

CCRC BRIEF

NUMBER 49

JANUARY 2011

The Structure of Student Decision-Making at Community Colleges

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Based on a longer review, this Brief summarizes research evidence and theoretical discussion regarding whether community college students are more likely to persist and succeed in programs that are tightly and consciously structured, with relatively little room for individuals to deviate (on a whim or even unintentionally) from paths toward completion, and with limited bureaucratic obstacles. The lineage of this hypothesis can be traced back in part to Tinto's seminal work on student persistence (1993), which recognized that the dropout phenomenon is not solely an individual failure but also an institutional one. In the community college context, this hypothesis has been prominently raised in recent years by Rosenbaum, Deil-Amen, and Person (2006), who examined differences in organizational procedures between public and private two-year colleges. The definition of *structure* used in this Brief refers not only to explicit institutional policies and procedures, but also to "norms and nudges" that may more subtly influence individuals' decisions at a point of action. This broad definition is influenced by recent literature on choice architecture, which calls attention to the way that choices are structured and presented (Thaler & Sunstein, 2008).

After outlining the kinds of decisions community college students face and the context within which they do so, this Brief introduces several concepts to examine how the structure of student decision-making may influence students' choices. It then discusses evidence regarding potential structure-based interventions and concludes with suggestions for future research and practice.

Navigating College

An important first step for a student in the pursuit of a postsecondary credential is deciding what program to pursue. Yet incoming students often lack well-defined, pre-established preferences. The abundance of program options offered by the typical multiple-mission, open-admissions community college may be particularly appealing to those who are undecided, yet it may also serve to perpetuate confusion and indecision. Incoming students may also be surprised to find that enrolling at a college does not necessarily mean that they can begin by taking college-level courses in any area. More than half of entering community college students are assigned to developmental coursework in at least one subject to better prepare them for college-level courses (Bailey,

Jeong, & Cho, 2010; Bailey, 2009). Developmental credits may qualify a student for financial aid, but may not count as degree credits toward graduation.

Each term, students must also choose how many courses to take and when to take them, based on program descriptions that often provide little guidance about which courses should be taken when. On top of this, students may have to make tradeoffs depending upon the vagaries of class times, family responsibilities, and work schedules. Ideally, students should consider how the course choices they make will impact the set of choices they will have in the following term, but at many institutions it is difficult to confirm in advance what courses will be offered in a future semester. Thus, term after term, a complex decision-making process is repeated.

In general, throughout the college experience, students often encounter bureaucratic hurdles that throw them off course. Applying for financial aid and registering for courses are often characterized as frustrating experiences by students. Even after a given term begins, students may encounter unexpected obstacles. For example, financial aid may be delayed. Or a course may be more difficult than expected, but it may be too late to gain access to an appropriate course. Another common problem is that courses that count toward specific program requirements for a two-year degree may not be transferable if the student decides to continue at a four-year institution.

The level of assistance provided by advisors and counselors in helping students navigate community college and make appropriate decisions is typically low, owing to extremely high caseloads. The advising that does take place is often by necessity focused on mechanics of course registration rather than larger questions about goals and long-term plans. In some cases, family and peer networks may compensate for a lack of formal guidance. But because students at community colleges are disproportionately first-generation college-goers, many from minority and low-income families, they may be less able to glean information from the experiences of their family and friends.

How Students Make Choices

The great variety of program and course options found at community colleges may enable students with different backgrounds, preparation, interests, and constraints to match with similarly diverse programs and attendance schedules. Indeed, this wide variety of alternatives has been central to the rise of open-access community colleges. Yet recent work in psychology, marketing, and behavioral economics presents compelling evidence that more choice is not always better.

Experimental evidence concerning "bounded rationality" suggests that seemingly irrelevant contextual

factors often influence choices (Bertrand, Karlan, Mullainathan, Shafir, & Zinman, 2005; Tversky & Simonson, 1993). The implication for higher education is that students' choices regarding programs of study or courses within programs may be highly dependent upon how these choices are structured and presented. Research also suggests when individuals make complex, high-stakes decisions with long-term implications, they may struggle in determining which factors are most important, in gathering all of the relevant information on these factors, and in appropriately weighing the costs and benefits of these factors in a final calculation.

Even after deciding on the best course of action, research on "bounded self-control" suggests that individuals may have trouble following through on a decision if it involves trading current pain for future gain, especially when the former is concrete and certain, and the latter is ambiguous and uncertain (Laibson, 1997), a phenomenon called "hyperbolic discounting." Individuals may also be averse to following through on a good decision when doing so means "locking in" some real or perceived loss—a phenomenon known as "regret aversion." "Hassle factors" and negative interactions can also cause individuals to delay taking an action they know to be beneficial (Bertrand, Mullainathan, & Shafir, 2004) simply because of unpleasant associations.

Bounded rationality and bounded self-control can lead to three potential problems: mistakes, delay, and dissatisfaction. First, individuals who are uninformed or overwhelmed with too much complicated information may make systematically biased decisions that are not in their best interest. Psychological and behavioral economic researchers have identified a number of decision-making heuristics and biases that individuals often resort to in the face of complexity. Madrian and Shea (2001), for example, found strong evidence of "default bias" in a study of 401(k) enrollment procedures at a large U.S. corporation. When the corporation instituted a policy of automatically enrolling new hires in the 401(k) plan unless they actively opted out, participation increased by about 50 percentage points. This indicates the large potential role for seemingly small differences in bureaucratic procedures.

In the community college context, the path from initial application to course enrollment requires numerous active decisions, where the default is simply not to enroll. And in the face of confusion, students may be unduly influenced by idiosyncratic factors, such as whether a friend is enrolling in a particular program or course. The tendency to base decisions on easily accessible information is referred to as "availability bias." Research suggests that students undertake surprisingly minimal search efforts regarding educational options, given their importance. Instead, they often resort to trial and error (Beggs, Bantham, & Taylor, 2006; Grubb 2006).

A second potential problem is "decision deferral." Greenleaf and Lehmann (1995) found that consumers may delay decision-making when they are uncertain about the consequences of their actions, when they are uncertain about how to identify and weigh the key attributes of alternative choices, and when they must wait on the advice of others. In higher education, some students, unsure about which courses to take, may simply never complete the registration process or, once they register, may delay decisions about degree concentration.

A third potential adverse consequence is dissatisfaction with the ultimate decision once it is made. Evidence from psychology and marketing suggests that consumers are

less satisfied when they are uncertain about their final choice and when the decision involves highly consequential tradeoffs (Heitmann, Lehmann, & Herrmann, 2007; Botti & Iyengar, 2006). This perspective complements Tinto's (1993) model of student dropout, which he suggests is a consequence of student frustration and disengagement. Students who had an unpleasant experience in making prior decisions or who have lingering doubts about their choices may dread having to go through the process all over again the following semester.

Promising Interventions

The lack of structure in the community college experience encompasses several types of problems that could be addressed by a range of solutions—very "light-touch" informational interventions, moderately intensive interventions restructuring aspects of curricula and student services, or even the dramatic overhaul of an entire institution. Several promising interventions are discussed below.

Improved Information and Support

Intensive advising. Perhaps the most straightforward approach to addressing the complexity of the community college experience is simply to enhance student advising. Most campuses, however, do not have the resources to scale up intensive-advising programs across the entire campus; accordingly, such "high-touch" programs may be feasible only for targeted at-risk subsectors of the student population.

Technological innovation. Evidence on the positive impact of simplifying the federal financial aid application process (Bettinger, Long, Oreopoulos, & Sanbonmatsu, 2009) suggests that technological simplifications in other domains (such as course registration) might produce similar positive results. For example, one potential "light-touch" intervention would be a sophisticated online college advising tool, which would integrate career exploration and goal setting, prerequisite navigation, course planning and recommendations, tracking of student progress in the meeting of requirements, and early warnings when students fall off track.

Integrated Curricula

Learning communities. In their simplest form, learning communities group students together as a cohort that takes two or more courses together in a given term. Learning communities may address structural problems in at least two ways: first, they simplify students' course choices (and schedules); second, they may improve peer networks. Learning communities have been evaluated in a randomized experiment conducted by MDRC (Scrivener et al., 2008). The study found statistically significant positive impacts on a range of outcomes during the treatment period, including credits attempted, credits completed, GPA, and self-reported student experience; however, these impacts tended to fade in post-program semesters. One limitation of the study is that because the learning communities involved a cluster of intertwined interventions, it was impossible to disentangle the mechanisms driving these effects.

Washington State's I-BEST program. The Integrated Basic Education and Skills Training (I-BEST) model, developed by the community and technical colleges in Washington State, combines instruction in basic skills with college-level career-technical coursework for up to two

academic years in an effort to streamline the curricula and improve student engagement. Research suggests that students who enroll in I-BEST are more likely to make point gains on a basic skills exam, earn college credits, and complete occupational certificates (Jenkins, Zeidenberg, & Kienzl, 2009; Zeidenberg, Cho, & Jenkins, 2010). While I-BEST is more structured than the standard curriculum, it is also more contextualized—basic skills are not taught in isolation but are integrated into an applied career-technical context. Thus, to the extent the intervention is successful, it is not possible to isolate structure as the primary causal mechanism.

Lessons from K-12 Curriculum Design

Instructional program coherence. Research on curriculum design in the K-12 sector provides some relevant insights for thinking about structure in community college programs. For example, Newmann, Smith, Allensworth, and Bryk (2001) found that Chicago public elementary schools with higher levels of teacher-perceived “instructional program coherence”—defined as “a set of interrelated programs for students and staff that are guided by a common framework for curriculum, instruction, assessment, and learning climate and that are pursued over a sustained period” (p. 299)—made higher gains in student achievement.

Constrained curriculum. In their study of the effect of high school organization and structure on student dropout rates, Lee and Burkam (2003) analyzed data from the High School Effectiveness Study, covering 3,800 students in 190 schools, controlling for student demographics, test scores, and school size. Their results suggest that schools offering mainly academic courses and few nonacademic courses have fewer dropouts.

Radical Organizational Change

Meaningful and lasting change may require more than tweaking around the edges; it may require overhauling the organization so that all aspects of the institution are aligned to promote student success (as discussed by Jenkins [2011] in a companion review in CCRC’s Assessment of Evidence Series). This is the motivation behind a new community college in the City University of New York (CUNY) system that is being designed from the ground up and is expected to enroll its first students in 2012. Students at the new school will be required to attend full time and will choose from ten to twelve program offerings, and articulation (i.e., course transfer) agreements with CUNY’s four-year institutions will be specified in advance (CUNY, 2008).

In describing its decision to limit students’ options upfront, the concept paper for the new college cited compelling qualitative research comparing public and private two-year institutions by Rosenbaum et al. (2006), who found that at least some for-profit, or occupational, colleges produce better outcomes by providing students with a more structured experience. The researchers conducted in-depth qualitative and survey analyses at seven public and seven private two-year institutions within a single metropolitan area of Illinois to examine differences in organizational procedures. They concluded that the relative advantage of occupational colleges over community colleges stems from the “package deal” (Rosenbaum et al., 2006, pp. 225–227) afforded to students by the occupational colleges through a complementary combination of well-structured programs and mandatory, well-integrated support services.

Discussion and Conclusion

The observational evidence is very strong that community college students are often confused and sometimes overwhelmed by the complexity of navigating their community college experience. And the evidence from other fields (such as consumer choice and financial planning) is very strong that individuals’ ability to make good decisions—or to make any decision at all—is adversely affected by several of the factors that are present in the community college context. The evidence relating to specific solutions in the community college context is limited but growing. Enhanced advising, assistance in navigating bureaucracy (e.g., completing the federal financial aid application), and the provision of linked cohorts/curricula through learning communities are among the interventions that have been evaluated and found to have positive (if not transformational) impacts.

It is worth emphasizing that the structure hypothesis raises several different types of problems, each of which might require different types of solutions. And indeed some of these solutions may confront values held by some educators. “Hassle factors” such as long lines at registration, burdensome and/or redundant paperwork, or negative interactions with financial aid staff may require behind-the-scenes streamlining of bureaucratic processes, additional support staff, and/or new staff training. While the cost and effort required for such reforms may not be trivial, the argument for reducing hassle factors is uncontroversial. Similarly, there is little substantive argument against providing students with better information (and better ways to search and navigate this information) to help them manage the sheer complexity of gathering and wisely utilizing all of the relevant information on the costs, benefits, and requirements of alternative educational paths.

A related but distinct challenge is the number of program options students must choose from, which psychological evidence suggests can cause decision paralysis, arbitrary decision outcomes, and dissatisfaction. Simply providing students with more information may not solve this problem, but reducing options is certainly more controversial. CUNY’s new community college, which explicitly limits students’ choices upfront, is one radical potential solution. Helping students navigate an abundance of options need not imply restricting student choice, however. A middle option would be for schools to provide the equivalent of a “prix-fixe” menu, offering a limited selection of pre-packaged college pathways that students could choose from instead of planning their schedules “a la carte.” Similarly, colleges might experiment with setting “smart defaults,” as companies have begun to do with their employees’ retirement plan choices. These defaults do not limit students’ ability to customize their own path through college but instead provide them with a reasonable starting point. For example, incoming students could be “pre-registered” for a set of common foundational courses, which they would then be free to change; returning students could be pre-registered for a set of logical follow-up courses based on their major and previous coursework.

Overall, the evidence that a problem exists is very strong, but the evidence on what policies best address it—particularly in terms of cost-effectiveness and scalability, as well as in terms of figuring out which types of interventions work best for whom and under what

circumstances—is much more limited. But the fact that there is no simple clear answer need not be cause for discouragement. Instead, the issue of structure in higher education decision-making can be viewed as ripe for future innovation and research.

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Funding for this research was provided by the Bill & Melinda Gates Foundation. This Brief is based on CCRC Working Paper No. 25 (part of the CCRC Assessment of Evidence Series), *The Shapeless River: Does a Lack of Structure Inhibit Students' Progress at Community Colleges?*, which is available for download free of charge at <http://ccrc.tc.columbia.edu>.

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