed. However, ongoing large processes like accreditation, college master planning, mandatory state reporting, program planning, etc. are always the priority."

No process

A number of comments stated that the college had no defined process for establishing research needs or setting research priorities. These institutions were generally those that either had no designated research function at the college or had no systematic process in place for requesting or using data and information. In some instances the colleges were in the process of either establishing or redesigning a process as a result of new leadership or a new institutional research office.

> "A major part of our problem is that we don't have a researcher! Three faculty members meet as necessary to 'crunch numbers' as specific needs arise. Individuals make requests for information to their supervisors and they are eventually forwarded to the research committee. All members have a full time teaching load, so their time available for these additional duties [is] limited. "

Usefulness of Research

"Please comment on the relevancy or usefulness of the research for assessing major initiatives at your college (e.g., student learning outcomes, basic skills, and accountability)."

There were a total of 260 comments, with more than 100 colleges represented in the comments. The majority of comments indicated that ***research yielded valuable information for planning and decision making at the colleges***. The comments stated that research was used for developing curriculum through program review data and information, analyzing enrollment trends, determining budgets, responding to accountability and accrediting agency requirements, for basic skills and student learning outcomes work, and generally for planning and decision making. This response, highlighting the value of research, stands in contrast to the perception of the faculty group that evidence is not integrated into classroom-level planning. This underscores the observation that the measures being gathered are not necessarily those that are most useful for practitioner-level work.

The following three major themes were extracted from the comments.

How research data and information are used
Numerous comments were made regarding the use of data and information as a result of the research being done at the college. Many stated that the research had been helpful for understanding needs and for making decisions specifically for: the Basic Skills Initiative; the student learning outcomes and assessment work being done; enrollment management efforts; matriculation purposes; program review and curriculum planning; general accountability; staffing and equipment decisions; and strategic planning.

> "We are developing an integrated planning, program review, outcomes assessment, and budgeting model. Research is critical to support SLOs, basic skills, and Title III in particular. We employ a balanced score card and the ARCC report to improve student learning and outcomes."

Linking research to cultures of evidence and inquiry
Some comments were made regarding the importance of using data and information to create a culture of evidence in which decisions are based on data. Similarly, there were comments made regarding the importance of using data and information to create a culture of inquiry in which questions that are generated by the college community drive the research, and thus the quality and performance of the college.

> "Effective evaluation practices are critical for creating a foundation and shaping the dialog for all components of institutional effectiveness. The problem for our college is widespread resistance to practice inquiry that can result in the discovery of causal factors underlying student success. We continue to stay focused on the student as the significant problem, when the data and findings should be prompting the college to begin exploring its own practices, particularly for underprepared students."

Need for data coaching
Several comments were made regarding the need for assistance with interpretation and implementation or use of the data and information. While most comments acknowledged the value of institutional research, some comments were made regarding the potential increased value given additional research staff or talent to assist faculty and administrators with taking action on the data.

"We have a lot of data, but we need to apply the information more and communicate to a broader audience on campus."

Strengthening Research Capacity

Discuss your college's unmet needs for institutional research including where you believe the college needs the most assistance with research.

There were a total of 258 comments, with more than 100 community colleges represented in the comments. ***The majority of comments pointed to the need for additional research staff.*** Other comments suggested the need for improved systems and processes for accessing and using data and information, as well as desire to shift the culture from one of having evidence to building inquiry. The comments suggested that colleges recognized the need for research, as well as the value of data and information. Clearly research has become a priority at most colleges in the state and is fast becoming integral to the way the colleges operate. Colleges are moving beyond simply requesting data to using the information for planning and decision making.

The following four major themes were extracted from the comments.

Inability to meet current workload
The majority of comments were in regard to the need for additional staff to support the increased demand for research. Many of the comments pointed to heightened accountability from external agencies and new statewide initiatives that require substantial research and information that are based on data (e.g., the Basic Skills Initiative and student learning outcomes). As a result, the research offices, which are often "one-person shops," have been unable to respond to the myriad requests from multiple areas of the college. Comments were made about the college's need for research, as well as the value the college now places on data and information.

"We need a much larger office staff of researchers. The demand for research is high. Faculty in those disciplines where research is done, they have taken on that role within their discipline, in coordination with the research office."

Increasing access to data
Several comments were made about the need for increased access to data and information. These comments suggested improved systems for online access (e.g., decision support systems), as well as improvements in the colleges enterprise resource planning (ERP) systems (e.g., Banner, Datatel, Peoplesoft).

"Data mining—cleaning up data and then being able to access it from our ERP."

Strengthening data coaching
Many comments were made about the need for research staff to assist the college community with interpreting and using the data and information. Statements were made about the college's inability to utilize the data and information from the research that was provided to the college community. The reasons for this gap were varied, but mostly pointed to lack of understanding of how to interpret and apply the data and information.

Suggestions were made that the research staff needed to provide faculty, staff, and administrators with assistance in interpreting the data, conducting action planning based on the data and information, and incorporating the data and information into planning and decision making processes. Several comments were made about the need to formally train faculty on how to generate research questions, how to interpret the data, and how to use the information.

> "Our college is quite successful at gathering data and putting reports together based on that data. Where we struggle is with executing action plans as a result of this data. It almost seems like having the data is enough. I don't really think we do a good job of 'doing' anything with the data, or implementing programmatic changes or initiatives based on the data."

New research topics
Some comments suggested specific types of research that were needed at the college, many of which included longitudinal cohort tracking studies to determine success of students after they leave the college. Other suggestions for research included: studies on special student populations; placement and matriculation research; research on students who drop out or go to other colleges; student learning outcomes research; and qualitative studies such as surveys.

> "Follow up with transfer students or with students who leave for a job on completion of a certificate. Determining why students drop out or why they don't return the following semester. Being able to do more cross-tabulations and multi-variate analysis not just descriptive univariate summaries."

Conclusion

As in the quantitative responses, the open-ended questions revealed differences both within and across colleges in how community college professionals perceive the process of gathering, analyzing, and acting on information, indicating the lack of a clearly established system. The qualitative responses also reflected the gap in perception regarding how data are used; in the survey less than half of respondents felt that data were being used for learning assessment and program planning, whereas the comments described the valuable research being done on the Basic Skills Initiative, student learning outcomes, and assessment. These responses also called into question the depth of research integration into budgeting and planning decisions and highlighted the need for multiple improvements in the research process in order to strengthen college cultures of evidence. The open-ended responses describe how the role of research has expanded from supplying data to helping others use this evidence and underscores that greater capacity is needed, both to fulfill requests for information and to ensure that colleges are able to understand and act on the information they have.

Exploring the Perception Gap

The results of the survey, particularly the comments, revealed an apparent disparity in perception of how the research function was being managed at individual colleges. Moreover, there were differing viewpoints on how research data and information was being used and who was using it. In order to test the assumption that this perception gap results from both a lack of resources and the lack of systems that are vital for building and sustaining an effective research infrastructure, interviews were conducted to determine why some of the colleges demonstrated consistency in their description of the research function and others did not. These interviews also gathered information on characteristics that were shared by colleges with a greater integration of research at various levels of the college.

The research team selected a representative group of eight colleges from the pool of survey respondents: four colleges with seemingly convergent opinions about the research infrastructure at their college and four with seemingly divergent opinions. The team then constructed an interview protocol designed to probe the colleges for details on the following:

- o Processes, procedures, systems, or protocols used for developing and managing the research infrastructure
- o Application and usage of research data and information including how data are used, by whom, and how widespread the information is shared or made available
- o Support that the college provides in facilitating data exploration, usage, and application through data coaching
- o The extent to which the college bases planning and improvement decisions on data

One to four individuals per college were interviewed during Spring 2009 (e.g., college presidents, chief instructional officers, chief student services officers, student learning outcomes coordinators, Basic Skills Initiative coordinators, and institutional researchers). Some of the interviews were conducted in person, while others were conducted over the phone or via e-mail. Each interview lasted between 30-60 minutes and the results were summarized by a team member and then shared with the interviewees for fact checking.

The research team cautions against drawing strong conclusions from such a limited set of qualitative interviews, but found that several themes did emerge and that the interview responses were consistent with the survey. The colleges that described their research function in a similar way in the survey also demonstrated a convergence of opinions in the interviews. In addition, the interviews validated the ***correlation between the convergence of opinions and the existence of an effective infrastructure for conducting institutional research***. Although their research systems were not flawless, the colleges with convergent opinions often had key structural elements in common. Similarly, the colleges that had divergent opinions in the survey demonstrated conflicting opinions in

the interviews and showed evidence of a lack of an infrastructure for conducting institutional research.

There were three key findings regarding the organizational structure of the research function and the culture of evidence at the college. First, the ***colleges with convergent opinions and an apparent research infrastructure had a history of maintaining an institutional research office***. These institutional research offices had dedicated staff who responded to requests from across the college including multiple constituency groups and committees. The chief researcher often reported directly to the president, making a clear organizational statement about the importance and significance of the role of research at the college. The chief researcher was usually involved in numerous college-wide committees including the president's cabinet and various shared governance committees. In contrast, the colleges that were considered divergent in opinion and had less of an obvious research infrastructure, did not involve the researcher in committee work to the extent that the convergent colleges did, and in some cases the research office was not fully functioning or staffed (e.g., use of an external consultant or an available faculty member to provide data and information). The reports that were produced at these colleges were perfunctory reports that fulfilled internal or external requirements or mandates (e.g., accreditation and program review reports), leaving the college community to feel that they were not operating with enough evidence or information for planning and decision making.

The second piece of evidence regarding infrastructure was the accessibility of the data and information. Colleges with convergent opinions spoke of either having ***a research website where current research reports and information were regularly posted and/or having a web-based portal for accessing and querying data sets.*** Additionally, these colleges spoke of having the chief researcher involved in facilitating discussions that were based on data or of providing training on the use and interpretation of data. In contrast, the colleges that had divergent opinions and lacked an infrastructure spoke of the need for more data and information. They also spoke of the lack of transparency at the college. In some instances, the perception was that the administrators controlled the information and made decisions about what information would be generated by the research office, as well as who would have access to the information. The sentiment was that the research data and information was not widely shared and was available only to isolated groups on campus for special interest purposes.

The final infrastructure finding regarded how research data and information was received, processed, and delivered. Those colleges from the convergent group generally had ***established mechanisms for the college community to request data and information, such as an online data request form, as well as policies and protocols for conducting and using research on campus*** (e.g., human subjects policies, research standards, and operational definitions). Additionally, these colleges had some semblance of a research agenda that was used to organize research requests and link them to broader college goals or initiatives. Those colleges that were considered divergent in opinion and lacking infrastructure generally responded to research requests in an ad hoc or piecemeal manner. The research was not as tightly linked to strategic goals or directions.

One result found in both convergent and divergent colleges was that **_research data and information are not consistently tied to budget and other planning decisions_**. All colleges interviewed agreed they needed to improve in this area.

Conclusions

Consistent with the results from the open-ended responses in the research capacity survey, most of the interviewees believed that the single most important element for improving research capacity is adequate staffing in the research office. The interviewees believed that the increasing requirements and requests for data and information, along with the need for assistance in facilitating discussions that are evidence-based, have placed extraordinary demands on the research office that cannot be met without additional resources or support.

Some of the colleges—particularly those that have been using data for planning and improvement decisions for a number of years and have strong cultures of evidence—believed their college was **_data rich but information poor_**. These colleges were satisfied with the amount of data they had available to them, but recognized the need for developing ways in which to better facilitate the use of data and to transform data into action. These colleges have a culture of inquiry and want to commit more resources to data coaching, which they believe will better facilitate the use of data and information for planning and decision making. Colleges that were not as far along the continuum of developing research capacity will also be faced with these same issues of gleaning actionable insight from their data and evidence once their production increases.

In addition to the need for staffing, another missing element is the need for a solid infrastructure for conducting research. Although the convergent colleges showed evidence of having a research infrastructure, all of them lacked some element of a comprehensive infrastructure. Some of the colleges in the survey only had partial systems for requesting and delivering research data and information, as well as lacking mechanisms for widely communicating and sharing the information. Other colleges were unable to identify any clearly defined systems and lacked protocols for conducting and using research data and information.

Finally, most of the colleges that were interviewed were able to identify a core set of data needs that were generally tied to accountability requirements (e.g., accreditation, program review, student learning outcomes, and the Basic Skills Initiative). However, very few noted that their college had an integrated research agenda that was linked to strategic goals and used for planning or one that provided a way in which to measure performance or progress toward these goals.

Where We Go From Here

The lack of consistent and actionable measures for assessing basic skills success is a symptom of a larger issue—the need to establish a stronger infrastructure to integrate accountability reporting into robust systems of evidence—based decision making and planning. The BSOC statewide survey revealed that colleges lack clearly articulated processes for establishing research agendas, distributing research results, and integrating the information into practice, particularly with faculty and student services staff. In reviewing the results of the survey and follow up interviews, it became clear that research capacity – encompassing both staffing levels and the skill sets of the researchers – lies at the heart of college's ability to engage in evidence-based decision making and sustain a culture of evidence. Furthermore, the issue is more complex than simple capacity; it reflects the changing role that information and data now play on college campuses. The demands on institutional research (IR) offices at the colleges are now fivefold:

1. **Production** - gather and collect data, conduct analyses and write research reports that are both clear and informative.
2. **Dissemination** – have an infrastructure in place for the dissemination of data and information to appropriate stakeholders throughout the college and to the public.
3. **Interpretation** – help administrators, faculty and staff analyze and interpret the data and information and in so doing, assist them in evolving their research and inquiry skills.
4. **Translating Evidence into Action** – assist administrators, faculty and staff in using data and information to drive improvement and planning decisions.
5. **Closing and Widening the Loop** – ensure that decision making is translated into action and action is widely evaluated and based on data.

These differences point to the need for a new role for researchers, specifically to:

o provide data and information, including consultation about what the data mean, to a wider audience at the college
o work more closely with faculty and student services staff, especially those in leadership roles in significant student initiatives, to help them act on the rich data that exist at most colleges
o increase the use of data in planning and budgeting

However, the ability of colleges to make this shift will be hampered by the budget crisis. With many colleges laying off faculty and staff, it is unlikely that new positions will be created to address this increased scope of work. As we enter an era when colleges will have to serve many more students with much fewer resources, the ability to understand and utilize information will become even more critical to allow for money, staff, and support to be directed to the elements of the college that have the greatest impact on student success. It is imperative that statewide efforts be implemented that will enable colleges to continue fostering cultures of evidence and to expand the capacity of all community college professionals – not just researchers – to understand and utilize information.

Recommendations

In order to facilitate the reformulation of research capacity, the RP Group recommended three key strategies. These recommendations form the structure for the Bridging Research, Information, and Culture (BRIC) project, which the RP Group launched in Fall 2009.

1. **Increase the efficiency of institutional research offices through standard reports and a statewide IR resource person.** The RP Group will research data and reporting commonalities and develop a series of automated reports that would enable IR professionals to meet their increasing workload and protect time that can be spent working more closely on the ground level with campus faculty, student services staff, and administrators. In addition, the BRIC project proposes to create an Institutional Research "Concierge" who is tasked with staying current on available and newly-developed tools that can create efficiencies for campus-level researchers.

2. **Develop an online and regional professional development structure that facilitates building cultures of evidence.** The budget crisis has resulted in deep cuts to the professional development infrastructure of the California community college system. The RP Group proposes to develop a series of opportunities that can be easily accessed at little or no cost and that addresses the limited time that will be available for professional learning. In addition, communications efforts are needed to clarify the value of research, data coaching, and using evidence for decision making to non-research professionals.

3. **Provide college-specific assistance that enables a number of campuses to work more effectively with data and information.** The RP Group proposes to offer technical assistance to help colleges build and sustain an effective infrastructure for evidence-based decision making. For example, experts could visit colleges to help integrate information about career technical education with basic skills and general education transfer programs. This type of intensive support will be vital to sustaining fledgling cultures of evidence during cut-backs. These offerings will be closely coordinated with other statewide efforts, to ensure that as many colleges as possible are receiving assistance and that the various initiatives are able to build from one another.

Over the past year, the BSOC project enabled the RP Group to better understand the ability of colleges to use evidence for decision making and formulate a strategy that will help colleges navigate the changing role of information. With California community colleges in the midst of restructuring in response to changing student needs and lower budgets, this information could not be more timely. This crisis provides an opportunity to change fundamental structures in a way that enables more students to succeed. The RP Group, together with the many practitioners who recognize the value of research, will strive to leverage the wealth of information that the colleges possess to make our work more responsive, innovative, and successful.