Based on input from practitioners at 42 two-year colleges in the Western Interstate Commission on Higher Education region, this document outlines the research agenda of the Western Center for Community College Development (WCCCD) for the next century. Introductory sections describe the role of focused research, the WCCCD, methodology used in developing the agenda, and the WCCCD's basic research agenda, indicating that it establishes priorities within the broad areas of learning and teaching and leadership. Next, eight priorities for conducting research are identified for learning and teaching: the adaptation of professional, technical, and occupational education to the specific needs of the workforce; the application of learned skills and knowledge in simulated real-life situations; the effectiveness of technology-assisted learning; the remediation of basic skill deficiencies and access to college programs; the attributes of teaching excellence; the impact of diversity; the impact of student service activities on student success; and the role of student activities in commuter-based colleges. For each priority, several subtopics are identified providing more specific areas for research. Next, the following six priorities, with related subtopics, are identified for the area of leadership: college responses to institutional effectiveness and assessment, the impact of declining resources on mission, the effect of organizational structure on effectiveness, trends and outcomes for leadership/management styles, the effectiveness of personnel policies, and the effects of collective bargaining. Appendixes provide a list of college participants and a description of the Delphi process used to identify the agenda items. (KP)
A Research Agenda for the Twenty-first Century
COMMUNITY COLLEGE ISSUES:

A Research Agenda for the Twenty-first Century

WESTERN CENTER FOR COMMUNITY COLLEGE DEVELOPMENT

JULY 1995
This publication was developed by the Western Center for Community College Development in cooperation with selected community colleges in the fifteen states served by the Western Interstate Commission on Higher Education (WICHE).

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Appendix A: Participating Colleges
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As the community college movement enters the 21st Century, it faces numerous challenges. The two-year college movement which came of age in the ‘60s and ‘70s, has reached a level of maturity at the close of the 20th century which creates an expectation that these institutions will deliver on their promise to provide meaningful educational experiences to all citizens. In order to deliver a wide range of services from remediating the skills of under-educated adults to delivering fully articulated transfer programs into senior institutions, community college leaders and faculty have a critical need to understand how to be successful in both the learning/teaching environment as well as in the leadership/management environment. In an attempt to educate a world-class work force in a period of declining resources, these two-year colleges need better techniques and processes. Unfortunately, no textbooks contain the answers to the critical issues confronting practitioners in the profession of community college education.

Recognizing the dilemma created by the expanding expectations of the community college and the limited availability of truly empirical data which can be applied to these issues, the Western Center for Community College Development has identified a research agenda focused solely on community college issues. The results of this effort are reflected in this publication which is designed to serve as a guide to higher education departments at research universities, doctoral students pursuing studies in the area of community colleges, and research faculty engaged in their own pursuit of knowledge. The publication is a beacon to guide their efforts in directions most useful to the community college professional community.

The Western Center sincerely appreciates the cooperation of the community colleges who participated in this project. Without the commitment of their valuable time to propose
topics and to set priorities, this project could not have been completed. As the research agenda is implemented, the results will serve not only these colleges, but their colleagues throughout the American community college movement.
Focused Research

The pursuit of knowledge for knowledge's sake is a legitimate academic function. However, unless knowledge has a specific application to current issues, its value to professional organizational leaders is at best minimal and more likely nonexistent. Leaders are focused on achieving organizational goals and their daily activity is consumed with meeting and overcoming challenges to increased organizational effectiveness. These busy professionals need knowledge developed to help meet the challenges they face.

The situation in higher education is no different than that faced in other organizations. In fact, due to the variety of roles and missions as well as the diverse populations served, the lack of relevant focus in higher education research may in fact be more prevalent than in other fields. Normally, research in higher education is driven by the interest of faculty whose orientation is the research university. As a result, research in areas directly impacting other components of higher education is often ignored. Obviously, the lack of focus on issues such as those involving the two-year community college is not the result of any plan to deprive these institutions of information they need to increase their levels of excellence in serving their particular clientele. Rather, the specific research agenda for community colleges has never been effectively articulated based on the perceptions of the practitioners in this segment of higher education. Therefore, the first step in increasing the flow of relevant information for any area is to clearly define the research agenda. The Western Center set about the task to develop a focused research agenda for community colleges, the results of which are presented here.
The Western Center for Community College Development

The Western Center for Community College Development was established in 1992 to work with two-year institutions in the 15 states served by the Western Interstate Commission on Higher Education (WICHE). As part of its mission, the Western Center strives to:

- design and provide professional development activities which strengthen learning and teaching processes and community college leadership;

- provide services to allow for the accomplishment of community college missions and other activities associated with the community college movement;

- work with community colleges and community college systems to develop successful educational reform strategies;

- provide a forum for bringing together college professionals to project future trends within the community college movement;

- facilitate the development of partnerships among community colleges and between community colleges and businesses, government agencies, public and private funding organizations and other educational resources; and

- identify a research agenda focused on issues critical to the two-year college, conduct or facilitate research and disseminate resulting information.

The latter role led to the project reported in this publication.
The Approach

The Western Center identified 42 two-year colleges in the WICHE region (see Appendix A for a list of participating colleges). The selected colleges comprise a sample of the type and size of college commonly found in the 15 western states and throughout the country in general. The study had two objectives: (1) to identify the research topics of greatest interest to community college leaders, and (2) to determine the priority of these topics in pursuing research efforts.

The study was designed to use a modified Delphi technique which involves a panel of experts in the identifying, consolidating, refining and setting of priorities for potential research topics (for a detailed description of the Delphi technique, see Appendix B). The Western Center served as an objective facilitator and did not interject bias or opinion into the research agenda. Panel members responded to anonymous material and expressed their opinions independently of one another. The process represented a true consensus building method and allowed for the contribution of all panel members.

The initial action was the identification of a range of research topics considered important to the panel of experts. The panel consisted primarily of presidents and chief instructional officers. To facilitate the development of consensus, topics were divided into two areas—teaching/learning and leadership/management issues. No restrictions were placed on the number of topics that could be identified by each panel member.

After receiving the suggested topics, the Western Center integrated the responses and identified a list of potential major topics and subtopics. The panel reviewed these and made suggestions for changes, additions and deletions. With this information, the Western Center revised the list of proposed topics and again forwarded them for review and
comment. A consensus that the list fairly represented the thoughts of the panel was then reached.

The panel of experts was then requested to prioritize both the topics and subtopics. The priorities were weighted and relative rankings of topic and subtopic priorities were achieved. This prioritized list became the research agenda presented in the following pages.
The basic research agenda consists of broad topics within two areas: learning and teaching and leadership. The agenda is then expanded by providing a specific discussion of each topic's primary focus and the specific subtopics within each focus area. Both the topics and subtopics are ordered in a priority listing with the most significant item listed first.

The combination of topics and subtopics represents the consensus of the panelists concerning issues that require exploration in order to provide information that can be applied to challenges faced by community colleges. In developing the agenda, there were many other items identified by individual participants. However, during the consensus building process, panelists agreed that the topics and subtopics contained in this research agenda represent the primary research activities of interest to community colleges.
Learning and Teaching

Priority 1  Adapting professional, technical, and occupational education to the specific needs of the workforce.

Priority 2  Contextual learning and student outcomes (involves the application of learned skills and knowledge in simulated real-life situations during the learning/teaching process).

Priority 3  Determine the effectiveness of technology-assisted learning.

Priority 4  Basic skill levels and access to community college programs.

Priority 5  Components of teaching excellence.

Priority 6  The impact of diversity on the community college.

Priority 7  The impact of student service activities on community college students.

Priority 8  The role of student activities in commuter-based community colleges.
## Leadership

<table>
<thead>
<tr>
<th>Priority</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority 1</td>
<td>Institutional effectiveness and assessment.</td>
</tr>
<tr>
<td>Priority 2</td>
<td>The impact of declining resources on the community college mission.</td>
</tr>
<tr>
<td>Priority 3</td>
<td>Organizational issues within the community college.</td>
</tr>
<tr>
<td>Priority 4</td>
<td>Styles of leadership and management in the community college.</td>
</tr>
<tr>
<td>Priority 5</td>
<td>Personnel issues within the community college.</td>
</tr>
<tr>
<td>Priority 6</td>
<td>The effect of collective bargaining.</td>
</tr>
</tbody>
</table>
Learning and Teaching: Priority 1

Adapting professional, technical and occupational education to the specific needs of the workforce.

Discussion: This topic focuses on investigating the effectiveness of structuring curriculum to prepare students for the world of work by linking educational outcomes to workforce requirements.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>the degree to which restructured professional technical curricula are shifting toward generic outcomes versus job-specific skills;</td>
</tr>
<tr>
<td>1.2</td>
<td>the degree to which the educational community is moving away from determining the completion of professional technical programs by the accumulation of course credits versus the obtaining of specific competencies and skills;</td>
</tr>
<tr>
<td>1.3</td>
<td>the degree to which general education components and professional technical components have been integrated in the curriculum to ensure consistent measurable outcomes in preparing students to enter the workforce;</td>
</tr>
<tr>
<td>1.4</td>
<td>the degree to which community colleges have restructured their professional technical curricula to meet specific and validated workforce requirements;</td>
</tr>
<tr>
<td>1.5</td>
<td>student success in gaining workforce-oriented skills through revised professional technical curriculum offerings;</td>
</tr>
</tbody>
</table>
1.6 the value and acceptance of student portfolios in communicating student competencies to prospective employers.
Learning and Teaching: Priority 2

**Contextual learning and student outcomes.** (Contextual learning involves the application of learned skills and knowledge in simulated real-life situations during the learning/teaching process).

**Discussion:** This topic focuses on issues of integration and success in teaching academic content, technical skills and workplace skills using contextual methodology.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>the degree of integration and success in teaching the skills of teamwork, critical thinking, and problem solving as they relate to the workplace;</td>
</tr>
<tr>
<td>2.2</td>
<td>the impact of contextual learning methodology on shifting the educational focus to student learning versus skill/knowledge teaching;</td>
</tr>
<tr>
<td>2.3</td>
<td>the degree of curriculum outcome shift toward mastery of skills versus knowledge of content resulting from the contextual learning movement;</td>
</tr>
<tr>
<td>2.4</td>
<td>effectiveness of contextual methodology in teaching academic skills versus other instructional approaches;</td>
</tr>
<tr>
<td>2.5</td>
<td>the issue of the success in converting curricula to context teaching techniques and the degree that these techniques have found acceptance within the community college;</td>
</tr>
<tr>
<td>2.6</td>
<td>the impact of contextual learning/teaching on student and faculty perceptions and attitudes;</td>
</tr>
</tbody>
</table>
2.7 the usefulness of student portfolios to assess students' knowledge and skills within the context of real-life applications.
Learning and Teaching: Priority 3

_Determine the effectiveness of technology-assisted learning._

**Discussion:** This topic focuses on the benefits of technology-assisted instruction in terms of student learning and outcomes.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>benefits of technology-assisted instruction in terms of student learning versus the cost of implementing the practices;</td>
</tr>
<tr>
<td>3.2</td>
<td>the differences in student outcomes (e.g. retention, grades, skill attainment, satisfaction, etc.) resulting from various models of technology-assisted teaching versus traditional teaching methodologies</td>
</tr>
<tr>
<td>3.3</td>
<td>the impact of technology on community college faculty including their ability to effectively use the technology available in the marketplace to enhance student performance.</td>
</tr>
</tbody>
</table>
Learning and Teaching: Priority 4

Basic skill levels and access to community college programs.

Discussion: This topic explores the success of remediating basic skill deficiencies, including determination of the most successful remediation strategies and the impact of K-12 educational reform on the basic skills of entering community college students.

Priority | Subtopics
---|---
4.1 | the success of remediating basic skill deficiencies in terms of student completion of collegiate program offerings in the community college;
4.2 | the determination of the most successful remediation strategies in terms of student academic gain and persistence in pursuit of academic goals of "at risk students;"
4.3 | the degree of preparedness for collegiate level work of entering community college students;
4.4 | the effectiveness of "bridge programs" designed to bring older entering students up to a level commensurate with high school completers entering from tech-prep programs;
4.5 | the impact of K-12 educational reform on the basic skills of entering community college students.
Learning and Teaching: Priority 5

Components of teaching excellence.

Discussion: This topic focuses on the attributes of excellent or master teachers as well as the techniques used to achieve intended educational outcomes in the classroom. Specific issues to be explored include:

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>how do classroom teachers know if and what their students learn?;</td>
</tr>
<tr>
<td>5.2</td>
<td>how can excellent master teachers be identified and what attributes do these classroom teachers have that increase the likelihood of student success?;</td>
</tr>
<tr>
<td>5.3</td>
<td>how do successful master teachers accommodate the diversity found in community college classrooms?;</td>
</tr>
<tr>
<td>5.4</td>
<td>the degree to which the skills of master teachers are used to improve instructional techniques of less skilled/experienced faculty;</td>
</tr>
<tr>
<td>5.5</td>
<td>the degree to which experience in classroom teaching influences the quality of instruction;</td>
</tr>
<tr>
<td>5.6</td>
<td>do colleges reward excellence in teaching as a primary and valued faculty attribute?</td>
</tr>
</tbody>
</table>
Learning and Teaching: Priority 6

The impact of diversity on the community college.

Discussion: This topic looks at the way community colleges are responding to the issue of diversity and the impact of diversity on accomplishment of the college's mission.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>identification of the outcomes colleges use to measure accomplishments towards diversity for students, faculty and staff;</td>
</tr>
<tr>
<td>6.2</td>
<td>the degree to which community colleges integrate the opinions, cultures and activities of diverse populations into their student body, faculty and staff;</td>
</tr>
<tr>
<td>6.3</td>
<td>the impact of diversity on the accomplishment of college missions;</td>
</tr>
<tr>
<td>6.4</td>
<td>the degree to which community colleges have achieved diversity in their curricula, student activities, and faculty/staff activities.</td>
</tr>
</tbody>
</table>
# Learning and Teaching: Priority 7

**The impact of student service activities on community college students.**

**Discussion:** This topic explores the impact that specific student service activities (e.g. counseling and advising) have on the success of community college students.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1</td>
<td>the identification of successful models for determining student outcomes upon completion of student academic objectives;</td>
</tr>
<tr>
<td>7.2</td>
<td>how student goals change and how they are accommodated/assisted in these change processes during their enrollment in the community college;</td>
</tr>
<tr>
<td>7.3</td>
<td>the impact of student counseling on student outcomes, including pre-admission and in-term counseling/advising activities by student service professionals;</td>
</tr>
<tr>
<td>7.4</td>
<td>determining the degree that stated student goals match student achievement during community college attendance;</td>
</tr>
<tr>
<td>7.5</td>
<td>the degree of effectiveness of career counseling programs in assisting students to set career goals, choose supportive majors, increase retention and complete programs;</td>
</tr>
<tr>
<td>7.6</td>
<td>effectiveness in identifying student goals other than program completion and student attainment of these goals;</td>
</tr>
<tr>
<td>7.7</td>
<td>the impact of &quot;how to&quot; courses on student performance (e.g. courses such as how to study, how to take tests, etc.);</td>
</tr>
<tr>
<td>7.8</td>
<td>benefits of student services to students with various characteristics (e.g. age, gender, disabilities, marital status, etc.).</td>
</tr>
</tbody>
</table>
Learning and Teaching: Priority 8

The role of student activities in the commuter-based community college.

Discussion: This topic focuses on nonacademic student activities in the typical commuter-based community college, including the impact of participation in student activities on student outcomes.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>the extent to which student activities are directly linked to an instructional program, and the success of linked activities in comparison to activities not linked to instructional programs;</td>
</tr>
<tr>
<td>8.2</td>
<td>the impact of student participation in student activities on:</td>
</tr>
<tr>
<td></td>
<td>* grade point average;</td>
</tr>
<tr>
<td></td>
<td>* retention in programs;</td>
</tr>
<tr>
<td></td>
<td>* completion of programs;</td>
</tr>
<tr>
<td></td>
<td>* attitude towards college after leaving student status;</td>
</tr>
<tr>
<td></td>
<td>* speed with which they secure a job; and</td>
</tr>
<tr>
<td></td>
<td>* success on the job.</td>
</tr>
<tr>
<td>8.3</td>
<td>trends in providing student activities in the commuter-based community college;</td>
</tr>
<tr>
<td>8.4</td>
<td>student expectations concerning college-sponsored student activities and the extent to which these expectations are met.</td>
</tr>
</tbody>
</table>
Leadership: Priority 1

Institutional effectiveness and assessment.

Discussion: This topic focuses on the community college's response to the institutional effectiveness and assessment movement, including the degree to which community colleges have accepted the responsibility for measuring student outcomes against intended student goals and/or expectations and the methods used for measurement.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>the degree to which community colleges have accepted the responsibility for measuring student outcomes against intended student goals and/or expectations:</td>
</tr>
<tr>
<td>1.2</td>
<td>the degree to which institutional strategic planning is reflected within college budgets:</td>
</tr>
<tr>
<td>1.3</td>
<td>the degree to which community colleges collect and use data in an effective and meaningful way to assess outcomes;</td>
</tr>
<tr>
<td>1.4</td>
<td>the state and effectiveness of classroom-based institutional research in improving the educational process and student outcomes;</td>
</tr>
<tr>
<td>1.5</td>
<td>the impact and effectiveness of the quality improvement movement on community college culture, leadership and management styles;</td>
</tr>
<tr>
<td>1.6</td>
<td>the degree to which longitudinal data are collected and utilized to determine the impact the community college has on its students (all who attend) and upon the communities it serves;</td>
</tr>
</tbody>
</table>
the degree to which contractual or partnership agreements exist for third-party evaluations and assessments to determine institutional and/or program effectiveness.
Leadership: Priority 2

The impact of declining resources on the community college mission.

Discussion: This topic focuses on the effects that declining resources have had on the community college mission and how community colleges have responded to this resource decline.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>efforts made by institutions to restructure their organization and activities in order to meet their mission objectives during a period of declining resources;</td>
</tr>
<tr>
<td>2.2</td>
<td>processes used to prioritize resource distribution while in a declining mode and the acceptability/ownership/morale implications on the faculty and staff of these processes;</td>
</tr>
<tr>
<td>2.3</td>
<td>identification of strategies used by community colleges to obtain alternative resources and the degree to which these alternatives actually provide new offsetting resources;</td>
</tr>
<tr>
<td>2.4</td>
<td>the actual decline in resources experienced by community colleges and how these declines were distributed throughout the institution;</td>
</tr>
<tr>
<td>2.5</td>
<td>the impact of a decline in institutional resources on instructional activities;</td>
</tr>
<tr>
<td>2.6</td>
<td>the direct and indirect impact upon the &quot;open door&quot; policy of the college in a declining resource period.</td>
</tr>
</tbody>
</table>
Leadership: Priority 3

Organizational issues within the community college.

Discussion: This topic focuses on the effect of organizational structure and processes in the community college on institutional effectiveness.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>the effect of organizational structure on customer service (defining customers as all users of an institution's services or products including internal services for faculty and staff);</td>
</tr>
<tr>
<td>3.2</td>
<td>changes in organizational structure in response to the concept of &quot;seamless education&quot; (i.e. the ability of students to transition to various levels of education based on need and competencies with minimum effort);</td>
</tr>
<tr>
<td>3.3</td>
<td>the impact of technology on organizational structure;</td>
</tr>
<tr>
<td>3.4</td>
<td>trends in organizational structure used within public community colleges and their impact on institutional effectiveness;</td>
</tr>
<tr>
<td>3.5</td>
<td>the effect of adopting continuous improvement goals for an institution and the impact of such goals on organizational structure;</td>
</tr>
<tr>
<td>3.6</td>
<td>the impact of educational reform (from within or outside the college) upon the organizational structure of a college;</td>
</tr>
<tr>
<td>3.7</td>
<td>the impact of governance structures on a college's organizational structure.</td>
</tr>
</tbody>
</table>
Leadership: Priority 4

*Styles of leadership and management in the community college.*

**Discussion:** This topic focuses on the trends and outcomes of leadership and management styles within the community college.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>the degree to which various leadership styles are effective in achieving organizational goals and excellence;</td>
</tr>
<tr>
<td>4.2</td>
<td>identification of successful models for evaluating community college leaders/managers;</td>
</tr>
<tr>
<td>4.3</td>
<td>the critical attributes community college leaders will need for success in the next decade;</td>
</tr>
<tr>
<td>4.4</td>
<td>the degree to which community colleges use meaningful participatory management techniques as they relate to decisions within the institution;</td>
</tr>
<tr>
<td>4.5</td>
<td>the degree to which community colleges have adopted and use quality management methodologies and the impact of these methodologies on institutional effectiveness;</td>
</tr>
<tr>
<td>4.6</td>
<td>the type of leadership and management styles practiced in community colleges and how factors such as size, environmental setting and longevity of senior leadership affect leadership styles.</td>
</tr>
</tbody>
</table>
Leadership: Priority 5

**Personnel issues within the community college.**

**Discussion:** This topic focuses on human resource issues within the community college and includes factors of selection and professional development.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>the effectiveness of screening and selection processes used by colleges for hiring staff and attaining the desired diversity (in its broadest context) of future employees in the institution;</td>
</tr>
<tr>
<td>5.2</td>
<td>the identification of training and professional development needs of community college leaders;</td>
</tr>
<tr>
<td>5.3</td>
<td>how personnel conflicts and issues are resolved by community colleges including the results and effectiveness of these efforts;</td>
</tr>
<tr>
<td>5.4</td>
<td>the effectiveness of human resource policies or procedures in meeting ethnic diversity hiring goals;</td>
</tr>
<tr>
<td>5.5</td>
<td>the effectiveness of efforts to replace retiring faculty and administrators.</td>
</tr>
</tbody>
</table>
Leadership: Priority 6

The effect of collective bargaining.

Discussion: This topic's focus is on the institutional outcomes associated with collective bargaining within the community college.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>the degree to which collective bargaining results in collaborative or adversarial relationships within the institution;</td>
</tr>
<tr>
<td>6.2</td>
<td>the relationship of collective bargaining to efficient and effective institutional management;</td>
</tr>
<tr>
<td>6.3</td>
<td>the relationship of collective bargaining to the instructional process and student outcomes;</td>
</tr>
<tr>
<td>6.4</td>
<td>the impact of the collective bargaining process on an institution’s response to declining resources.</td>
</tr>
</tbody>
</table>
Appendices

Appendix A:
Participating Colleges

Appendix B:
A Modified Delphi Process
Appendix A: Participating Colleges

ALASKA

Prince William Sound CC
P.O. Box 97
Valdez, AK 99686

ARIZONA

Navajo CC
Navajo Nation
Tsaile, AZ 86556

South Mountain CC
7050 South 24th Street
Phoenix, AZ 85040

Rio Salado CC
640 North First Avenue
Phoenix, AZ 85003

Yavapai College
1100 East Sheldon Street
Prescott, AZ 86301

CALIFORNIA

College of the Siskiyous
800 College Avenue
Weed, CA 96094

East Los Angeles College
1301 E Brooklyn Avenue
Monterey Park, CA 91754

Grossmont College
8800 Grossmont College Dr.
El Cajon, CA 92020

Mendocino College
P.O. Box 3000
Ukiah, CA 95482

DeAnza College
21250 Stevens Creek Blvd.
Cupertino, CA 95014

Feather River College
P.O. Box 11110
Quincy, CA 95971-6023

Shasta College
P.O. Box 496006
Redding, CA 96049

Lake Tahoe CC
P.O. Box 14445
South Lake Tahoe, CA 95702
CALIFORNIA (continued)

West Hills CC
300 Cherry Lane
Coalinga, CA 93210

COLORADO

CC of Denver
1068 Ninth Street
Campus Box 250
Denver, CO 80204

Pueblo CC
900 West Orman Avenue
Pueblo, CO 81004

HAWAII

Honolulu CC
874 Dillingham Blvd.
Honolulu, HI 96817

Kauai CC
3-1901 Kaumualii Highway
Lihue, HI 96766

IDAHO

College of Southern Idaho
315 Falls Avenue
P.O. Box 1238
Twin Falls, ID 83303-1238

MONTANA

Dawson CC
P.O. Box 421
300 College Drive
Glendive, MT 59330

Fort Belnap College
P.O. Box 547
Harlem, MT 59526

35
MONTANA (continued)

Flathead Valley CC
777 Grandview Drive
Kalispell, MT 59901

Salish Kootenai College
P.O. Box 117
Pablo, MT 59855

NORTH DAKOTA

Bismarck State College
1500 Edwards Avenue
Bismarck, ND 58501

Little Hoop CC
P.O. Box 269
Fort Totten, ND 58335

NEW MEXICO

Clovis CC
417 Schepps Blvd.
Clovis, NM 88101

Northern New Mexico CC
1002 North Onate Street
Espanola, NM 87532

OREGON

Central Oregon CC
2600 NW College Way
Bend, OR 97701

Lane CC
4000 East 30th Avenue
Eugene, OR 97405

Oregon Coast CC
Service District
332 SW Coast Highway
Newport, OR 97365

Rogue CC
3345 Redwood Highway
Grants Pass, OR 97527

SOUTH DAKOTA

Sinte Gleska College
P.O. Box 490
Rosebud, SD 57570
UTAH

Salt Lake CC
P.O. Box 30808
Salt Lake City, UT 84130

Utah Valley CC
800 West 1200 South
Orem, UT 84958

Snow College
150 East College Avenue
Ephraim, UT 84627

WASHINGTON

Pierce College
1601 39th Avenue SE
Tacoma, WA 98374

Tacoma CC
5900 South 12th
Tacoma, WA 98465

South Seattle CC
6000 16th Avenue SW
Seattle, WA 98106

Walla Walla CC
500 Tausick Way
Walla Walla, WA 99362

WYOMING

Casper College
125 College Drive
Casper, WY 82601

Central Wyoming College
260 Peck Drive
Riverton, WY 82501
Appendix B: A Modified Delphi Process

PURPOSE

The Delphi process is a method of identifying information relative to an issue and then reaching consensus concerning the priority of the final information or its potential in reaching a decision. In other words, the process both identifies information associated with a question, narrows that information to a smaller subset based on consensus and finally either reaches a priority order of the information or a decision. As its basis the process uses a group of "experts" or members of various constituent groups that have a stake in the results of the process. Inherit in the Delphi Process is the ability to conduct the effort without assembling all of the members of the team at one location. This helps to focus the opinions of individuals participating in the Delphi Process, prevents the cost associated with lengthy meetings, and reduces the probability that the group will go off on various tangents.

BASIC PROCESS

Issue to be Explored

The facilitator who will manage the Delphi process must develop a statement that defines the type of information needed from participants, how the information will be refined and the final use of the information. As part of the initiation of the process all participants must clearly understand why the issue is being explored and how the outcomes will be used.

Process

The facilitator is responsible to provide participants in the Delphi Process with specific instructions on their participa-
tion and the various steps which will be taken during the process. Since the issues involved and outcomes expected may vary these steps, this must be tailored for each issue explored. However, the basic process remains as follows:

1. A representative panel of experts about the topic being explored or representative members of constituent groups which have an interest in the outcome is identified by the facilitator.

2. The facilitator obtains agreement from the potential participants concerning their willingness to participate and to abide by the rules of the process.

3. A series of “rounds” are initiated aimed at developing information concerning the issue. For example, if the issue is a prioritization of functions within a work unit, the first “round” would request the participants to list the functions performed by the work unit. A subsequent “round” would provide participants with an integrated list of functions identified and asked whether or not this list was comprehensive and accurate. Several “rounds” might be required to further integrate the list so that there is general consensus concerning the functions to be prioritized. Once this level is reached, “rounds” would follow in which individuals prioritized the various functions and the results of this prioritization would be fed back until a general consensus had been reached as to the order of priority of the various functions. In short, the process identifies relevant information and then narrows that information until the desired outcome is reached. In each step, the participants of the process provide their input individually and the facilitator integrates these data.

4. Process logistics can be supported via the use of computer networks, mail, internal distributions systems or other written communication methods. In general, oral communication is not effective and should be avoided. Written communication ensures a consistent format and makes it easier for
the facilitator to continue to integrate and narrow the information as the process moves towards completion.

General Information

The Delphi Process is especially useful in capturing the opinions of a large number of experts or constituents on an issue. The process may be to determine information concerning an issue, establishing priorities, refining statements of mission, developing lists of data, reaching consensus on the most probable solution to a problem or resolving issues. The process works in situations in which opinion is essentially the main determinate versus using empirical data to arrive at a final position. In curriculum development, the process known as DACUM (developing a curriculum) is analogous to the modified Delphi Process except that the experts usually meet together and the process is conducted through oral dialogue. This and other modifications are frequently used in planning processes. The Delphi Process, as described above, has the advantages of expanding the number of participants and eliminating the logistics and other problems associated with a large face-to-face meeting aimed at reaching consensus.