Simplifying Complexity in the Student Experience: Gathering Data

Institutional Complexity From the Student Perspective

Community colleges support a wide array of students, including traditional and nontraditional, daytime and evening, part-time and full-time, as well as career-oriented and academic transfer–oriented students. To meet the needs of this diverse student population, community colleges offer a complex variety of programs and courses, such that students in a community college may have a far greater number of choices available to them than students enrolled in a four-year institution.

Many community college students are confused or overwhelmed by the number and complexity of choices they face, which can result in "mistakes"—unexamined decisions they make that waste their time and money or that divert them from a promising academic or career path. For example, if a student is unsure which courses to take the next semester, the easiest decision may be to delay course enrollment for another semester or year—which may result in dropping out of college without ever having made the active decision to do so. Alternatively, the student may select courses impulsively, realizing only later that the chosen courses will not apply toward a degree or will not be accepted by the student's desired transfer destination.

In an era of constrained financial resources in which student–counselor ratios can exceed 1,000:1, community colleges are struggling with how to help their students more effectively navigate the wide range of choices they must make. This practitioner packet is designed to help colleges identify areas where students struggle due to excessive complexity and to help colleges consider and implement relatively low-cost solutions that could strongly improve the student experience.

> **Many community college students are confused or overwhelmed by the number and complexity of choices they face.**

This is part one of CCRC's practitioner packet on streamlining the student experience. To learn more about how colleges can use data to inform a redesign, see Simplifying *Simplifying Complexity in the Student Experience: Using Data* (part two). For information on how colleges can analyze data and evaluate and further refine reforms, see *Simplifying Complexity in the Student Experience: Evaluating a Redesign* (part three). For detailed examples of data collection and project management materials, see the *Appendix — Sample Documents* (part four).

A Case Study: Macomb Community College[1]

In the spring of 2011, CCRC and Macomb Community College, a large comprehensive suburban community college outside of Detroit, embarked on a redesign effort to simplify students' academic decision-making processes. Macomb leaders suspected that complexities in the processes of intake, orientation, and course selection were hindering students from making optimal choices in course enrollment, program selection, and transfer.

The college's redesign process consisted of three phases. In phase one, the college—with the help of CCRC—gathered data on how students experienced intake, orientation, registration, advising, and the overall process of academic decision-making. In phase two, Macomb used the findings from phase one to identify areas for improvement and assembled work teams to devise and implement solutions. In phase three, Macomb (with CCRC) conducted research on the new processes and procedures that were implemented in phase two in order to assess their impact and then refine and improve them. Throughout this packet, we will return to the example of Macomb to demonstrate how other colleges could follow a similar path.

Gathering Information About the Student Experience

In order to help create a more positive college experience for students, an institution must first understand students' *current* experiences. Which pieces of their college experience are frustrating or confusing? What types of needs do students have, and how do current college processes either meet those needs or fail to do so? Gathering information on these questions will provide the college with a more solid foundation for redesigning college processes and services.

To understand students' experiences, colleges should gather data from both students and frontline service providers. Learning directly from students can be eye-opening: Things that seem straightforward and reasonable from the *practitioner's* perspective may not look at all the same from the *student's* perspective. In addition to students, it is important to gather information from academic advisors, financial aid advisors, information desk personnel, and computer lab personnel. These personnel see students every day; they hear their stories, experiences, and complaints. Thus they can help identify support tools or processes that seem to work well or poorly for different groups of students.

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Who Should Gather the Data?

Conducting research—gathering data, analyzing it, and reporting it—is time-consuming and requires both institutional commitment and knowledge of research methods. The initial exploratory data-gathering phase of research also represents a key first step within the larger change management process: By soliciting input from multiple stakeholders through interviews or focus groups, the college is more likely to generate nuanced findings and recommendations that all stakeholders—even those who might normally be resistant to change—can endorse.

The research team should include individuals who have earned the trust of the college community and who also have some research experience. For example, an institutional researcher, a well-respected senior administrator, and a social science faculty member might work

together on the project. If the research work falls outside the scope of normal work duties, participation on the research team should probably include release time.

What Methods Are Available for Collecting Data?

Colleges can gather information on the student experience through multiple methods and from several groups of college stakeholders. Below we focus on four types of data (focus group, interview, survey, and performance data) and two types of stakeholders (the students themselves, and frontline service providers) from whom CCRC gathered data to inform changes at Macomb.

Methods for Collecting Data			
TYPE OF DATA	**FORMAT**	**PURPOSE**	**TYPICAL TARGET POPULATION**
Interview	One-on-one meetings in which a respondent shares personal opinions with an interviewer	Allow in-depth exploration of individual attitudes, beliefs, and behaviors	Students, staff, and faculty
Focus group	Guided discussions with a small set of individuals who share opinions on certain experiences or topics	Provide quick way to explore general perspectives	Students
Survey	Questionnaire administered to larger groups to gather information on processes or tools	Quantify attitudes or opinions on specific processes or tools	Students, staff, and faculty
Performance	Either collected from institutional data sources or from performance-based tasks administered in interview, focus group, or survey contexts	Provide information on behaviors or outcomes	Students

Interview Data

Interviews provide a space for open and honest conversation with individuals. The one-on-one setting allows interviewees to share personal views and concerns (including controversial or unpopular perspectives) and provides ample time to delve into the nuances of each participant's background, experiences, and perceptions.

Interviewees should include a variety of individuals who each have different roles, experiences, and sources of information about student challenges and frustrations. Interviews with faculty and staff can be particularly useful, as the in-depth conversation provides time to gather two related but distinct types of information: (1) their understanding of the student experience, based on their daily interactions with students; and (2) their perspective on how the college might improve the student experience.

Interviews also provide an opportunity to learn whether and why faculty and staff feel well-disposed (or ill-disposed) toward potential changes in processes and approaches. Any eventual redesign will need faculty and staff support to be successful; thus, understanding and incorporating these stakeholders' perspectives will help the college design a strategy that most faculty and staff will support. Participating in the interview process also tends to pique stakeholder interest in the redesign. "Closing the loop" by letting participants know how their input informed the redesign will help maintain their interest, build their trust in the redesign process, and ensure potential interview participation in the future.

Interviews provide an opportunity to learn how faculty and staff feel about potential changes in processes and approaches.

Typically, interviewees are guaranteed confidentiality; that is, an individual's perspective will be formally recorded and may be shared as part of a larger report, but the individual's name will not be attached to his or her specific responses.

Gathering Interview Data at Macomb

CCRC researchers began their qualitative research at Macomb by interviewing key administrators and all of the college's full-time counselors and advisors. Data gathered from these interviews helped researchers identify key areas where students appeared to struggle. For example, counselors and advisors believed that new students did not strongly benefit from the college's online orientation; they noted that many students "wasted" their limited face-to-face advising session by asking questions that should already have been answered in orientation.

The nuts and bolts of conducting interviews. Interviews are typically 30 to 60 minutes in length, although interviews collecting additional types of data (such as survey or performance data, as discussed below) may require more time. Compensation is typically provided to students but not to faculty or professional staff.

Individuals should never be *required* to participate in an interview, as unwilling interviewees are unlikely to be helpful. In general, faculty and staff are pleased to share their perspectives, provided that the administration makes clear that the interviews are not meant to evaluate employees. Faculty and staff can be encouraged to participate with a recruitment letter.

An interviewer must consider how to put respondents at ease and help them to feel free to share their unvarnished perspective—even if that perspective is critical or controversial. A good interviewer maintains a positive tone, listens carefully, and uses follow-up questions to probe for deeper thoughts. An interview protocol helps the researcher manage interviews effectively; practice in using the protocol with volunteers (even with friends or family members) will help the researcher feel more confident and prepared, which in turn will help interviewees feel more confident and relaxed (see the appendix for a sample interview protocol).

Confidentiality

Confidentiality is an important consideration in focus groups and interviews. At the start of any interview or focus group, the facilitator should explain how participants' input will be used (e.g., in public reports, internal memos, etc.) and assure participants that their individual input will not be personally identifiable in any way, unless their consent to do so is explicitly given. In focus groups, participants should be instructed to keep the content of the conversation confidential—that is, not to "gossip" to friends about other participants' thoughts or opinions.

Some colleges have Institutional Review Boards (IRBs), which require specific confidentiality protections for research participants. Gathering information for purposes of institutional improvement typically does not require IRB oversight; however, if any member of the research team wishes to present or publish interview or focus group data outside the context of the college, IRB oversight may be required. In that case, the college's IRB may require specific consent forms that spell out participants' confidentiality protections.

Focus Group Data

A focus group is guided by a facilitator, who asks participants to share their thoughts and experiences related to the topic at hand. For example, in a student focus group, the facilitator might encourage students to provide feedback on current (or potential) support tools or processes, and on how well these tools meet students' needs. Researchers can then use this information to identify *themes*, or recurring concerns, ideas, or opinions voiced by participants.

Typically, focus groups are most helpful when the college is in an exploratory data-gathering stage and is seeking to gain a general understanding of participants' reactions to, or perceptions of, particular issues. Because focus groups allow diverse participants to share their thoughts and build on each other's ideas, they can result in new and unexpected insights. However, the group context is less appropriate if the college is gathering information on sensitive or controversial topics, as participants may be hesitant to voice unpopular opinions.

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The nuts and bolts of conducting focus groups. Focus groups vary in size, but the most manageable and productive focus groups tend to be small, with perhaps three to seven participants. The findings that emerge from each focus group may vary depending on the group dynamics—for example, a highly opinionated person may sway a group's discussion in a particular direction—and thus three or four separate focus groups are often useful.

Gathering Focus Group Data at Macomb

During the exploratory research phase, CCRC researchers conducted eight student focus groups at Macomb to explore more deeply the areas that appeared to be problematic for students based on staff interviews. Focus groups were conducted to get a general sense of student experiences in terms of intake and academic decision-making, including processes such as orientation, advising, course selection and registration, program selection, and transfer decision-making.

Because counselors and advisors suggested that different populations would have differing experiences and opinions, the researchers conducted separate focus groups with different groups of students: older (over age 20) and younger students, students who had decided on a program of study ("decided" students) and those who had not ("undecided" students), and first-semester as well as continuing second-semester students.

Prior to implementation, CCRC researchers conducted another set of four focus groups in which first-time college students in their first or second semester at Macomb completed individual self-advising tasks, and then discussed related issues with the larger group. After implementation of the reforms was complete, the research team conducted a final set of four focus groups in which students completed the same self-advising tasks and discussion process, in order to help the college understand the effectiveness of the redesign and further refine the reforms (see part three for more information).

Focus groups can last between 30 minutes and 2 hours, depending on the number of topics, the number of participants, and any additional planned activities (such as the gathering of performance data, see below). The facilitator should take detailed notes and, if participants provide their consent, the group's discussion should be recorded for later reference.

While students generally enjoy participating in focus groups, some incentive is typically necessary to recruit them to participate. Such incentives include gift cards (ranging from perhaps $25 for a ½ hour to $75 for 2 hours), free food, and college-branded gifts (see the appendix for a sample student recruitment letter).

Before conducting the focus group, researchers should create a protocol to help the facilitator effectively manage the discussion. Typically, a focus group protocol includes a set of broad questions about the topic of interest along with a set of potential follow-up questions, which can be asked if and when further probing is appropriate (see the appendix for example focus group protocols).

Survey Data

Surveys can be used to efficiently collect information from large and broad populations of people as well as from very specific groups. While focus groups or interviews leverage *open-ended questions*, or questions that allow participants to answer in their own words, surveys are more appropriate for *closed-ended questions*, or questions that require respondents to choose from a limited set of specific responses. Accordingly, surveys are better suited for digging into the details of an issue that is already partially understood rather than for exploring the outlines of a broad or vague issue.

> **Gathering Survey Data at Macomb**
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> After the research team identified online orientation as an area for improvement, based on the interviews and focus groups, they surveyed participants at the end of their online orientation session in order to gather feedback on particular aspects of the program. Information gathered from the orientation survey both shaped the design of the new orientation and served as baseline data against which post-implementation data could be compared, in order to track whether the redesigns effected any changes in the student experience.

The nuts and bolts of conducting surveys. While creating high-quality questions is important in the focus group or interview setting, it is absolutely critical in the survey setting, given that no facilitator is available to help clarify an unclear question or follow up on an unclear answer. After drafting the survey, the research team should test it with a small group of respondents to gather feedback on the clarity of the questions and answers and revise accordingly (see the appendix for sample survey questions and additional resources on survey design).

Beyond the quality of the questions themselves, the actual mechanics of the survey may also create challenges for respondents. In particular, long questionnaires can create survey fatigue. Survey layout can also contribute to fatigue; for example, too many items on one screen or page might overwhelm respondents. Accordingly, prioritize the most important information to collect and keep the survey short.

Surveys can be used on their own or in conjunction with interviews and focus groups. For example, distributing a demographic questionnaire to focus group participants can allow researchers to connect specific findings to different demographic groups.

Performance Data

Performance data provide information on how individuals perform or act in the "real world." For example, to assess student experiences with an online system, researchers might analyze transactional data, including how many students log in to the system, how often they log in and how long they stay, and which tools they use. In an investigation of students' academic success, performance data could include GPA or exam score data.

While some performance data may be collected through existing institutional data sources, other data may be collected as part of the interview, focus group, or survey context.

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Gathering Performance Data at Macomb

The CCRC research team administered performance tasks during student focus groups, using "self-advising scenarios" which were designed to assess students' abilities to choose appropriate courses or programs of study using the college's website (including the college's course catalog). Each student completed a unique scenario, or hypothetical situation (e.g., "you are interested in business and want to earn at least $50,000 after graduation"), along with a related list of questions, such as which program of study would be most appropriate for the student's hypothetical goals.

Students completed their own scenarios independently and then discussed their responses (as well as their related challenges and confusion) with the larger group. Together, the scenario-based performance data and the qualitative reactions provided a more complete picture of the challenges students faced as they attempted to self-advise using available resources (see the appendix for example scenarios).

The nuts and bolts of collecting performance data. Researchers may be surprised to discover how much useful performance data is hidden within existing systems such as online learning platforms, online registration systems, or even student ID card swipe logs. Researchers must anonymize such data (that is, remove student identifiers) before analyzing and reporting them. The information can be very helpful in tracking changes in real-life student behavior in response to an intentional redesign. Different types of performance data are relevant to different types of redesigns; the table below provides some examples of data that could be helpful under different circumstances.

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Examples of Performance Data Relevant to Different Redesigns	
REDESIGN FOCUS	**EXAMPLE PERFORMANCE DATA**
Developmental education (assessed with student information system data)	• Proportion of new students enrolling in developmental vs. college-level courses • In-course pass rates • Proportion completing college-level English or math with a C or better within a year
Course catalog (assessed with lab activity)	• Proportion of students able to successfully complete basic self-advising tasks using catalog • Identifying advising tasks which seem easier or more difficult for students to accurately complete • Identifying types of students who perform better or worse
Online student portal (assessed through online activity data linked to student login)	• Number of students visiting site • Average number of visits per semester • Average length of visit or number of pages per visit • Most popular pages or tools • Most popular search terms • Pages or tools that tend to be visited together • Pages or tools that trigger the most queries

Conclusion

Qualitative and quantitative data—gathered using the methods described above—can help colleges understand the student experience and gain clarity about the areas that most need improvement. Colleges who skip this exploratory data-gathering and analysis phase may embark on an ambitious redesign only to discover that they wasted time and resources on changes that do not fully address the real problems students are facing.

While CCRC conducted most of the research detailed in this packet, other colleges may undertake similar work by creating a research team, which can begin the research process by examining and adapting the documents included in this packet's appendix. After gathering exploratory data, researchers need to extract some basic findings which will allow college's leadership to identify the areas most in need of reform and assign appropriate staff members to devise and implement solutions. Part two of this packet provides some suggestions in terms of how to design and implement redesigns that build on research findings, drawing on Macomb's experience.

Endnotes

1. For the full research see, Jaggars & Fletcher (2014).

Sources

Jaggars, S. S., & Fletcher, J. (2014). *Redesigning the student intake and information provision processes at a large comprehensive community college* (CCRC Working Paper No. 72). New York, NY: Columbia University, Teachers College, Community College Research Center.