

Making Space and Making Do:
An Exploration of the Practices that Start New Majority Students toward Their
Educational Goals

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A dissertation Submitted in partial fulfillment of
The requirements for the degree of

Doctor of Philosophy
(Educational Leadership and Policy Analysis)

at the
UNIVERSITY OF WISCONSIN-MADISON
2014

Date of final oral examination: 11/13/2014

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Abstract

This phenomenological study explores the practices taken up by a group of successful community college students to start a college education. Drawing on the data collected for a national study, I assembled a database of interview transcripts, public documents, and participant observations that were gathered at four diverse community colleges, Chief Dull Knife College, El Paso Community College, North Seattle Community College, and San Diego City College. These texts together represented viewpoints on why students come to these colleges, what challenges they face, and in what activities they engage in order to succeed—both to persist and also to be recognized by others as successful first-year college students. Data analysis proceeded not to arrive at the meaning individuals connect to their experience but to gather and interpret representations of the ways in which individuals and groups take up available social resources. This analysis was guided by the tenets of discourse analysis augmented by the constant comparative method of grounded theory.

Initial analysis resulted in twenty strands of activity that were organized—with some help from Kenneth Burke and James Wertsch—into four groups: activity aimed at progressing in college, activity aimed at designing educational environments, activity aimed at establishing agency, activity aimed at establishing educational purpose. Three of these strands were then taken through two additional rounds of analysis to identify discrete actions, subject positions that students adopted, student goals, the artifacts that students used. In turn, this analysis led to an interpretation of what a sample of students do to establish their educational purposes, what sorts of educational spaces they sought out and designed, and in what kinds of routine activities they engaged. Together, these practices flesh out the ways in which these successful community college students make use of their access to college. The study suggests that research might augment studies of behaviors, institutional conditions, and interactions of behavior and conditions with research that attends to why students do what they do with the resources that are available to them.

Further, the study points practitioners to a set of program practices that mattered for students in the study.

Chapter 1

Reworking Traditional Pathways into College Education:

The Case of a New Majority of College Students

There is no doubt that "getting ahead and getting an education" are closely linked for most college students in the United States (Labaree, 1997, p. 1). To be sure, a college education has always involved learning and personal development, but as early as end of the nineteenth century students came to college and colleges recruited students as consumers who pursued exchange value in a credential market (Brown, 1995; Labaree, 1997). By the end of the twentieth century, getting an education that conferred social mobility meant—for students, policymakers, and higher education researchers alike—attaining a degree that signaled a level of human capital or status that mattered.

The view of college as a means to social mobility through degrees appears now to be insufficient for growing number of students who come to American colleges. This view of college has always been problematic, devaluing learning, overproducing some credentials while underproducing others, and consistently reinforcing social advantage (Labaree, 1997), and this widely-shared belief seems particularly inadequate for the nearly three-quarters of "first-year" students—students I have come to think of as New Majority students—who are beginning their college education in for-profit four-year institutions or public or private two-year institutions in programs that provide relatively little promise of social mobility.¹

¹ In these footnotes, I will carry on two conversations with the text. The first is a conventional elaboration of the central argument in the text. The second and more substantial is an elaboration of a theory of student progress that informs my work and analysis but is indirectly related to this exploratory empirical study. The growth of enrollments in two-year and for-profit institutions is hardly news. But just how dramatic the growth is depends on how students are counted. In 2010, based on fall enrollments in degree-granting institutions, New Majority institutions enrolled 44 percent of 21,016,126 students enrolled that fall in all institutions of postsecondary education in the United States (U.S. Department of Education, National Center for Education Statistics, 2012a); based on 12-month unduplicated headcounts in these same institutions, degree-granting New Majority institutions enrolled 51 percent of all students (27,995,144) (U.S. Department of Education, National Center for Education Statistics, 2012b). More telling statistics can be derived from the analysis of undergraduates enrolled in all (and not only degree-granting) Title IV eligible institutions. New Majority institutions

Compared to "traditional" students, New Majority students are less academically prepared, more likely to enter college by way of remedial education, and often move to degrees slowly and erratically. Many of these students live in communities and seek to participate in labor markets where college degrees have uncertain economic and social value. Beyond seeing college as a place to get a degree that provides social mobility, many come to college to learn basic academic and "life" skills and acquire experiences and certifications that expand their ability to participate in local economies and communities. And, many of these students will need to make use of their college education before they have a degree in order to become self-sustaining and contributing participants in their society. For many of these students, the degree to which they aspire may not provide enough social mobility to pay off, economically or socially, by the time they have attained it.

Despite being relegated to the margins of the mainstream American higher education, many New Majority students—students who are not prepared academically, socially, culturally, and/or economically to begin college at four-year institutions—do make use of American colleges and universities. Consider the subset of students who start college in remedial classes at public community colleges, arguably the archetypal New Majority institution.² Much attention has been paid to the low persistence rates of these students, yet whether these students go on to get a degree and get ahead, the vast majority do complete "some college." In policy and research arenas, education research needs to contribute to explaining the value students derive from college as well as to assessing the effectiveness of

enrolled 52 percent of the 3,371,169 first-time degree/certificate-seeking undergraduates at these institutions and 58 percent of the total unduplicated head count, 25,495,599 students (IPEDS). Perhaps the most telling statistics comes not from IPEDS but from the 2007-08 National Postsecondary Student Aid Study (NPSAS:08). In 2007-2008, New Majority institutions enrolled 69 percent of "first-year" undergraduates based on credit accumulation (Powerstats and U.S. Department of Education, National Center for Education Statistics, 2010). Another 9 percent of first-year students moved between institutions during the year. The vision of social mobility through degrees has always been problematic for "non-traditional" students—age 24 or above, financially independent, single parents, and/or part-time. It is equally so for the super majority of students who get their start—their first year's worth of college credit—at New Majority institutions.

² At the 83 community colleges that participated in the Achieving the Dream Initiative, nearly 60 percent of students who enrolled in 2004 took at least one remedial course (Bailey, 2009). One-fifth of the students who placed into remedial math never enrolled in a remedial math course, and less than one-third completed the remedial math sequence.

existing policies and organizational structures and developing and testing new ones. Especially in light of the rise of "post-traditional learners" (Soares, 2013), studies of student success—a body of research that, as the review below suggests, continues to rely on models of student progress developed to understand "traditional" students—must begin to examine the ways in which the new majority of beginning college students negotiate their access to college in addition to documenting students' movement through a pipeline to degrees. Such explorations need to ask not only how students become active participants in college communities and whether students' initial aspirations or expectations are attained, but also in what ways they are drawing on their own lives, values, and experiences and on their college experiences to begin the practice of being college students (Fernández-Kelly, 1995; Waters, 1994).³

This phenomenological study is anchored in the assumption that in addition to attaining degrees, many of the heterogeneous students enrolled at low-status institutions are using college to start on their own paths to becoming able to contribute to a series of

³ For these students attainment and success are better understood in terms of their situated assessment of what constitutes success. The New Majority student encounters not coherent academic and intellectual communities but a fragmented social environment. These students are not primarily considering whether to adopt the norms and values of a campus but rather mustering what resources they can to attain the benefits of a college degree. Certainly choices about college going continue to be mediated by largely unobserved background characteristics (Hauser, Warren, Huang, & Carter, 2000) and already established habitus of both students and social institutions (Bourdieu & Passeron, 1990). Choices about college going are constrained by the academic pathways offered by available institutions of higher education and these institutions are themselves constrained by the choices these students make. But there is little reason to believe that decisions about college going are, for these students, participation in rites of passage. Among the alternative definitions of college success that have emerged in recent years is a growing consensus that the rapidly changing world of the twenty-first century requires individuals who are self-determining learners, agents who appropriate the tools, roles, and relationships on offer in school and at the same time embrace an obligation to build innovate respectfully with and for the others with whom they share spaces. The concept of self-determination appeared in law as part of theory that might guarantee access to democracy for indigenous peoples and then for minority groups. It represents a promising concept to describe the identity and development of inquirers, people who maintain a degree of creative autonomy that is rooted in their prior experience while they develop the capacity to contribute within new and evolving knowledge-producing communities. In concert with contributing to the capacity of citizens to self-determine, postsecondary education is reshaped by the needs of its students. Arguably, just as democratic states have a legal interest in promoting political self-determination for indigenous peoples and minorities, these states have a cultural, social, and economic interest in promoting educational self-determination among all citizens, for all citizens/groups now position themselves and their experience in respect to structures of dominance that cross state borders.

mutually beneficial collaborations as well as becoming self-sustaining in and out of school.⁴

The overarching purpose of the study is to explore the practices taken up by the new majority of first-year undergraduates to start and make progress in attaining a college education. More specifically, this exploration will address the following question: From the perspectives of students and other stakeholders, what do New Majority students do to get started on the path to a college education?

Background to the Study

Given American visions of a college education, it is not surprising that discussions of success in higher education⁵ are consistently linked to the attainment of credentials. Whatever else they do, successful students persist to graduation. This belief is parallel to a widely-accepted theory about what students who attain degrees have in common: they are successful because they were successfully integrated into the social and academic communities that they found at college.⁶ The logic underlying this theory is straightforward. A student comes to a campus with a set of characteristics that largely determine her college goals and commitments. Her initial goals and commitments are influenced by and influence her social and academic interactions on campus. In turn, as she interacts in social and academic communities, she modifies her initial goals and commitments based on her

⁴ In his analysis of "the culture of the New Capitalism," Sennett (2006) describes society that puts a premium on being able to manage short-term relationships and improvise a narrative "without any sustained sense of self" (p. 4) and to constantly develop new skills and capitalize on potential abilities, trading the pursuit of "craftsmanship" based on past achievement for the cultivation of "talent" or potential ability. Sennett believes that this new vision of work, talent, and consumption does not set people free but that it pertains, at least in the sample of large firms that he studies. A growing body of work suggests that whatever else its aims, postsecondary education now globally confronts the challenge of graduating students prepared for Sennett's New Capitalist world (R. Barnett, 2000; Engeström, 2008; Gibbons et al., 1994; Peterson, 2007).

⁵ I will use the abstract nouns "postsecondary education" and "higher education" and "college" to refer to a social institution in the spirit of the Neo-Institutionalists. I will use the nouns "college" or "campus" for references to individual colleges or universities, organizations as opposed to social institutions. I make the generalization with the appreciation that individual colleges and universities often have varied missions that, in a larger study, should be differentiated.

⁶ For Vincent Tinto, a college is "not unlike any other human community" (1993, p. 204), and thus the processes of staying in or leaving college mirror those related to staying in or leaving any other human community.

perceptions of the normative congruence between her own goals and commitments and the values, social rules, and academic quality she finds in campus academic and social communities. If she finds a "fit" in those communities, she persists.

This basic theory is the foundation of the interactionalist model that has been adopted widely to explain student success (Braxton, Hirschy, & McClendon, 2004; Deil-Amen, 2011b; Hirschy, Bremer, & Castellano, 2011; Pascarella & Terenzini, 2005). Conceptually, the model links student success in college with students' conscious and unconscious adoption of sanctioned roles along with the knowledge, skills, and dispositions associated with those roles. Thus the model is compatible with the predominant explanations of baccalaureate attainment: status attainment theories (Sewell, Haller, & Ohlendorf, 1970), social reproduction theories (Bourdieu & Passeron, 1990; Bourdieu, 1973), rational actor theories (Breen & Goldthorpe, 1997), and even institutionalist theories (Meyer, Ramirez, Frank, & Schofer, 2007). While empirical support for the relationship between integration into college communities and success in college remains mixed (Braxton et al., 2004; Braxton & Lien, 2000), the interactionalist model offers a causal explanation as to why membership in the community of people with degrees is on average associated with increases in personal and collective stocks of economic, social, and cultural capital as well as well-being. Successful students have acquired the habits of the college-educated and with those habits the distinction of being college graduates; concomitantly, they have access to opportunities restricted to college graduates.

Notwithstanding the power of this model to make sense of aggregate attainment data, the interactionalist model has limited ability to explain the success of students who do not or cannot follow traditional paths to four-year degrees, including non-traditional students and also minority students (Bean & Metzner, 1985; Braxton et al., 2004; Goldrick-Rab, Carter, & Winkle-Wagner, 2007; Tierney, 1992).⁷ This limitation is increasingly

⁷ Degree completion is often theorized to be the result of the reasoned pursuit of self-interest by rational actors (Breen & Goldthorpe, 1997), but it no less well explained as the outcome of largely

significant in the twenty-first-century context. Although matriculating to a residential four-year school remains for some students from some families a kind of rite of passage, that group is shrinking. By 2008 only about one-quarter of first-year undergraduates were enrolled in public or private not-for-profit four-year colleges (see Table 1).⁸ At that time, more than one-third of undergraduates—more than 40 percent of New Majority students—started college defined by their college's placement procedures as "underprepared" to join the academic community on campus (NPSAS:08).⁹ A decade of empirical attempts to classify community college students has found that the majority are not community members—Adelman's "homeowners"—but instead are using college to advance careers or upgrade skills that they already have (Bahr, 2010). Consider a recent analysis of the course-taking and enrollment behaviors of 2001 cohort of community college students in California. Bahr (2010) found transfer and vocational students to make up less than one-fifth of the cohort. A small group of "Drop-In" students and two larger "investigative" groups—"Exploratory" and "Experimental" students who do not following a discernable "traditional" path through college—made up more than one-half of the cohort. At least in

unobserved characteristics of a student's family (Hauser et al., 2000) or of the already established habitus of students and social institutions (Bourdieu & Passeron, 1990). For some students from some families, college attendance and degree completion is a foregone conclusion (Grodsky & Riegle-Crumb, 2010; Horvat, 2001; McDonough, 1997; Reay, David, & Ball, 2005). For others—largely students who are less advantaged and less academically prepared—attendance and success are the outcomes of conscious choices based on the information available. Traditionally, non-traditional college students are those who share any of the following characteristics: (a) delay enrollment, (b) attend part-time for part of the year, (c) work full-time employment (35 hours a week or more), (d) are financially independent, (e) have dependents, (f) are single parents, (g) do not have a high school diploma (Bean & Metzner, 1985; Choy, 2002; Horn & Carroll, 1996). Sedlacek (2004) argues that non-traditionality might be better understood in terms of students' culture and experiences: nontraditional students are those who come to college from a cultural context and with experiences that are not typical of traditional power groups. It is worth noting here that New Majority students and non-traditional students overlap but are conceptually distinct groups.

⁸ The 2008 national sample of students for the NPSAS suggested that roughly half of undergraduates were "non-traditional": nearly 40 percent were over the age of 24, more than half were enrolled part time during the year, and nearly half were financially independent, a quarter with financial dependents themselves (National Center for Educational Statistics, 2008). Over 40 percent of college students were non-White. On growing diversity among undergraduates see also (Deil-Amen, 2011c; Newton, 2000; Sedlacek, 2004).

⁹ The actual percentage of students who begin college needing to take remedial courses is likely higher since some delay enrolling in those courses until they are, by credit accumulation, no longer first-year students. In the National Educational Longitudinal Study (Attewell, Lavin, Domina, & Levey, 2006) and the Achieving the Dream study (Bailey, Jeong, & Cho, 2010), roughly 60 percent of community college students took at least one remedial course.

California, most community college students do not exhibit the behaviors of wannabe members seeking to integrate into communities at college. Rather, they

use the community college in a wide variety of ways to achieve an equally wide variety of ends. Some of these ends align closely with institutional goals, priorities, and performance indicators, and others do not. (Bahr, 2011a, p. 45)

Table 1

Distribution of Institutions and Students by Institutional Sector for Select Years

	All Institutions	Traditional Colleges and Universities	New Majority Institutions	Public 2-Year Colleges
Degree-Granting, Title IV Institutions Open to Students in the 50 States and District of Columbia in 2010	4599	2221	2378	978
Fall 2010 Undergraduate Enrollment	18,082,427	9,105,247	8,977,180	7,218,063
12-Month Unduplicated Headcount: 2010-2011	24,547,381	10,803,102	13,744,279	10,923,705
First-Year Undergraduates in 2007-2008 (in thousands)	8,738.4	2,157.2	6,581.2	4,921.0
Distribution of First-Year Undergraduates in 2011-2012 Academic Year by Percent	100	24.5	75.5	51.8

Note. Estimates for institutions, headcount, and fall enrollments based on data from the U.S. Department of Education's Integrated Postsecondary Education Data System. Estimates for student level based on data from the U.S. Department of Education, National Center for Education Statistics, 2007-08 and 2011-12 National Postsecondary Student Aid Study (NPSAS: 08 and NPSAS:12).

For the most part, the new majority of first-year students attends non-selective campuses that are racially and ethnically diverse—most attend low-cost public two-year colleges. Based on the findings of the Beginning Postsecondary Students Longitudinal Study (BPS:04/09), these students are more likely to be employed than their traditional student peers and more likely to see themselves as employees enrolled in school than as students working to meet expenses. Retention and graduation rates and enrollment patterns suggest that the New Majority student has an instrumental relationship with his colleges and progresses through institutions based on his individual goals and situations rather than

according to a tradition (Cohen & Kisker, 2010; Cox, 2009a, 2009c; Cureton & Levine, 1998; Deil-Amen, 2011c). Part of a highly mobile generation of college students, one-third of these students attend part-time and more than one-third transfer at least once, about 40 percent to another New Majority institution (Hossler et al., 2012). Their behavior as students does not lead them efficiently to degrees (Rosenbaum, Deil-Amen, & Person, 2006) as many seem to be sampling college as opportunity to start building intellectual, social, and cultural capabilities that will serve their futures (Cox, 2009a; Palmer & Gasman, 2008; Santiago, 2007; Tinto, 2006-2007).

Open access to colleges that support multiple educational missions—from adult basic education to transfer—has freed New Majority students from traditional pathways and enrollment patterns. Often empowered to follow their own interests, New Majority students create considerable stress in a social institution that authorizes a body of knowledge, skills, and dispositions and installs that knowledge in a set of certified persons, college graduates. In turn, these students present a problem for the models that dominate research on their progress. In order to be relevant to these students, colleges and universities must continue to confer social legitimation in the form of degrees and "charter"—construct and certify—particular identities and practices that are affirmed by students and as importantly by others in their social environment (Meyer & Scott, 1992; Meyer, 1970).¹⁰ At the same time, colleges and universities are now also providing many students who are not prepared to

¹⁰ Despite an assessment movement that is decades old, the legitimacy of college as an institution continues to rest on those outside college believing that college produces meaningful outcomes rather than on its efficiency in producing some measured outcomes—for instance, knowledge, skills, dispositions (Meyer, 1977; Zemsky, 2005). There is substantial empirical support for the theory that as a social institution, higher education does not so much ensure students adopt its goals as it does embody a "theory of knowledge and personnel," acquaint students with that theory, and channel graduates toward social positions legitimated by that theory (Meyer, Ramirez, Frank, & Schofer, 2007). As a social institution, college need not account for what individual students have done or were intended to internalize. Individual organizations affect the outcomes of students collectively or culturally: college graduates—agents within a cultural system—accrue the benefits of a college education largely irrespective of learning. The competences of college graduates are not so much validated as widely endorsed, collectively taken for granted. Students are successful to the extent that they successfully study and enact a collective script (Meyer, 1986). It follows that local organizations are under pressure to visibly adopt the appropriate institutional charter, even if that charter grates on local practices and needs.

complete degrees with opportunities to practice with the kinds of knowledge and skills and tools that are associated with contributing within the social, economic, and aesthetic worlds in which they will live.¹¹

Confronted with growing evidence of the reappropriation of a social institution, researchers are now tasked with studying not only how students move toward degrees but what happens in college and why students progress in the ways that they do (Bahr, 2013b). This study collects and interprets a corpus of interviews, public documents, and participant observations at two-year colleges with programs that have been proven to contribute to the progress of New Majority students. More specifically, the study focuses on what a sample of New Majority students do in order to progress in college and what their colleges are doing to support their practice as New Majority college students.

Significance of the Study

This study was conceived in hopes of contributing to what we talk about when we talk about the progress of "non-traditional" students—including why they go to college, what their "success" means, and what program features help them in pursuing their educational goals. More concretely, the study makes three specific contributions. First, the study adds to a small and growing body of literature that seeks to enlarge the dialogue about the purpose of college by representing the educational aspirations and experiences of New Majority students in terms of the meanings that they attach to their pursuit of a college education (Bahr, 2013b; Cox, 2009a, 2009b, 2009c; Deil-Amen, 2011a, 2011b, 2011c; Koyama, 2007; Louie, 2007; Rosenbaum et al., 2006). A growing chorus of voices is raising questions about the purposes of a twenty-first-century education (Boyer Commission on Educating Undergraduates in the Research University, 1998; Fitzpatrick, 2007; Gee, 2004;

¹¹ There is some evidence that institutions of higher education are being pressured by changes in student demand to provide opportunities for students to build in-demand skills and dispositions rather than opportunities to earn degrees (for reviews see Gee, Hull, & Lankshear, 1996; Gibbons et al., 1994; Peterson, 2007; Sennett, 2006).

Gibbons et al., 1994; Wenger, 1999) and the adequacy of commonly used measures of success (Bahr, 2013b, 2013b; Calcagno, Crosta, Bailey, & Jenkins, 2007; Hagedorn, Moon, Cypers, Maxwell, & Lester, 2006; Leinbach & Jenkins, 2008; Roksa & Calcagno, 2010).¹² By representing the practice of New Majority students in the words of New Majority students and their advocates, this study adds to input-output analyses—research that analyzes an outcome variable as a function of characteristics observed earlier—by describing student progress in terms of the social practices through which individuals actively and critically assemble and rearrange a portfolio of skills and experiences that, from their perspective, enables them to progress toward their educational goals.¹³

Second, this study represents and interprets situated social practice that is part of multimodal, interactive, and interested historical activity. By design, my work does not aim at general claims about causal relationships among economic, psychological or sociological constructs. Instead, by considering phenomena situated between agents and institutions, I advance concepts related to the progress of New Majority students that can be used to propose hypotheses about the uses New Majority college students are making of college and the kinds of practice colleges might scaffold to get those students started toward their educational goals. Finally, this exploratory study describes the ways in which a small sample of supportive programs contribute to students becoming successful in their own eyes. Practitioners may consider adopting some of these program features in an effort to improve the college success of New Majority students.

¹² Smith, MacGregor, Matthews, and Gabelnick (2004) list more than a half dozen reform initiatives making similar contentions.

¹³ I have sought to add to important work that is "articulating the behavioral mechanisms that link distal student characteristics to eventual outcomes" (Bahr, 2013b, p. 147)

Chapter 2

Research on the Twentieth-Century Pipeline to Postsecondary Success: Expectation, Choice, Transition, and Persistence

The seventy-year history of research on the problem of college student departure belies the current state of knowledge and understanding of this phenomenon. We are beginning to make substantial progress in our understanding of the roots of college student departure. Research testing Tinto's near-paradigmatic interactionist theory has yielded robust empirical support for four logically interconnected propositions. . . . Although critics of Tinto's theory . . . urge the development of new theoretical perspectives, it is my strong belief that Tinto's theory should be seriously revised and that the foundation for such revision should be the four reliable relationships described above. This assertion is made for two reasons. First, given the long history of inquiry on college student departure, it is fatuous to abandon four empirically reliable relationships that partially account for college student departure. Second, these four relationships fit two criteria for the construction of theory: the theory should include pertinent research findings, and the theory should account for research findings.

John Braxton. "Conclusion: Reinvigorating Theory and Research on the Departure Puzzle." *Reworking the Departure Puzzle*. (2000)

The validity of Tinto's theory continues as an open question in liberal arts colleges and two-year colleges and across different racial or ethnic groups. "Problematic" best describes its validity in commuter universities, but four logically interrelated propositions receive strong empirical backing in residential universities. Put differently, Tinto's theory garners partial support in this type of collegiate institution. Given the mixed pattern of support for Tinto's theory, scholars may elect to pursue two distinct paths (Braxton, 2000a). One path entails a serious revision of Tinto's theory to account for student departure in residential universities, but this path also suggests the need to abandon the application of Tinto's theory in commuter colleges and universities. The other path involves the development of new theories, one to account for student departure in four-year residential universities and the other to account for student departure in commuter institutions.

John Braxton, Amy Hirschy, and Shederick McClendon. *Understanding and Reducing College Student Departure*. (2004)

This exploration of what New Majority Students do in order to progress toward their postsecondary educational goals takes its departure from three distinct bodies of research literature. In this chapter I take up the study of the factors that are related to student progress. In reviewing the research literature that describes student progress through the college pipeline, I seek to establish a kind of baseline, a description of the understanding of what it takes to be successful in college that prevailed at the turn of the last century. To make sense of this overwhelming body of work, I have divided it into four widely used domains: student expectations, student choice, college transition, and student persistence.

In the chapter that follows, I turn my attention from studies of the college pipeline to the robust, transdisciplinary discussion of the purpose of a twenty-first-century college education in hopes of opening new questions about what constitutes successful student movement through college and toward educational goals. I conclude the next chapter with an overview of research on the educational progress of New Majority students. Together, these two chapters construct a view of how and why we understand students to begin a college education as well as what contributes to and militates against their achieving their educational goals.

Two findings emerge in this review. First, in the student success literature, there are few studies of the experiences of New Majority students and nearly none of the activities these students take up in order to their progress towards their educational goals. Second, the interactions between models of the twentieth-century college pipeline and the purpose of a twenty-first-century college education hint at broad transformation in the social purpose of postsecondary education and the limited capacity of dominant models to describe how students in general and New Majority students in particular move toward the new ends of college.

The Pipeline

In the history of higher education, a focus on student pipeline is relatively recent even though analysis of who stays in school goes back 70 years (for reviews see Pantages & Creedon, 1978; Summerskill, 1962; Tinto, 1975). The study of who gets into college, how, and to what effects underwent significant development the 1960s and 1970s (Gelber, 2007) as historians took up the challenge of documenting the college investment in remedial programs (Brier, 1984; Labaree, 1988; Wechsler, 1977) and secondary school dropout rates (Deschenes, Cuban, & Tyack, 2001; Dorn, 1996; Labaree, 1988; Wechsler, 1977). Often focused on the experience of a single group or institution, the historical narrative that has emerged since the 1965 Higher Education Act generally traces the massification of higher

education that led to excess capacity in the 1970s and 1980s and then to increased stratification of institutions, access, and outcomes.¹ At the center of this narrative are concerns about unequal access and outcomes across gender and race and social class but also the possibility of "dividends in social mobility at the cost of struggle" (Gelber, 2007). Student progress, in much of this literature, is framed negatively as student departure.

In 2003, the Social Science Research Council (SSRC) convened scholars from across disciplines to synthesize existent research on the student progress into and through college.² That project supported the review empirical work on student progress from sociology, psychology, and economics, higher education research and consolidated a view of a higher education "pipeline" affected by four broad factors—preparation, access, paying for college, and retention and attainment (Orr, 2009; SSRC, 2004). Underlying this research is a broadly shared sequence of actions that structures this review: a successful student expects to go to college, makes a choice concerning enrollment, transitions to college, and then persists to a degree. This sequence is predominantly that of traditional-age students (ages 24 and under) who in the fall of 2011 made up 78.3 percent of undergraduate enrollments at traditional institutions and 54.2 percent of enrollments at New Majority institutions (U.S. Department of Education, National Center for Education Statistics, 2012d).³ The story of nontraditional-age students is, Adelman (2006) reminds us, is very different. Nontraditional-age students maintain higher GPAs and may enter the pipeline with the goal of developing mastery in a domain as opposed to receiving validation of what they know and can do (Hoyert & O'Dell, 2009; Spitzer, 2000). Moreover, their transition and

¹ Looking at 30 years of the annual freshman survey of the Cooperative Institutional Research Program (CIRP) in 1998, Astin noted substantial gains in the enrollment of women across majors and careers and in the belief that women should be full participants in higher education but a concomitant a shift from an ethical focus on developing a philosophy of life to being financially well-off. CIRP data also document a more competitive and instrumental approach to academics.

² The initial work of this project isolated four central topics: preparation, access, paying for college, and retention and success (Orr, 2009; SSRC, 2004), the final topic of central interest here. This project resulted in a 2004 SSRC report and special journal issues in the *Teachers College Record* in 2007 and 2009 that serve expand the analysis of the path to college in the United States beyond the initial models reviewed above.

³ In fall 2011, Students 25 years of age or older made up 21.4 percent of the undergraduate enrollment at traditional institutions and 44.5 percent of the enrollment at New Majority institutions.

persistence are affected by "adult" commitments off-campus, opportunities to direct their own learning, and vocational goals for their education (Kortesoja, 2009). These differences in aspiration and experience notwithstanding, all of these students encounter the same pipeline, and their progress is often measured in the same ways.

College expectations.

Since early studies of the college pipeline, expecting to go to college has been found to predict future educational attainment and so of occupational and status attainment (Duncan, Haller, & Portes, 1968; Mortimer, 1996; Reynolds & Burge, 2008; Sewell, Haller, & Portes, 1969; Sewell, Hauser, & Wolf, 1980; Sewell & Shah, 1968; Spenner & Featherman, 1978). The study of what students' postsecondary educational expectations contribute to attainment hinges on a definitional question: Is the unit of analysis an ideal goal or a realistic plan? While there are good reasons to consider students' goal-oriented aspirations (Duncan et al., 1968; Haller & Butterworth, 1960; Haller & Portes, 1973; Woelfel & Haller, 1971), recent research focuses most frequently on realistic expectations about how far a student believes she will actually be able to go (Wells, Lynch, & Seifert, 2011). This very narrow construct appears to be an important element in models of the college choice process (Cabrera & La Nasa, 2001; Horn & Carroll, 1997; Hossler, Braxton, & Coopersmith, 1989; Hossler & Gallagher, 1987; St. John, Asker, & Hu, 2001).

In their systematic review of quantitative studies of the role of educational expectations, Wells, Lynch, and Seifert (2011) provide an overview of complexities of the construct. Necessarily self-reported data, student expectations are elicited through questions about the number of years of postsecondary education students expect to complete, the credentials that they expect to attain, or thresholds of education that they hope to reach. Researchers are confronted with transforming reported data into variables that are appropriate for their analytic models and have to assume that variations between realism and idealism are random. Quantitative studies of student expectations tend to focus on a variable created around bachelor's degree attainment and often use aspiration,

expectation, and plan interchangeably (Wells et al., 2011). Some recent quantitative research (see for instance Domina, Conley, & Farkas, 2011; Reynolds & Johnson, 2011) and qualitative research (see for instance see for instance Borrero, 2011; Dyke, Johnston, & Fuller, 2012; Kennett, Reed, & Lam, 2011; Strayhorn, 2010) establish more substantive definitions of expectations but largely continue to work with a variable that measures students' realistic beliefs about attaining bachelor's degrees.

The expectation to enroll does not appear to be a simple rational decision, even less so for non-traditional students. Instead, the construct might be better represented as a range of responses to circumstances that are dynamic and constrained (Borrero, 2011; Dyke et al., 2012; Reynolds & Johnson, 2011). Qualitative work suggests that expectations are related to the ways in which students reflect on their situation (Dyke et al., 2012) and the effort they are willing to invest in their education (Reddick, Welton, Alsandor, Denyszyn, & Platt, 2011) and that expectations are not so much clear decisions but positions imbued with tension (Borrero, 2011) and anxiety (Wrosch, Miller, Scheier, & De Pontet, 2007). The processes of establishing and changing expectations have been shown to be affected by college experience (Dyke et al., 2012; Reynolds, Stewart, & MacDonald, 2006), support from families and schools (Borrero, 2011; Reynolds & Johnson, 2011), and non-cognitive attributes (Dyke et al., 2012; Mattern & Shaw, 2010; Reynolds & Johnson, 2011). While research continues to confirm a positive relationship expectations and both academic performance and attainment, studies have also found that in some cases students with no expectations have outcomes similar to those with high expectations (Mattern & Shaw, 2010), that educational expectations are strongly related to social group membership (Reddick et al., 2011; Reynolds & Johnson, 2011; Strayhorn, 2010), and that students' beliefs about their educational outcomes are often disconnected from their personal academic and social resources (Harding, 2011; Rosenbaum, 2001).

From its beginnings, the college pipeline is both structured by established patterns of opportunity in the broader society but also remains open to individual and group aspirations

for mobility. While students' educational aspirations are related to their initial educational expectations and prior educational experiences, students' beliefs and experiences with faculty and staff and other students also affect what students plan to do in college and in turn the goals that they achieve (Wang, 2013). Warming expectations can affect both how students engage their own education and, in some instances, their educational attainment (Reynolds et al., 2006). At the same time, it appears that many students lower their expectations as they confront the realities of a lack of space in four-year institutions and their own limited economic, social, and academic resources (Alexander, Bozick, & Entwisle, 2008; Reynolds & Burge, 2006).

Choosing college.

Student choice—the second step on the pathway—is generally conceived of as a staged process of predisposition, search, and choice (Hossler & Gallagher, 1987; Litten, 1982) that can be expanded to include considerations of access and persistence (St. John & Paulsen, 2001) and context (Perna, 2006). The process has often been conceptualized within economic models of human capital investment or sociological models of status attainment (McDonough, 1997; Perna, 2006). Drawing on Becker's (1962) general model, economic approaches have studied the expected costs and benefits of attending college and the relationships between expectations and student choice for various groups (Kane, 1999; Long, 2004; Manski & Wise, 1983). Growing attention has been paid to how differences in demand for human capital and the supply of resources to invest in college are related to persistence and attainment across groups (Ellwood & Kane, 2000; Paulsen, 2001) and the ways that the lack of information or differences in access to information about college costs and benefits affect the choice to attend college (DesJardins & Toutkoushian, 2005). While this research has clarified the criteria that students and their families consider in deciding whether to enter college, it has also found that students are generally poorly informed about costs and benefits (Perna, 2004a) and appear to be significantly affected by group

membership and non-pecuniary interests. A smaller body of research suggests that criteria vary by students' ages as well (Kortesoja, 2009).

Sociological models attend more closely to the ways that choices are shaped by contexts. Initially based on traditional status attainment models that explained educational aspiration in terms of measure of socio-economic status (Hearn, 1984, 1988; Sewell et al., 1980), these approaches have become more nuanced. Perna (2006) calls attention to the increased use of the sociological constructs of cultural and social capital to analyze student choice. These approaches consider in different ways how student choice is influenced by a complex system of attributes that includes language skills, cultural knowledge, mannerisms, and tastes as well as knowledge of norms and memberships in groups (McDonough, 1997; Perna & Titus, 2005). Rather than reducing the process of choice to rational decision making and group membership, this research explores the ways that choices are influenced by what kinds of symbolic goods and relationships individuals and groups value and the amount of cultural and social capital they possess. Within the framework, kinds and amounts of capital and the relative value of that capital within a social space establish habitus, variously defined by Bourdieu as acquired systems of preferences, principles of vision and division, tastes, durable cognitive structures, schemes of action. In turn, habitus orient perceptions of situations and appropriate responses to situations. Drawing on this basic framework, researchers construct choice not as the outcome of rational analysis but as sensible choices based on social positions. By extension, this research leads to findings concerning what social positions lead to what kinds of choices about (not) attending different kinds of schools.

Research across these frameworks has led to a general consensus on a set of factors—though these factors are clearly most salient for traditional students. Student choice is most strongly predicted by "academic preparation" and "academic achievement" (Cabrera & La Nasa, 2001; Ellwood & Kane, 2000; Perna, 2004a, 2004b) though choice remains mediated by family income (Kao & Tienda, 1998; Rouse, 1994) and the availability of student aid (St. John, 1991), perceptions of costs and benefits (Rouse, 1994) and

background characteristics from gender (Stage & Hossler, 1989) to race and ethnicity (Hossler, Schmit, & Vesper, 1998; Perna & Titus, 2004; Perna, 2000). Predisposition, search strategies, and decision-making processes appear to be affected by students' habitus and educational and social contexts. High-SES students, for instance, have long been more likely to attend college and more likely to attend selective institutions net academic characteristics (Hearn, 1984, 1988). Price conscious students who are financially independent, need to/choose to work outside college, and/or have lower levels of academic achievement are more likely to choose a community college (Somers et al., 2006). SES has been found to have a substantially greater effect on choice than race or gender given the same controls and the effect is mediated by information about college in families and decisions about college preparation early in life (McDonough, 1997).

High school also has a substantial effect on whether students chose to go to college. Schools with a college-bound ethos that provide counseling for students and their families concerning academic and financial preparation increase the odds of matriculation. McDonough (1997) concludes that while academic preparation has a major influence on whether a student will attend, students' SES and the structure and culture of their high schools play major roles in where they will choose to attend.

These findings notwithstanding, the methodological and conceptual limitations of studies of student choice have frequently been pointed out (Manski, 1993; McDonough, 1997; Perna, 2006). The quantitative methods that continue to dominate the study of student choice broadly fail to explain the choice of any individual student (and often lump students into groups based on the availability of data) and struggle to estimate the complex constructs related to human choice or to account adequately for contexts. The smaller set of qualitative studies of student choice that have appeared since 1990 have enriched theory about the student choice process (see for instance Gall, Borg, & Gall, 1996; McDonough, 1997; Pope, 2003) with limited generalizability, and mixed methods approaches remain rare (see for instance Hossler et al., 1998). Perhaps more limiting are the conceptual constraints

in this literature about "choice." Economic models of student choice as human capital investment struggle to explain on what information groups or individuals base decisions or in what ways their decision-making processes unfold; sociological approaches offer little light on how individuals actually arrive at decisions (Manski, 1993).

Perna (2006) has offered a hybrid framework that nests the process of making an economic choice within a sociocultural context. The framework does include both individual's decision-making processes and also the effects of contexts, group memberships, and habits on processes of gathering and using information and makes room for both qualitative and quantitative methods. But Perna's framework does not easily escape the conceptual problems of economic and sociological approaches to student choice since it assumes students are investing in their personal future with limited information about costs and no reliable information about their personal return on the investment, and it nests that decision making process in a context that for all practical purposes either determines the decision before it is made or makes the process subconscious.⁴ In at least one study, the decision making process of community college students emerges as the interaction of encouragement by families and friends and initial contacts in college along with the close proximity and low-sticker price of a community college (Somers et al., 2006).

As has frequently been suggested (see for instance Attinasi, 1989; Perna, 2006), research on student choice needs to assume that students are active participants whose social interactions affect what college means for them and what they will decide about it. Naturalistic, situated data concerning students' process of making decisions about college are needed.

⁴ The difficulties confronted by human capital theories of the role of education are well documented (Bills, 2003; Grodsky & Jones, 2007; Mundel & Coles, 2004). Biegly (1981) offers a discussion of the potentially functionalist nature of status attainment theory; Grodsky and Jackson (2009) review the limitations of social reproduction theory.

The transition to college.

Much of the research on the transition to college focuses narrowly on factors related to student and family characteristics, preparation, access, or outcomes that impede or more rarely contribute to student success (Deil-Amen & Turley, 2007). This work has contributed to the development of theories and models that identify points of impasse in a pipeline that has one terminus in the decision to go to college and the other in the completion of a degree (Carter, 2006). Difficulties remain in determining what counts as completion (Adelman, 1999) and how to count who is persisting and who is departing (Adelman, 2004).

It is clear that the likelihood of a successful transition into college is affected by preparation, academic (Adelman, 1999) and financial (Hossler & Vesper, 1993; St. John, 1991). But preparation is not a simple step in a rational chain of decisions. Low-SES students are discouraged from entering at all (Cabrera, Burkum, & La Nasa, 2003; Cabrera & La Nasa, 2000, 2001) and have unequal access to academic preparation (Bryk, Lee, & Smith, 1990; Gamoran, 2001; Nora & Rendón, 1990). Net background characteristics, students entry into college is influenced by their perceptions of the outcomes of college (Grodsky & Jackson, 2009), whether those outcomes are primarily economic returns (Goldin & Katz, 2009; Katz & Autor, 1999; Mishel, Allegretto, & Bernstein, 2006); jobs with higher levels of discretion, esteem and social status (Hout, 1984); psychological well-being, physical health (Ross & Mirowsky, 1999); longevity (Lauderdale, 2001); a host of social outcomes (Pallas, 2006); or the capacity and motivation to pursue additional schooling (Goyette, 2008; Zhang, 2005). Students' understandings of outcomes and their concomitant aspirations have an ambiguous or paradoxical relationship to the information they have about college (McDonough, 1997; Rosenbaum, 2001; Schneider & Stevenson, 1999). Similarly, their perceived and actual abilities to pay have been found to affect directly and indirectly their decision to go to college and their persistence in college (Domina, Conley, & Farkas, 2011; Reynolds & Johnson, 2011).

While the central factors that influence the transition to college are largely agreed upon, the ways in which those factors affect the process is far from clear. The transition experience varies by student group, institutional setting, and student goal. A voluminous body of research confirms that social class, race, and gender continue to serve as mediating factors to access (Goldrick-Rab, Carter, Winkle-Wagner, 2007). After matriculation, the pathway proceeds through a structurally disintegrated system of organizations that historically have collected and shared little information about student progress.

The path is complicated further by variation in patterns of attendance. Despite the continued focus of much research (and concomitantly in many large data sets) on first-time, full-time attendance, students now attend multiple institutions (Adelman, Daniel, & Berkovits, 2003) with varying goals and commitments (Goldrick-Rab et al., 2007). Students transfer back and forth between institutions, set out on temporary excursions to pick up a few credits, and migrate between sectors, sometimes serially sometimes sporadically (for a general review of approaches see Adelman et al., 2003; McCormick, 2003). As they move between institutions, students have a differential response to the experience based on race, ethnicity, class, gender and different experiences across institutions (Pascarella & Terenzini, 2005). The resulting swirl is only partially captured by models that define the general student path as one towards a bachelor's degree (de los Santos & Wright, 1990; Townsend & Dever, 1999) or through a single institution.

A small set of anthropological and cultural studies of the transition have described student activity itself (Koyama, 2007). Drawing on theories of identity formation, marginalization, identification, belonging, this body of work attends to students experiences in terms of the development of subjectivities in the context/sociocultural processes of learning/negotiation of contexts and development of identities (see for instance Davidson, 1996; Quiroz, 2001; Roberts, 2001; Rymes, 2001; Weis & Fine, 2000; Yon, 2000). Typically through case studies, this work links schooling and processes of developing agency and subjectivity and engaging in acts of resistance. Koyama (2007) notes that these studies

often focus on preparation for college rather than to post-matriculation activity and that richer ethnographic characterizations of the pathway through college like that of Levine and Cureton (1998) may now be out of date.⁵

Despite the vast body of research on the pipeline, the picture of students' entry into college is widely acknowledged to be limited conceptually and empirically. Gelber (2007), for instance, argues that historical understanding of the academic pathway is complicated by uncertainty about whether selectiveness is intentional, how remediation has impacted unequally prepared students, whether access is primarily a civil right or a personal good, what the federal and state role is promoting access, and whether growing enrollment is best explained by the availability of aid, civil rights activism, economic growth, or changes in the cultural significance of higher education (see also Brint & Karabel, 1989; Dougherty, 2001). *Questions That Matter*, a 2004 SSRC report, notes that most studies of the transition to college assume that the end of the process is degree that "signals readiness to work and train further." At the same time, the authors concede that adult learners may have other goals and that degrees cannot be "equated with knowledge and skill acquisition" (Social Science Research Council, 2004, p. 19). They call for research on ends other than completion data: generic skills that matter; college activities that contribute; transfer; curriculum; group/mentor relationships; regional imperatives. These alternate dependent variables might, they argue, lead to "a more conceptual and reflective approach" that can better account variation in the transition to college and also provide constructs and theories that can be tested.

The picture of students' transition to college is limited due to three broad methodological challenges. First, research designs rarely look inside the black box of college going activities, expectations, and understandings (Koyama, 2007; Long, 2007; Louie, 2007). Increasingly, reviews of the research on academic pathways call for attention to

⁵ Levine and Cureton do provide details about the beliefs of students but offer little evidence concerning how those beliefs guide student activity. They largely assume the pathway modeled by Tinto or Astin is the operative one.

student agency through the representation of student voices and the interpretation of student and organizational activity and expectation within specific sociocultural and economic contexts. Second, the transitions literature includes few rich longitudinal studies and a general dependence on surveys that suffer from problems with selection bias, the reliability and validity of survey items, endogeneity, response rates and missing data (Goldrick-Rab et al., 2007). The SSRC initiative led to a call for more substantive constructs, the increased use of mixed methods, and a focus on under-researched groups and designs that framed the college pathway as part of a broader social system. Finally, quantitative models of the transition to college continue to be grounded in theories about first-time, full-time, traditional-age students and so risk threats to external validity in a national context in which those students comprise a smaller and smaller component of the student population.

In sum, despite robust models of barriers in the transition, research continues to struggle to explain why student transition experiences vary, especially for students who are not first-time, full-time enrollees at selective institutions or for individual institutions within sectors.

Persistence to success in college.

Ostensibly a subfield within the college transition literature, research on student persistence precedes the study of the transition to college in every way. The size of this body of literature as well as its theoretical coherence justify treating it separately. While the study of student persistence draws from several distinct models of the college pathway, persistence and attainment are consistently conceptualized as both indirect and direct contributor to social mobility and status attainment⁶ and the outcome of both student characteristics and experiences. Increasingly the parallel questions of persistence and retention are framed in economic terms (Cox, 2009a): students invest a great deal in completing degrees in hopes of returns on that investment; institutions and societies need

⁶ Pascarella and Terenzini (2005) suggest that persistence is broadly conceived of as a multivariate estimator of life chances.

to retain students to completion so as make efficient use of educational resources in the production of a stock of educated workers. Within this economic framing, student success is, by definition, persistence to a degree or credential.

The dominant models.

Broadly, the persistence literature draws on Astin's input-environment-outcome model as a conceptual guide. Students arrive at college with attributes that affect their college choice and their initial engagement with and commitment to college. At college, they encounter an environment (e.g., programs, policies, faculty, peers, and experiences) that affects and is affected by the degree to which students develop in or are integrated into the social community at their college. Their relative development and institutional commitment determines whether they continue on the pathway to a degree. The theory was given its paradigmatic expression in Vincent Tinto's (1975, 1993, 2000, 2006-2007) much elaborated theory of student departure. In the conclusion to the 1993 iteration of the model, Tinto sums up the processes of student departure and retention this way:

Institutions of higher education are not unlike other human communities and the process of educational departure is not substantially different from the other processes of leaving which occur among human communities generally. In both instances, departure mirrors the absence of social and intellectual integration into or membership in community life and of the social support such integration provides. An institution's capacity to retain students is directly related to its ability to reach out and make contact with students and integrate them into the social and intellectual fabric of institutional life. It hinges on the establishment of a healthy, caring educational environment which enables all individuals, not just some, to find a niche in one or more of the many social and intellectual communities of the institution. (pp. 204, 205)

At its core, Tinto's model is a model of the process of becoming or failing to become a member of an educational community, intellectual and social (1993, p. 132). While it "hinges" on the individual's perception of belonging within the educational community, the process itself emerges from an interaction between the educational organizations that seek to sustain particular kinds of communities and the individuals who bring to organizational situations their own goals, values, and commitments and also who make sense of those situations.

Tests of Tinto's theory have empirically substantiated a basic, temporal theory of action: students' characteristics at their entry into college influence both their initial level of commitment to the institution and the subsequent level of commitment they form as students at that institution; the institutional commitment that they form as students is also influenced by their integration into "social communities" at the institution; students' subsequent institutional commitment is positively related to their persistence at their institution of choice (Braxton, 2000a). Despite the lack of a substantive explanation of the role of student integration into social and academic communities (Braxton, 2000b; Braxton et al., 2004), the four basic logical relationships in the theory have and continues to guide much of the research on persistence, in respect to the questions considered and the methods adopted (Espinosa, 2011; Karp, 2011; Metz, 2004; Reason, 2009).

Recent research on student persistence is so voluminous that Reason (2009) described the task of surveying it as Herculean. The factors that contribute to student persistence are largely agreed upon if their individual contributions (and even the basic direction of causation) are not. Drawing on the logic of Tinto's theory, the literature suggests that student persistence is best understood in terms of who students are, where they begin on the path, and how they involve themselves in the environment they find there. It follows loosely that institutional retention is best understood in terms of who they admit, what experiences they offer, and how they manage students' movement through these experiences. There is also a general agreement in this subfield that given the frequency and

cost of student departure, there is a need for causal models that permit, controlling for students' background characteristics, the prediction of who will depart, what kinds of institutions and experiences and choices about involvement make departure more likely (Metz, 2004).

How who students are matters.

The research on persistence understands students as bundles of characteristics, the same characteristics considered in the college transitions literature. The "comprehensive" model of influences on learning and persistence developed by Terenzini and Reason (2005), for instance, defines the precollege student in terms of sociodemographic traits, academic preparation and performance, student dispositions. Research on these factors continues to find academic preparation and performance to be the strongest predictor of persistence, especially when preparation and performance are combined with socioeconomic standing (ACT, 2007; Adelman, 2006). On its own, socioeconomic status has been shown to be the most powerful predictor of persistence (Lotkowski, Robbins, & Noeth, 2004; Pascarella & Terenzini, 2005) though the role of this predictor appears to vary with institutional type (Braxton et al., 2004). Of growing interest are the contributions of non-academic or non-cognitive characteristics such as general motivation, self-discipline, self-confidence, and self-efficacy, and clarity of college goals and commitments (ACT, 2007; Braxton et al., 2004; Lotkowski et al., 2004). The contributions of family support—a factor that is more difficult to quantify—is also receiving some attention though it grates against the dominant model that assumes students need to separate from their home communities in order to be integrated into educational communities (Rendón, Jalomo, & Nora, 2000).

There is broad empirical support for the significance of the relationship between pre-college student characteristics and persistence and robust work continues to be carried out on the topic (Crisp, 2010; DesJardins, Ahlburg, & McCall, 1999; Espinosa, 2011; Fike & Fike, 2008; Hernandez & Lopez, 2004; Melguizo, Bos, & Prather, 2011). There are at the same time growing concerns about the value of models that use student characteristics to predict

performance. Significant questions have been raised about the internal and external validity of studies that use student traits as estimators given known within group heterogeneity (Reason, 2003; Tinto, 2006-2007). Equally, researchers are calling attention to the limited utility of models that predict student persistence based on factors over which college students, practitioners, and researchers have relatively little control (Grodsky & Jackson, 2009; Reason, 2009) and which play significantly different roles in different educational settings (E. A. Barnett, 2010; Braxton et al., 2004; Deil-Amen, 2011b; Hirschy et al., 2011; Karp, 2011; Rodgers & Summers, 2008).

How where students start matters.

A substantial body of research models the effect of institutional type—defined broadly in terms of institutional control, sector, and level of selectivity—on student persistence. State policies governing higher education systems show little effect when outcomes are net students' preparation, socioeconomic status, and aspirations (Grubb, 1989; Wellman, 2002). The positive effects of attending a private institution in respect to persistence are also muted when appropriate controls for institutional characteristics are applied (Saupe, Smith, & Xin, 1999) though students who begin a private not-for-profit institutions have historically been more likely to complete bachelor's degrees and go on to graduate school (Astin, Tsui, & Avalos, 1996; Ethington, 1997). The size of the campus at which a student starts seems at best to have an indirect and inconsistent effect on persistence and attainment (Pascarella & Terenzini, 1991; Stoecker & Pascarella, 1991). Admissions selectivity, on the other hand, has a modestly positive and significant relationship to the institutions six-year graduation rate even when institutional characteristics are controlled for (Adelman, 1999; Astin et al., 1996; Ethington, 1997) though it is somewhat unclear how to interpret this relationship since selective institutions and students at those institutions have an a priori advantage. In the end, differences in student background seem to explain more of their persistence than does the type of

institution they attend (Calcagno, Bailey, Jenkins, Kienzl, & Leinbach, 2008; Rodgers & Summers, 2008) especially for students at non-residential campuses (Braxton et al., 2004).

While findings that relate institutional type to student persistence are mixed, two characteristics seem to matter. First, single gender institutions and minority-serving institutions—primarily historically Black colleges and universities—appear to offer focal students qualitatively different experiences that include fewer of the barriers women and Black students confront in mainstream institutions and have a modest positive effect on attainment (Astin et al., 1996; D. G. Smith & Morrison, 1994; Wolf-Wendel, Ward, & Kinzie, 2009). Second, students at two-year institutions are less likely to attain their educational goals than comparable student at four-year institutions. A substantial body of literature has explored this second instance of the impact of institutional type: in their metaanalysis, Pascarella and Terenzini's (2005) document a 15 to 20 percent decrease in the likelihood of completing a bachelor's degree for students who initially attend a two-year college after other relevant characteristics have been controlled for. A variety of theories have been offered to explain the difference: 2-year colleges cool out students' aspirations (Clark, 1960) or slow down the process so as to make attainment less likely (Cuccaro-Alamin, 1997), especially for traditional students (Christie & Hutcheson, 2003). Students who begin a 4-year colleges—and successful transfer students from 2-year colleges who appear to resemble students who start at 4-year colleges—are thought simply to "fit" in at college better (Pascarella & Terenzini, 2005, p. 383) or to maintain higher aspirations (McCormick, 1997; Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1998). These findings, however, are complicated by difficulty in defining fit or the role of aspirations, a construct that is, according to Pascarella (1999) ambiguously conceived by students and badly defined by researchers (Bach et al., 2000; Borden, 2004; Rosenbaum et al., 2006; Swanson, 2002; Wells et al., 2011). Perhaps more to the point, studies of the relationship between beginning at a two-year college and persisting to an educational goal broadly fail to explain why two-year college students depart or why those who persist remain.

Research that defines institutional types in terms of organizational behaviors rather than structural or demographic characteristics has shown more promise. Organizations characterized by actions that promote higher levels of student satisfaction and involvement and a greater sense of fairness in decision making (collegial institutions) or a strong sense history and tradition among students (symbolic institutions) tend to increase levels of student integration and intent to persist, and organizations that effectively align resources with student needs (systemic institutions) tended to increase the likelihood of student persistence (Berger & Braxton, 1999; Berger, 2001-2002). Organizations that engage in high levels of political or bureaucratic behaviors have more mixed influence on persistence. Across types of organizational behavior, student persistence appears to be positively influenced by student perception of fairness in decision-making, a sense of caring, and alignment between the mission and organization actions (Braxton et al., 2004) and by increased expenditures on instruction and academic support (Gansemer-Topf & Schuh, 2006).

How student activity matters.

What students do—often framed in terms of how and with what they are involved or engaged—has inspired a staggering amount of research though, oddly, relatively little of it attends in material ways to what students do. The models that guide this research appear to be guided by broadly shared theories about the student development or institutional impact (Davis & Murrell, 1993; Pascarella & Terenzini, 2005). Theories of student development—including theories of psychosocial development and identity formation, cognitive-structural theories, typological models, and person-environment interaction theories—focus on the emergence of self-understanding and awareness of self as learner and, somewhat paradoxically, on the growing appreciation of the roles of others, a sense of obligation to others, and growing individuality (Pascarella & Terenzini, 2005). Psychological self-definition and development is typically conceived of as a cumulative and relatively continuous and orderly process toward complexity that is dependent on the completion of prior stages.

Cognitive readiness is necessary but not sufficient trigger of developmental change, and higher-level development is increasingly complex. Progress down this path is often thought to be motivated by a challenge to a current state and determined by the nature of the challenge.

The predominantly sociological theories of institutional impact (Pascarella and Terenzini, 2005, consider those of Astin, Tinto, Pascarella, and Weidman), on the other hand, seek to explain how institutional and individual attributes shape development and growth by influencing "behaviors, attitudes, values, beliefs, interests, and even cognitive preferences."⁷ The focus is on socialization determined by student responses and environmental intensity and student change resulting from interactions between traits, social structures (in and out of the learning environment), and effort/intention.

Theories of college impact and student change in college have become "fundamental to the design and development of academic and nonacademic policies, programs, and practices as well as to useful research on student change during the college years" (Pascarella & Terenzini, 2005, p. 60). The models developed from these theories are generally models in the technical sense of that term: sets factors and relations that simplify experience so as to allow differential effects to be calculated statistically. The persistence of students in college programs is most appropriately construed, in these models, as a kind of intervention rather than an assembly line (Astin, 1993). The significant factors include peers, values, attitudes, identity, and socioeconomic status, the experience of programs and faculty (especially the relevance of these to students). Curriculum, it seems, matters little. Summarizing these models in 2009, Wolf-Wendel, Ward, and Kinzie note that three central and overlapping concepts—involvement, engagement, and integration—seem to sum up the student behaviors that define progress on the pathway though there is general agreement that integration is conceptually different and of less predictive value than involvement and

⁷ Pascarella and Terenzini (2005) acknowledge a bias in this literature toward seeing change as developmental, explaining away regressions, and failing to account for the malleability of the organism, the complexity and diversity of contexts, or the impact of symbolic tools (p. 51).

engagement and a concern that these constructs overestimate the agency of students and underestimate the impact of learning environments and institutional agents.

Fissures in the dominant models.

The factors that inform the models that explain the efficacy of student activity—academic preparation and performance, academically related experiences, the ability to pay, interactions, residence, learning communities, major, social and academic integration⁸—guide research design. At the end of the first decade of the twenty-first century, persistence and attainment are broadly still assumed to be the product of student involvement and engagement with and integration in institutions (Wolf-Wendel et al., 2009), but those assumptions appear to be under pressure on at least four fronts.

First, and most simply, there are growing uncertainties about the ability of the interactionalist model to explain data about student activity or the direction of causation between kinds of activity and outcomes (Braxton et al., 2004; Pascarella & Terenzini, 2005). Research continues to use student integration as a dependent or independent variable, for instance, despite empirical work suggesting that when a measure of students' post-matriculation commitment is introduced into a model that uses social and academic involvement to predict attainment, student integration—the extent to which students have adopted the social and intellectual values of the campus—ceases to be significant (Beil, Reisen, Zea, & Caplan, 1999). Retention at different kinds of institutions is now known to be influenced by different sets of factors (Braxton et al., 2004), raising serious questions the existence of a single process underlying student persistence.

Second, the theory that students who persist are those who have been integrated into new social and intellectual communities is disputed. In the early 1980s, the work of John Bean and a series of collaborators argued that socialization theories of persistence tended to focus on the experience of young, full-time students at residential campuses and to push a set of off-campus environmental factors out of the model. In a conceptual model

⁸ This list comes largely from Pascarella and Terenzini's (2005) review. They also include athletics.

that sits between a theory of student development and one of institutional impact, Bean and Metzner (1985) focus on four sets of variables—academic performance in college, psychological outcomes, background and defining variables (especially high school performance and educational goals) and a set of environmental variables. Social integration remains in the model but as a compensatory interaction effect on psychological outcomes and the intent to dropout. Bean and Metzner assume that environmental variables are more important than integration for students who are not at residential campuses. Bean and Eaton (2000) extend this model, explaining student interactions with the college environment through attitude-behavior theory, coping behavior theory, self-efficacy, and attribution theory: students' normative beliefs influence their attitudes, which in turn affect their intentions; intentions lead to behaviors that are adapted to new challenges in the college environment.

This and similar models suggest that students who have high levels of self-efficacy or who attribute their success to variables that they can control are more likely to be motivated to adapt to new challenges and become integrated into the college environment. As students interact in the college environment, their attitudes, motivations, and behaviors change. Influenced in part by the limitations of socialization models of college impact, more recent contributions to the role of student involvement tend to use the development of competent membership (Reason, 2009; Tinto, 2006-2007) or social psychological development to describe the impact of college.

Third, what is known about what students do in college suffers from limitations similar to what is known about how they transition to college. The desire to arrive at causal models has limited the use of qualitative methods to look inside the black box of college-going activities, expectations, and understandings.⁹ Longitudinal qualitative databases of college-going activity like that recommended by Attinasi (1989) remain rare, and

⁹ A growing number of mixed methods and quantitative studies are acknowledging this limitation (see for instance Deil-Amen, 2011b, 2011c; Melguizo, Bos, & Prather, 2011)

understandings of what students do in college often depend on surveys that suffer the limitations detailed above. Studies continue to draw on theories developed to explain the experience of first-time, full-time, traditional-age students, and even attempts to look more closely at student activity tend to oversample this population (Cox, 2009a, 2009b; Deil-Amen, 2011b; Rios-Aguilar & Deil-Amen, 2012).

Finally, despite their effect on research and practice, these established theories of the persistence are acknowledged to rest on conflicted, historically contingent theories and evidence about what factors contribute to student change and how they contribute.¹⁰ Given considerable criticism about the ability of these models to explain the pathways of various groups of students in different institutional settings, significant effort has gone into validating and elaborating the models. Tinto's general model, for instance, has been expanded to include the influence of the relative compatibility between student and institutional goals (Braxton & Lien, 2000), iterative and reciprocal interactions between students' backgrounds and aspirations and institutional environments (Bean & Eaton, 2000), and a complex sequence of economic influences ranging from the impact of socioeconomic status to the outcomes of cost-benefit analysis and the direct effects of ability to pay (St. John et al., 2000). While the model remains paradigmatic, its relevance for the New Majority of students is open to question (Cox, 2009a, 2009b; Deil-Amen, 2011; Rios-Aguilar & Deil-Amen, 2012).

Intermediate Reflections: Studying the Pipeline

In broad strokes, the field of higher education—and the sociology of education and educational psychology with it—has constructed success in college as the efficient flow of

¹⁰ In broad strokes, students are conceived to act primarily to join or fail to join an existing community (Astin, 1993; Espinosa, 2011; Tinto, 1993), to respond to an existing institutional narrative or organizational culture (Bean & Metzner, 1985; Berger, 2001; Carter, 2006; DesJardins, Ahlburg, & McCall, 1999; Fike & Fike, 2008; Karp, Hughes, & O'Gara, 2010; Reason, 2009), to make use of a social setting (Cox, 2009a; Deil-Amen, 2011b; Metz, 2004), or to interact with cultural and professional agents to decide how to use a social setting (Mosholder, Waite, & Goslin, 2011; Museus & Quayle, 2009; Rodgers & Summers, 2008).

students with particular resources and information through a social institution to degrees. The efficiency of movement toward degrees is a function of the adequacy of student resources and information, and the extent to which those resources enable the student to be integrated, involved, or engaged in social and academic communities or to meet the cognitive and financial demands of the college.

Yet, while the pipeline and its components—expectation, choice, transition, and persistence—frame our thinking about student educational attainment, this paradigm has an uneasy status. As suggested above, expectation, choice, transition, and persistence are complex constructs that have different levels of explanatory power based on the context in which they are applied. More importantly, studies of various components of the college pipeline—especially those addressing persistence in the pipeline—now almost necessarily begin with a caveat. The basic models of expectation, choice, transition, and persistence, it is now widely believed, may have limited utility in describing the experience of New Majority students, especially those enrolled at colleges that serve a predominantly New Majority student population.¹¹ Empirical work has questioned to what extent the model is relevant to the experience of these students, whether the central factors in the model have a significant relationship, and whether in the case of two-year college or minority students the factors in the interactionist model are related in ways not predicted by the model (see Deil-Amen, 2011c).

It appears that as a conceptual model, the pipeline needs to be reworked. In the 2000 volume *Reworking the Student Departure Puzzle*, a group of important higher education scholars take up that task. Stage and Hossler (2000), for example, link research on college choice and persistence and build an alternate model constructed around a staged

¹¹ For a typical caveat see (Deil-Amen, 2011b). She notes that similar concerns have been raised about the value of interactionist models in the study the persistence of minority students, citing the usual suspects (Guiffrida, 2006; Hurtado & Carter, 1997; Tierney, 1992, 1999). She also offers brief summaries of three commonly raised concerns: integration might mean something quite different to a minority student (Hurtado & Carter, 1997); commuting students do not so much need to fit as to understand how to navigate the system (Torres, 2006); students co-construct their success with cultural or institutional agents and not as independent agents (Bensimon, 2007).

process of student behavior and choice within a set of nested contexts and social involvements as opposed to the process of academic and social integration. Other alternatives collected in the volume define student pathways in terms of interactions between home and institutional cultures (Kuh & Love, 2000) and speculate about alternate student pathways in responsive institutions (Laden, Milem, & Crowson, 2000; Tierney, 2000). In their theory of minority student retention, Rendon, Jalomo, and Nora (2000), trade the typically person-centered model for a system-centered framework in which a student pathway emerges through the collective negotiation of membership in multiple groups with different relations to dominant culture; student progress in the pipeline, they suggest, is influenced as much by validation as involvement, engagement, and integration.

These revisions and extensions of the interactionalist model seem to share a set of basic assumptions. Student pathways vary across institutions and student groups. Constructs believed to be part of a successful pathway need to be studied across a broad range of institutions and within single institutions in respect to a range of ethnic, racial, and socioeconomic groups. Care needs to be taken in distinguishing between antecedents of student success, student success, and the outcomes of student success. More, these revisions are driven in part by a growing concern that the pipeline model makes all but invisible the experience of the students who most benefit from earning college degrees and are least likely to attain one. While these researchers continue to model the pipeline, their revisions to the interactionalist model raise questions about its salience for policy, programs, and practices. Given the scope of these questions, it seems reasonable to ask in what ways the basic metaphor—and the pipeline is a metaphor—remains useful. In the following chapter, I consider a body of interdisciplinary literature that is wondering what college is for and in what ways New Majority students are making use of college.

Chapter 3

Emerging Views of the Progress of the Majority of American College

Students

In part because of the flexibility offered to students, community colleges make the impossible possible. Students who otherwise would be excluded from postsecondary education for any number of reasons (e.g., obligations to work or family, financial limitations, inadequate preparation for college) find opportunity in the community college. Hence, terms such as *nontraditional* or *underrepresented*, while applicable to U.S. postsecondary education as a whole, appear almost nonsensical when one examines the population of students in a typical community college. In reality, the community college is the primary door through which nontraditional, underrepresented, low-income, and first-generation students enter postsecondary education.

Peter Bahr. "The Deconstructive Approach to Understanding Community College Students' Pathways and Outcomes." (2013)

There is now a broad, if sometimes grudging, acceptance of the functional purpose of the college pipeline. The pipeline channels the flow of cohort after cohort of students to degrees with more or less efficiency (Fitzpatrick, 2007). But, like the models that make up the pipeline, this unitary purpose is disrupted by the presence of New Majority students. These students are using college to achieve ends that are loosely coupled to degrees at best. Whether they come to college to learn rather than to complete classes that roll up into degrees—the vision of college Barr and Tagg developed in their often cited 1995 *Change* article—remains an open question. Whether the purpose of the college pipeline has changed in the 20 years since "From Teaching to Learning" appeared, this period has been marked by increased pressure to redefine the meaning of the broad social blueprint from which individual institutions of higher education are derived.

This pressure is grounded in a now familiar narrative. The emergence of the "knowledge economy" and the economic, social, and cultural aspects of globalization and neoliberalism have changed both processes of knowledge production and management and also the roles adults need to be able to take up. In turn, higher education—a sector that accounted in 2007 for only 35 percent of the investment in postsecondary education and training in the United States—must also transform (Carnevale, Smith, & Strohl, 2010).

Policymakers and college administrators but also taxpayers and faculty talk not only about the production of new knowledge, degrees, and labor market outcomes but also about the need for college "qualities," especially in respect to student learning, the effectiveness of instructional and curricular design, and organizational performance (Peterson, 2007). Significant changes in the student body (Levine & Cureton, 1998), the kinds of organizations that deliver higher education in the United States (Tierney & Hentschke, 2007), and the ways in which knowledge is accumulated and passed on suggest that change is afoot. In this chapter, I develop a context for thinking about the ends of college for New Majority students and the growing body of empirical work on what uses these students are making of the college pipeline.

The Traditional Ends of the College Pipeline

Whether colleges and universities are adjusting to changes in their environment or the basic blueprint of these organizations is transforming remains an open question. Higher education as an institution—an exogenous model that reflects collective and cultural processes and defines the normative features of social organizations—has its roots in medieval Europe but has been adopted over time with remarkable isomorphism in respect to ends (Altbach, 1998), broad organizational structures (Gabler & Frank, 2005), and enrollment patterns (Drori & Moon, 2006; Ramirez & Wotipka, 2001). The institution has always been organized based on the policies of a particular polity (Clark, 1983, 1987; Levy, 1986; Ramirez, 2006), and so institutional isomorphism is more clear at national or, in the case of the United States, state levels.

Explanations of the social purpose of higher education diverge along various axes. An institutionalist view suggests that the "university" grew in the twentieth-century into a global "city of intellect" where domains of interest "could be analyzed and managed in the light of scientific principles" that were themselves being developed within the institution (Meyer et al., 2007, p. 200). That is, the social institution developed primarily as a locus of

a "faith" in "universalistic values, human empowerment, scientific knowledge, and rationality" (p. 203).¹ Alternate views seek to explain the purpose of higher education in terms of need for graduates who are able to contribute to social order or of class reproduction. These approaches often fall into one of three general categories:² status attainment theories, rational action models, and reproduction theories. Researchers variously consider the institution as a means of access to status over time, a market in which pursue interests and often to invest in human capital, and a field of social activity that is shaped by but at the same time shapes the actions of individuals and groups. Within each of these general models, the social institution of higher education is perceived to situate subjects and organizations with different and meaningful goals and levels of information within systems that constrain their respective action.

Each of these general approaches answers differently the question of whether the institution charter is primarily that of a training mechanism or a means of legitimating knowledge and personnel, but they appear to share a basic belief that the end of a higher education is both opportunity for mobility and the maintenance of barriers to social mobility (Deil-Amen & Turley, 2007). Degree attainment remains stratified by social origin—though stratification is mediated by academic preparation, and thus for many students college represents a barrier that must be overcome. The raft of reforms of undergraduate education in the opening decade of the twenty-first century that follow the Boyer Commission Report (1998) describe a driving interest in providing access to education opportunity and at the same time resistance to institutional change (B. L. Smith, MacGregor, Matthews, & Gabelnick, 2004). College remains a strategic opportunity to gain status and capacities that

¹ Meyer et al. (2007) note that pressure from policymakers notwithstanding, colleges and universities produce graduates with the specific knowledge, skills, and dispositions that align with an existing role structure inefficiently at best (see also Chabbot & Ramirez, 2000; Robinson & Brown, 1994; Zemsky, 2005).

² In their review of the differential returns of college for students, Grodsky and Jackson (2009) point to these three theories. Taking a splitting rather than lumping approach, Bills (2003) arrives at seven theories of the link between school and socioeconomic outcomes: human capital, screening (including filtering), signaling, control, cultural capital, institutional, and credentialism theories.

are related to social opportunities for mobility. College in the United States is about learning or other sorts of human development largely to the extent that these ends have economic and more often vocational outcomes (Grubb & Lazerson, 2005).

Toward a Twenty-First-Century Social Context for the College Pipeline

Whatever the social charter that provided a blueprint for higher education at the beginning of the twenty-first century, policymakers and parents and a number of educational researchers believed that formal postsecondary education—and especially the increased attainment of degrees—was critical to personal and social well-being and mobility and equity (Cox, 2009c; Fitzpatrick, 2007). That belief rests on a willingness to simplify the relationship between education and economic advancement. Cox (2009c), for instance, reviews research suggesting that the twenty-first-century economy will produce far more low-skilled service jobs than high-skill jobs, that ramping up educational attainment risks inflating the credential employers will expect, and that the income growth of college graduates has ceased to match increases in productivity.³ Questioning whether higher education develops a workforce, Meyer et al. (2007) review research suggesting that the twenty-first-century "global knowledge society"—whether that phrase is an empirical description of the everyday life of most people or a myth that organizes social institutions at a moment in history—has largely adopted and expanded the Modernist university. The university continues to provide a "symbolic infrastructure" that legitimizes actors and "provides the basis for order in a globalized but stateless world" (expand this reference Meyer et al., 2007, p. 204) through the authorization of knowledge that is perceived to be relevant to framing and solving local problems and the authorization of a "clearly demarcated category of certified persons" (p. 205) that have that knowledge installed in

³ Cox (2009a) outlines what she calls the "economic framing" of the purpose of higher education: postsecondary education develops the workforce and technologies that make states competitive in the global, postindustrial economy (see also Grubb & Lazerson, 2004).

them.⁴ Individuals learn that, independent of their personal "properties," cultural and organizational rules affect their life chances, and they acquire the dispositions and abilities that align with those rules.⁵

There is evidence for the general position Meyer et al. (2007) map out: the institution of higher education has resisted change and findings about the contribution of any particular college to individual development remain mixed. While postsecondary education has become the de facto workforce development system in the United States, postsecondary does not engage either directly or efficiently in training students. At the same time, it is clear that the social context of higher education in the United States has changed in ways that challenge the Modernist institution. Peterson (2007) describes seven generally accepted environmental dynamics—"the press for diversity, revolution in telematics, interest in academic quality, concern about economic productivity, search for new learning markets, expansion of globalization, and continued resource constraint" (pp. 165, 166). His reading of research on higher education as organization suggests that the "industry" that was "open, interactive, adaptive" has been forced to become to become "interdependent, entrepreneurial, and proactive" (p. 173).⁶ I focus here on two of

⁴ Indeed, Meyer et al. (2007) argue that the institution of higher education would lose cultural authority and capacity if organizational performance were closely linked to the development of concrete skills and individual knowledge. Through the twentieth century both in the United States and around the globe, higher education carried out its social role largely by celebrating "individual empowerment and capacity, scientific and metascientific principles, and the benefits of organizational rationalization" (p. 204). Individual colleges and universities graduated experts who could use knowledge to drive policy, but that expertise was cultivated not organizationally through the development of the capacities of individuals and groups to develop the information needed to solve local problems but institutionally. Higher education is legitimated not based on what kinds of learning happen but on the production of graduates, individuals with credentials that stand for a certain kind of specialization. The primary contribution of higher education to the knowledge society is not innovations but an educated elite that is believed to be able to frame and solve social problems; around the world, the institution serves largely to legitimize personnel and knowledge and organize generalized institutional roles.

⁵ Meyer et al. (2007) observe that empirical data of the sorts sociologists consider suggest that the institution is "set up to celebrate the unity of knowledge and cultural authority and to affirm the extraordinary human capacity for agency in acting in the newly global world" (p. 204).

⁶ A growing body of empirical work (Carchidi & Peterson, 2000; Gumpert & Sporn, 1999; Rhoades & Slaughter, 2004) describes and analyzes this new context.

environmental dynamics—diversity and quality—that are particularly salient to the institution that New Majority students engage as they enter their colleges.

Diverse students.

Students are now more likely to attend college but less likely to have a traditional college experience. The vast majority of high school graduates attend college (Grodsky & Jackson, 2007). While access to college and to kinds of institutions remains stratified by academic achievement, high school, and race/ethnicity and social origins (Adelman, 2004; Grodsky, 2007; Kane, 2001), analyses of the student body document racial parity in attendance and in attendance at elite institutions if students are considered net academic achievement (Adelman et al., 2003; Grodsky, 2007; Roksa, Grodsky, Arum, & Gamoran, 2007; Rosenbaum et al., 2006, pp. 6–7). This shift in access is matched by a decline in differences in degree attainment though gaps still exist (Adelman, 2004).

While more students have access, they have access to a "non-traditional" and unstable experience. Only about a quarter of students start their college education in organizations that obviously operationalized the higher education charter (Deil-Amen, 2011c). Students, especially students with lower SES backgrounds are more noticeably swirling through a variety of organizations and types of credentials (Adelman, 2004; Goldrick-Rab et al., 2007; Townsend & Dever, 1999). More likely to be older and financially independent, they are working more and moving more slowly to degrees (National Center for Educational Statistics, 2008).

Students and policymakers increasingly view college education in terms of upfront costs and occupational outcomes (Cox, 2009c; Pryor, Hurtado, Sharkness, & Korn, 2008). This view is shared by state and federal policy (see for instance Fitzpatrick, 2007) though state and national policy may tend to warm students expectations unreasonably (Rosenbaum et al., 2006; Rosenbaum, 2001) and lead to expectations that are weakly associated with actual outcomes (Goyette, 2008; Reynolds et al., 2006). If the predictions of Gibbons et al. (1996) hold, these students value college because it contributes to their

adaptability rather than their legitimacy. They expect colleges to change quickly in response to new technologies and bodies of knowledge and, at the same time, to connect research and teaching activities to the spaces where findings and learning will be used. Rather than being isolated from the worlds of consumers and employers, these students envision an educational experience that enables them to collaborate with those who would make use of the knowledge, skills, and dispositions they are developing while they develop them.

Questions about "quality."

Gibbons et al. (1996) predicted that the production of knowledge—of technologies for transfer and capable graduates alike—would become subject to more points of evaluation and a more formative use of error-friendly evaluation. Colleges would be pressed to provide students with opportunities to practice skills in authentic contexts and receive feedback from experts that contributes to improved practice rather than simply ranks or passes them. Drawing on a growing body of evidence of differential effects of education beyond high school on individuals, discussions of the institution of postsecondary education in the United States in particular show a growing confidence in linking higher education credentials with the preparation of students to move into new contexts and new communities with the expertise that enables them to participate and contribute to those communities (Gee, 2004; Könings, Brand-Gruwel, & van Merriënboer, 2005). Credentials that certify a postsecondary education increasingly appear now to include a consideration of what students have learned on campus and what counts as significant learning off campus. Learning outcomes and related core learning experiences have been articulated and rearticulated (Ewell, 2005; Wehlburg, 2010). Credentials are described in developmental terms, as movement toward a next phase of development, whether that next phase has primarily an academic focus (Association of American Colleges and Universities, 2007; Banta, Jones, & Black, 2009) or a vocational one (Bragg, 2001). The notion that postsecondary programs can afford to provide a "terminal" education has, since a 1994 review of the community college curriculum, been laid to rest (Cohen & Ignash, 1994, p.

29): there is growing belief that a successful twenty-first-century postsecondary education results in transferable learning and the capacity to learn in new contexts as well as a traditional credential. A growing number of non-traditional credentials that indicate mastery rather than legitimacy are now being tested.

The apparent requirement in the emerging blueprint for postsecondary education that individual graduates be linked to concrete skills and knowledge has been given systematic expression in broad-based learning outcome initiatives as diverse as those of the League for Innovation in the Community College (the League), the AAC&U, and the Partnership for twenty-first-Century Skills (P21). These separate projects argue that students need to develop skills in critical and integrative thinking, communication (including communication across cultures), the use of technology, problem solving, collaboration, innovation, and civic involvement and to a lesser extent disciplinary and cultural knowledge (see Table 2.1).

It is perhaps not surprising that this growing consensus about the substantive outcome of a college education has not yet redefined the student pathway through educational organizations. In fact, it appears that few colleges are organized in a way that enables them to align their structure or culture with these or any set of learning outcomes. Studies of attempts to design academic pathways around general education learning outcomes (Miles & Wilson, 2004) and organizational learning outcomes (Boning, 2007; Marinara, Vajravelu, & Young, 2004) have uncovered a perception that, in some cases, outcomes are subversive, even counterproductive for institutions: outcomes-based curricula seem to undermine traditional curricular and institutional structures, overload already limited capacities to collect and manage information about learning, and call attention to a lack of familiarity with and interest in membership in learning organizations among learners and teachers. Calls for defining the pathway into college in terms of student learning and

Table 2.1. Twenty-First-Century General Learning Outcomes

League for Innovation 21st-Century Learning Outcomes Project 21st-Century Skills	AAC&U Liberal Education and America's Promise Essential Learning Outcomes	Partnership for 21st Century Skills 21st-Century Student Outcomes
1. Communication skills (reading, writing, speaking, listening) 2. Computation skills (understanding and applying mathematical concepts and reasoning, analyzing and using numerical data) 3. Community skills (citizenship; appreciation of diversity and pluralism; local, community, global, and environmental awareness) 4. Critical thinking and problem-solving skills (analysis, synthesis, evaluation, decision making, creative thinking) 5. Information management skills (collecting, analyzing, and organizing information from a variety of sources) 6. Interpersonal skills (teamwork, relationship management, conflict resolution, workplace skills) 7. Personal skills (ability to understand and manage self, management of change, learning to learn, personal responsibility, aesthetic responsiveness, wellness) 8. Technology skills (computer literacy, Internet skills, retrieving and managing information via technology)	1. Knowledge of Human Cultures and the Physical and Natural World through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts 2. Intellectual and Practical Skills, including a. Inquiry and analysis b. Critical and creative thinking c. Written and oral communication d. Quantitative literacy e. Information literacy f. Teamwork and problem solving 3. Personal and Social Responsibility, including a. Civic knowledge and engagement—local and global b. Intercultural knowledge and competence c. Ethical reasoning and action d. Foundations and skills for lifelong learning 4. Integrative Learning, including synthesis and advanced accomplishment across general and specialized studies	1. Core Subjects and 21st Century Themes 2. Learning and Innovation Skills a. Creativity and Innovation b. Critical Thinking and Problem Solving c. Communication and Collaboration 3. Information, Media and Technology Skills a. Information Literacy b. Media Literacy c. ICT Literacy 4. Life and Career Skills

Note. Adapted from "Learning outcomes for the twenty-first century: Cultivating student success for college and the knowledge economy," by C. L. Miles and C. Wilson, 2004, *New Directions for Community Colleges*, 126, pp. 89, 90. Copyright 2004 by Jossey-Bass. And from *Liberal Education and America's Promise: Essential Learning Outcomes*, retrieved from the American Association of Colleges & Universities website: <http://www.aacu.org/leap/vision.cfm>. Copyright 2008 by AAC&U. And from *Framework for 21st Century Learning*, by Partnership for 21st Century Skills, retrieved from the Partnership for 21st Century Skills website: <http://www.21stcenturyskills.org>. Copyright 2004 by Partnership for 21st Century Skills.

development provided few detailed strategies for overcoming these barriers and often fail to acknowledge the role that higher education plays as an institution (Boyer Commission on Educating Undergraduates in the Research University, 1998; D. K. Johnson & Ratcliff, 2004; University of California, 2007). Across colleges and universities, quality remains broadly tied to credentials rather than learning, and outcomes measures continue to be systematically resisted (Meyers et al., 2007).

Nonetheless, there is growing evidence of links between the qualities of a college education and the value of that education. The links between college attendance and a range of social outcomes net individual background characteristics have long been well established if not well understood or systematically assessed (Pascarella & Terrenzini, 2005). In the absence of a systematic apprenticeship system, college is the de facto "core workforce-development system" in the United States (Carnevale, Strohl, & Smith, 2009; Carnevale, 2008), but the link between college education and occupational development appears to be indirect. College graduates may not be trained for jobs in college, but they have substantially greater access to jobs that provide further training and access to technology at work, both of which are associated with a range of benefits and higher wages (Carnevale, Smith, & Strohl, 2010, pp. 2–3). Though a relatively small part of postsecondary education, college appears to function as a gateway to training. At the same time, occupational growth—the demand for particular skill sets as much as entry level credentials—is increasingly driving the demand for postsecondary education: New Majority students in appear to be seek more education to gain needed "skills and training" as much as a credential that is needed for access to a job within an industry.

Census data also suggest growing differences in returns to kinds of degrees (Carnevale et al., 2009). People with different degree levels and kinds of degrees appear to have different opportunities if "opportunity" is, as it so often is, estimated by earnings. Contrary to institutionalist theories of higher education, higher degrees are not always better. Almost a quarter of those who hold occupational or vocational associates degree

earn more than the average bachelor's degree holder; certificate and license holders with no degree earn on average more than a quarter of bachelor's degree holders (Carnevale, Jayasundera, & Hanson, 2012). Workers with "some college" earn more than high school graduates (though not as much as degree holders).

In sum, it is clear that a sheepskin effect still holds, but data suggest increasingly that what students learn matters apart from degree attainment. By extension, higher education as an institution—whether it primarily legitimates knowledge and personnel, facilitates status attainment, provides a market for human capital development or a field for social reproduction—is now involved in contributing to students' capacities to participate in the worlds they seek to enter after school.

New Ends for a New Century?

While the college pipeline has served more to legitimate knowledge and personnel rather than train them, there are reasons to believe that a new context—one that includes an influx of more diverse students and a growing attention to what students have learned—is putting the existing social charter for higher education into competition with alternate blueprints for authorizing knowledge and personnel. College education cannot confidently be represented as a pipeline to degrees. To suggest other representations, I turn here to a summary of one of the most famous analyses of the future of institutions of knowledge production, *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies* by Gibbons, Limoges, Nowotny, Schwartzman, Scott, and Trow (1994).⁷ Rather than focusing on the too often exaggerated opposition Gibbons et al. draw

⁷ I draw on this source well aware of its limitations. The analysis of Gibbons et al. (1994) has been criticized as overly general and extreme (Brint, 2005). Still, their contention that the institution is under significant pressure is broadly accepted (Arbo & Benneworth, 2007). I might add that much of the criticism has the opposition between Mode 1 and Mode 2 and not the analysis of the changing institutions that I present here. Like Gibbons et al., I am not suggesting some clean break between the past and the present or the universal application of a new model. Instead, I am outlining basic changes in how knowledge production, knowledge producers, and postsecondary education are conceived.

between the existing approach to knowledge production—Mode 1—and the emerging one—Mode 2, I will focus on the emerging charter for higher education that they describe, along with the implications of that new charter for individual organizations and students.

A transforming charter.

Gibbons et al. a concept of social institution that is in many ways complementary to that developed by Meyer and the neoinstitutionalists. They outline a dominant university blueprint along with those for an increasingly diverse set of new institutions charged with knowledge production—government agencies, commissions charged with specific inquiries, high-tec firms. While they find substantial isomorphism among elite knowledge producing organizations, they note that securing funds since World War II has required universities to specialize and at the same time to collaborate with other universities and increasingly with the newer kinds of knowledge producing institutions. Universities developed transdisciplinary institutes and centers to pool the talent needed to do the research desired by public and private sector funders (Rhoades & Slaughter, 2004). At the same time, new university-industry research centers popped up off campus, and industry funded its own centers.⁸ These new institutions gained legitimacy as they recruited credentialed researchers to their staffs, secured funding, and provided research to policymakers and the public sector.

Gibbons et al. (1994) note that the university, as a social institution, continues to be a factor in determining who benefits from innovation (that is, it continues to legitimate personnel and knowledge). Competing institutional types, on their argument, do not so much threaten the legitimacy of the formal traditional institution as they do threaten to overload it. The speed and volume of knowledge production increases to rates beyond those that can be controlled by the traditional institution. In the process, organizations legitimated by the traditional university charter become less able to structure the work of knowledge

⁸ While these collaborations have long existed, Rhoades & Slaughter (2004) provide preliminary evidence of increases in numbers and significance.

production required within domains or by consumers of that knowledge. Demand for innovations, careers, and qualities exceeded university capacities.

Students who matriculate after the turn of the century find themselves entering an institution that is, at least rhetorically, being redesigned around a set of principles made popular by scholars from organizational learning, business, and public policy: workers and learners need to be able to produce and adapt knowledge rather than primarily to master an existing tradition, and so they need a different kind of education (Drucker, 1994; Friedman, 2006; Gee, Hull, & Lankshear, 1996; Gee, 2004; Kress, 2003; Reich, 1991).

Transforming organizations and organizational roles.

Across the old and new knowledge producing institutions, Gibbons et al. (1994) point to a basic organizational transformation. Rather than organizations structured around legitimate bodies of knowledge and experts in whom that knowledge has been installed, knowledge producing organizations begin to recruit the specialists, tools, and policies needed to complete concrete projects. Previously clear distinctions between domains of research and methodologies grow fuzzy as units within in the new knowledge producing organizations were structured around sociocultural problems. Previously clear distinctions between research and application give way to production processes staged close to work and life and continually refined by interactions between science, technology, and social issues. Rather than adding settled truth to a body of knowledge, the new organizations aim at supporting responsible decision-making in situations where many uncertainties remain.

Within these transforming organizations, individuals continue to conform to a specialized identity, a view of the world and knowledge production legitimated largely through the university. But at the same time, they are asked to assume multiple identities. Because they frequently collaborate with experts in other fields, researchers must consider alternate views of the world and knowledge production: they adapt methods and tools from their specialization for use in other specializations and make use of tools from other specializations. Gibbons et al. (1994), however, make clear that specialists never ceased to

be specialists; rather, they added a kind of transdisciplinary competence to their portfolio. Part of that competence is a capacity to deal with change and competition. Rather than working in a single field for a career, researchers increasingly find themselves work intermittently on discrete projects, shifting focus and often retraining as one project is completed and another begun. Individual organizations experiment with balancing the stability and security necessary for creative engagement with the institutional openness and flexibility necessary for organizational adaptability.

The central purpose of actors within the new organizations, Gibbons et al. (1994) argue, is knowledge production. That process depends on organizational structures and processes that allow actors the "freedom to make innovative choices" and at the same time make their careers and credentials less stable. On this analysis, knowledge production involves work that is driven by competition and collaboration more than legitimacy. That work is aimed at both use and exchange value and is the outcome of collaborations that cross institutional, regional, and even national borders (see also Engeström, 2008).

Transforming students.

Gibbons et al. (1994) argued that this new blueprint for organizations of postsecondary education and the concomitant new role for students would coexist and compete with the traditional model of higher education. College students, on their analysis, need to be prepared to learn and work in transdisciplinary, dynamic, informal, and applied settings on decentralized projects that link highly specialized workers who produce unexpected and novel forms of knowledge. They need to be able to see the production of knowledge as, in part, an ethical process and to measure success in terms of appropriateness, utility, profitability, and cost effectiveness and not only in terms of completeness or correctness. They need not only to make use of communication and data sharing technologies but to feel at home in collaborative networks that develop new knowledge. While twenty-first-century societies may continue to use postsecondary credentials to legitimate experts and knowledge, they also require graduates who have been

prepared to produce results in respect to local problems while they were acquiring legitimate dispositions and skills.

In short, these students pursue a college education that appears to have a dual aim: to legitimate knowledge and personnel and also to provide and document opportunities for students to become the knowledge producers that Gibbons et al. (1994) envisioned. These two aims coexist and compete for resources.⁹ Credentials that offer little information about individual capacities do and will continue to provide access to opportunities. At the same time, however, postsecondary education—"some college"—is being called on to prepare students to learn and work in transdisciplinary, dynamic, informal, and applied settings on decentralized projects that link highly specialized workers who produce unexpected and novel forms of knowledge. That is, college—and school more generally—is being asked to empower students to take up consciously the goals, values, and visions that underlie and guide their practices at school and work (Gee et al., 1996). Three implications follow. First, in school and later at work, students must overtly develop their portfolios of skills and dispositions so as to be ready for the next opportunities. Second, they must be prepared to struggle with the contradictory social imperative to be fully committed to tasks that others will end, "eager to work and ready to go." Third, they increasingly need to be prepared to function in social and organizational systems in which power is distributed through out the system and the steering is accomplished by leveraging patterns (explain) in order to adapt to the environment.

In this context, in addition to seeking legitimacy, college students must acquire "ways of talking, listening, reading, writing, acting, interacting, believing, valuing, and using tools and objects, in particular settings and at specific times, so as to display or to recognize

⁹ Cox (2009a) notes that the community college students she studied were interested in both the exchange-value and also the use-value of their education and that they found "inconsistencies" between their expectations and their experiences.

a particular social identity" (Gee et al., 1996, p. 10).¹⁰ And they must balance being engineered with deciding how to contribute in a system with limited central control. College must lead to a recognized degree and also a critical understanding and mastery of the process of the formation of identities and practices. In sum, twenty-first-century students must be eager to enter the college pipeline but ready to leave, perhaps before they have attained a degree.

Studies of "Mainstream" Twenty-First-Century College Education

In this final section of an already lengthy review, I turn to the studies that are describing the use New Majority of students are making of postsecondary education and in turn, beginning to revise models of the college pipeline. A sophisticated body of research has taken up the ways in which students—especially New Majority students—progress (and fail to progress) through the college pipeline (Bettinger & Long, 2005; Calcagno et al., 2008; Domina et al., 2011; Espinosa, 2011; Fike & Fike, 2008; Hernandez & Lopez, 2004; Hirschy et al., 2011). Notwithstanding changes in the context and purpose of college for many students, much of this work continues to use input-output models that link an outcome measured some pre-determined time after matriculation to background characteristics and behaviors.¹¹ Viewed from such a model, progress toward an educational goal is often operationalized as persistence¹²—whether students remain enrolled to some

¹⁰ Of course, many of the features of a Discourse—and perhaps especially those Discourses that carry the status of college-educated—must be enacted rather than stated explicitly. Gee, Hull, and Lankshear (1996) observe that Discourses necessarily resist critical reflection on "fundamental values and perspectives on the world" (p. 13): critical reflection by outsiders would undermine the Discourse itself; such reflection by insiders would compromise fluid performance in the Discourse.

¹¹ This work is well-designed and insightful but it relies on models of student behavior and data sets that were developed to the study "traditional" students pursuing two- or four-year colleges in traditional institutions. (Bahr, 2013b) allows that this work is answering "old" questions with increasingly sophisticated analytical methods.

¹² Bahr (2009) notes that studies of student patterns of enrollment are "a topic of longstanding and intensive interest" and are generally measured in one of six ways: persistence (including retention, attrition, departure, or dropout behavior), enrollment inconsistency (stopout behavior), completed credit hours, enrollment intensity, course completion rate, delay (procrastination behaviors). In each case, starting an education is operationalized in terms of behavior that can be quantified.

pre-determined point in time after matriculation—and is used to explain variation in academic attainment and to predict other attainment outcomes.

From pipeline to pathways: Benchmarks and purposes.

At the same time, the challenge of representing the educational pathways of community college students has led researchers to modify the pipeline model. In an analysis of methods for measuring enrollment patterns, Bahr (2009) observes that the widely used measures share a fundamental concept, "students' rate of progress" (p. 694), and an assumption that all students move through a sequence of steps—a necessary part of an education—at a productive and relatively invariant rate.¹³ The effect of these measures can be estimated only when the rate of progress is a positive constant, and so they have limited ability to explain the progress of students whose use of time varies.¹⁴ This variation in pathway presents a significant challenge for higher education research on student progress through classes to degrees. Bahr offers this slightly tongue-in-check reflection:

From the perspective of a researcher, however, the flexibility offered to community college students presents only disadvantages with respect to the design and execution of empirical studies. That is, for a researcher who seeks to understand why some students graduate while others do not, and how the policies and practices of the institution influence particular student outcomes, the complexity of students' pathways makes sound and informative research very difficult to execute. (Bahr, 2013b, p. 139)

Accommodating the flexibility of the enrollment patterns of community college students has led to measures that account not only for the number of terms completed or

¹³ Bahr observes that the ability of student persistence to explain variation in attainment depends on the relationship between persistence and rate of progress. Positive correlation—each unit of persistence is related to taking steps toward an educational goal—increases the explanatory power of persistence whereas negative correlation—each unit of persistence is related to not making steps toward a goal—decreases the explanatory power of the measure.

¹⁴ A STEM major who takes and passes courses that fit in her degree plan for one year may have a high rate of progress but be considered a stopout within a predetermined window of measurement. Her peer who regularly enrolls in and passes a full load of courses over four years but never takes a math course has shown greater persistence but in fact have a very low rate of progress towards any degree or certificate.

credits accumulated but also for momentum points or milestones, "steps along the pathway to a variety of academic goals" (Bahr, 2009, p. 695). These measures make possible what (Bahr, 2013b) calls a "deconstructive approach" to studying student progress: quantitative analysis of transcript-level data "to 'deconstruct' the varied steps or stages through which students pass from the point of college entry to a given outcome of interest" and (p. 145) and qualitative work that analyzes "*why* students exhibit the behaviors that they do" (p. 148).

For Bahr, deconstructive quantitative work promises to articulate "behavioral mechanisms that link distal student characteristics to eventual outcomes" (p. 147). To illustrate,¹⁵ he points to his transcript-level analysis of the course taking patterns of students who begin in remedial math or English (Bahr, 2012) that found a strong relationship between a non-passing grade in a remedial class and changes in behavior—students become less likely to attempt or complete the next level of coursework—but was able only to speculate about why this change occurred. By design, quantitative deconstructions of student practice can specify "*how*" students pathways unfold but can offer only speculative explanations of "*why*" they unfold the ways they do. Qualitative work that is mapped onto quantitative findings (Callahan & Chumney, 2009; Cox, 2009a, 2009b, 2009c; Deil-Amen & Rosenbaum, 2002; Grubb, 2010) can begin to answer "*why* questions" about interactions between behavior and institutional structures, the impact of experience on "decision making and behavior," and other ambiguities that emerge from quantitative deconstructions of student pathways.

From pipeline to pathways: Studies of "subjectivity."

¹⁵ he points to his transcript-level analysis of students who exit remedial math sequences without attaining college-level math competency (Bahr, 2013a). By comparing course taking behaviors before and after exiting a remedial math sequence, he confirms to varying degrees that these students exhibit behaviors—they reduce their course-taking intensity and experience a decline in their rates of course completion—that do not contribute to completing degrees or certificates, but he can only speculate about why these changes in behavior occur.

A growing body of research is trying to represent the progress of New Majority students beyond flow through a pipeline (Bahr, 2010; Collatos, Morrell, Nuno, & Lara, 2004; Cox, 2009a, 2009b, 2009c; Deil-Amen & DeLuca, 2010; Deil-Amen & Tevis, 2009; Deil-Amen, 2011a, 2011b; Hagedorn & DuBray, 2010; Saunders & Serna, 2004; Zell, 2010). Here, I will use the work of two of the qualitative researchers to whom Bahr points—Regina Deil-Amen and Rebecca Cox—in order to suggest some of the ways that qualitatively-oriented studies are elaborating the educational paths of New Majority students in ways perhaps not anticipated by Bahr. Though it continues to draw on some of sociological and psychological concepts from earlier models (Cox, 2009b; Deil-Amen, 2011b), the work of these two researchers defines access and diversity as positive values. New Majority students are conceived of as not as a special class of college students but as students who attend non-elite institutions where diversity—of institutional type, race and ethnicity, SES, academic preparedness, financial status, enrollment status, and various other dimension—is the norm. Rather than grouping students by a set of characteristics and then comparing their outcomes to those of "traditional" students, Deil-Amen and Cox set out explicitly to describe the experience of students at non-elite institutions in order to understand the ways in which those students experience different college settings and what organizational features constitute barriers and opportunities for them. They explain what contributes to actual outcomes and so situate students' educational trajectories and progress within students' lives, lives that are lived primarily off-campus.

While their interview protocols and participant selection are clearly influenced by factors shown by quantitative work to impact student behavior, the work of Cox and Deil-Amen typically takes as units of analysis the experiences of specific sociocultural situations between matriculation and graduation. This work is often grounded in data collected in open-ended interviews with students, staff, and faculty lasting more than 45 minutes.¹⁶

¹⁶ See also Collatos, Morrell, Nuno, & Lara, 2004; Deil-Amen & Tevis, 2009; Rios-Aguilar & Deil-Amen, 2012; Zell, 2010.

These data support the development of rich representations of students' experience of taking classes, talking with advisors and faculty, or reading college information. In turn, representations of situations support analysis that calls attention to the balance between individual agency of college stakeholders and the effects of social structures on available roles, choices, and interactions.

To be sure, the student trajectories that emerge in this work are circumscribed by credits, courses, degrees, and institutional legitimation, and students' progress is often linked to their measured "ability." But, the focus is on students' understandings, and so student progress is positioned "between subjectivity and objectivity"—to borrow a phrase from Deil-Amen. Objective events may shape the progress of students, but students' subjectivities also "shape their actions, interpretations of, and response to" their college experience (Deil-Amen, 2011c, p. 27). Deil-Amen (2011b), for example, describes "integrative moments" that provide New Majority students with procedural agency but do not necessarily lead to their integration into a social community on campus. By attending to students' experiences, this line of qualitative research has begun to outline reasons why New Majority students take an approach to college that is not "ideal" (Deil-Amen, 2011c, p. 6). In one study of students' understanding of their progress in college, Cox (2009b) suggests that Clark's (1960) "cooling out" process attributes failure almost exclusively to students and advisors and in so doing obscures the relationship between students' "aspirations" and "trajectories." In *The College Fear Factor*, she examines further the ways "habits of thinking, acting, speaking, and writing" of students and other college stakeholders, arguing that "assumptions and motivations," "goals and expectations," and "preconceptions" (especially students' underlying fear) about college mediate students' responses to institutional structures and the transformation of those structures.¹⁷

¹⁷ As Bahr implies, Cox's findings advance explanations of various student behaviors: decisions about persisting in a class, decisions about asking for help, tolerance for ambiguity in the curriculum, narrowly instrumental views of college, decisions about levels of engagement (from attending without completing work to being fully engaged). Her analysis of the preconceptions of faculty lead to

A new game.

Overall, the deconstruction of the New Majority pathway has begun to confirm a basic narrative. This cohort of students starts college with mixed motives (Bahr, 2010, 2012; Deil-Amen, 2011b) and limited information (Rosenbaum et al., 2006) in the leakiest part of the college pipeline. Many are marginally prepared and so attain degrees slowly if at all. At the same time, this research is beginning to describe a new college going norm. These students use college as they see fit. They have limited desire to form a social network on campus but respond to faculty and staff and other students who support them in making sense of their situation (Santiago, 2007, 2008). They know that they are unprepared and develop a series of strategies both to learn the academic skills they need in order to attain degrees and also to cope with the stress of being in an academic environment for which they are not prepared. These students view course practices and activities that support learning differently than the instructor or the researcher, but unlike students at elite institutions (Horowitz, 1988; Nathan, 2006; Pope, 2003), the students in Cox's study rarely adopted the instructor's view in order to become part of the academic community. For them, college is composed of classes. Good classes are spaces where it is safe to ask questions and access assistance—especially assistance from a teacher (D. Cole, 2007; Deil-Amen, 2011b).¹⁸

New Majority students are, it appears, playing a different game than the one traditionally offered to American college students.¹⁹ Deconstructive qualitative research has

explanations of interactions between students and institutional structures. She argues, for instance, that when students who approach college fearfully interact with faculty who are oriented to the norms of the disciplines and the professorate, students come to perceive college education in terms of the subject matter expertise of professors, the clarity of curricular expectations, the ability of students to master the curriculum. The interaction seems to result in a pair of beliefs: the value of education is related to the quality of students; curricular content is more significant than learning processes.

¹⁸ Across studies, almost familial relationships with staff and faculty served to validate students as viable college students and also link them to explicit information about how to go to college, from explicit assignments and feedback to explanations of financial aid and course selection. Deil-Amen (2011c) found relationships with same-group students to play a similar role.

¹⁹ Cox in particular calls particular attention to tension between what students want and what is on offer: "for the majority of students in the study, the value of a college education was integrally tied to what they learned and would be able to use. However, fundamental inconsistencies between students'

begun to explain students' experience of the pathway to a college education and the way they construct the pathway in interaction with others. This work is beginning to expand to include analysis of what students do to make use of the college pathway. Beyond explaining student behaviors and interactions between student behaviors and institutional structures, this work entails understanding how community college students make use of a social institution without being reproduced by it. I turn next to framing a study that might contribute in new ways to helping us to learn to see what non-elite students are doing on the pathway to a college education.

Chapter 4

A Practice Approach to Student Progress

There are increasing calls for research on New Majority students' subjective experiences in the pipeline (Bahr, 2013b; Deil-Amen, 2011b; Koyama, 2007; Louie, 2007). In order to represent and analyze the meanings that students attach to what happens in college along with their rationales for progressing in the ways that they do, research needs to define student progress as many steps along diverse pathways taken within often contradictory social institutions by agents whose perceptions, aspirations, and expectations as well as their skills and resources are changing. This research needs to take as the unit of analysis the lived experiences of students within their institutions and explore, as (Deil-Amen, 2011c) puts it, "where and how agency and structure intersect."

In taking up this call, I adopt a cultural studies view of student progress, one that frames the practices of successful first-year students in terms of the ways of talking, listening, reading, writing, acting, interacting, believing, valuing, and using tools and objects that make newcomers to college recognizable as college students. In this chapter I develop a way of representing and interpreting the practices of students and other stakeholders within institutional settings rather than institutional structures or individual behavior or cognition or the statistical interaction between structural and cognitive factors. The term practice is used informally in studies of students and institutions to describe routine activities. Practices, as I will use the term, refer to the conventional actions in which people engage within a context in order to participate in that context.¹

¹ Gee (2011c), for instance, suggests that practices are most simply represented by what people do in order to play a game. It is perhaps worth noting that activities and practices have long been viewed as situated (see for instance Dewey, 1938); that is, they happen and have meaning in contexts. The concept of context, however, remains difficult. Reflecting on Dewey's relational theory of cognition, Cole (1996) usefully points out that context refers both to a "whole situation" but also to that which "surrounds" an activity or practice of interest and that which weaves parts together and gives them coherence. Viewing context as container makes it easy to lose track of the complexity of context as occurring before, during, and after the occurrence of an activity or practice of interest and to attribute

In developing this chapter, I first reflect on the approach to Cultural Studies developed by Raymond Williams in an effort to suggest what a practice account of student progress might involve. That section is followed first by an elaboration of an analytical approach to studying practices and then by an approach to thinking about how individuals and groups go about developing the capacity to participate in new domains and contexts. This approach is perhaps unusual in a domain dominated by studies of large-scale databases. Neither Cultural Studies nor New Literacy Studies is a unified enterprise and neither is much used in studies of higher education. Modern Cultural Studies emerged in Great Britain in the 1950s as a field of study rather than a discipline (Hoggart, 1995). Using the theories and methods from sociology, anthropology, psychology, history, and literary studies, researchers working in this area sought to describe the production, distribution, exchange, and reception of meanings and to analyze how humans contributed to and made use of culture—from individual cultural artifacts to groups and institutions and whole ways of life. A more recent enterprise, the New Literacy Studies coalesced in the 1980s as a group of linguists, ethnographers, social psychologists, and sociologist developed a set of related sociocultural approaches to studying thinking and problem-solving.

I have (re)turned to Williams's strand of Cultural Studies because it offers a broad view of human activity as neither determined by context nor free of context but instead as situated, contradictory, and creative process. The New Literacy Studies theorizes the ways in which what humans can do as meaning makers—and so who they can be—is scripted for them by cultural models that both colonize and empower them. Viewing student progress as the acquisition of new ways of being through a cultural studies lens, I hope to highlight a

causation either to context or to the individual or group acting within a context. Drawing, like Williams did, on etymologies, Cole argues for conceiving context as both that which surrounds and also that which weaves together. By extension, activities and practices might be isolated for study but must be seen as distributed across individual actions and intentions and ever changing historical situations.

set of activities through which novice college students get started as participants in a new domain and the ways in colleges support that process.²

I have developed this framework in part in response to calls for relevant education, education that acknowledges and leverages students' own resources and purposes in an effort to prepare students to participate in diverse, democratic, neo-liberal societies. A growing chorus of policymakers and researchers contend that the aim of a twenty-first-century education is not only the conferring of credentials and social status but also documented and transferable identities and skills that are locally and, perhaps, globally relevant. By extension, the study of student success in college needs to account not only for what benefits are related to degrees and how an average student is socialized in college but also for what practices individual students hope to acquire and in what ways programs are supporting them to become able to participate in various communities of practice as the people they wish to become. The now standard conceptualizations of student success, as suggested above, have limited capacity to interpret students' non-choice and resistance and their decisions to change or not to change their goals. Moreover, these models do little to explain the outcomes of New Majority students.

It is also worth noting that I have developed this framework in part out of frustration with the limitations of a pipeline or path from pre-college experiences to college outcomes as a guiding metaphor for inquiry into student progress. As an experienced teacher of New Majority students and a program designer in New Majority institutions, I find counter-intuitive the notion that students' progress is determined by a narrow set of personal or group qualities and quantities of those qualities. I am unsure what to make of the idea that the activity in which students and teachers engage are interventions aimed at mediating the causal effect of students' background characteristics on their progress. I wonder about the

² Valuable in its own right, an understanding students' guiding visions of college might contribute to studies of relationships between specific visions of college and academic progress, learning, and labor market successes. Such an understanding can also contribute to studies of the relevance of college programs to these students as well as their motivation and behavior.

notion that college outcomes can be ascribed to students. I am not sure how to apply frameworks of student progress that are fixated on what students—and to a lesser extent teachers—are and seems to occlude who students are and what "successful" students become able to do. More than one-half century of persistence research confirms, at least for me, that what a community college student starts with is *on average* the best *predictor* of what she will end up with. That hypothesis confirmed, I wonder why some students who start college in the leakiest part of the pipeline become successful college students in their eyes and the eyes of the higher education professionals who teach and support them.³ More research on what college makes of the attributes students possess when they arrive at college seems unlikely to help my inquiry. I propose instead to ask what students are doing to start making progress.

Toward a Cultural Studies Approach to Student Progress

A practice approach to student progress assumes that progress can be measured neither as new mental representations stored in students' heads nor as degrees conferred on students. Instead, progress emerges as changed participation in what I will call communities of practice.⁴ Students are able to remain in college—passing classes and tests and taking new classes—because what they do marks them as participants in communities of practice. Viewed this way, progress is a cultural affair. This view of progress is in some ways not novel, for the study of communities in colleges and universities and colleges and

³ Feel encouraged to read a nod to Sherwood Anderson here.

⁴ Gee (2004) has questioned the utility of "community" in naming how individuals organize themselves to pursue goals: describing a community entails the thorny problems in determining what counts as participation, membership, and boundaries: Which practices and identities qualify a person for membership? Is it credentials rather than practices that make insiders? How is membership determined? These concerns with the concept of community notwithstanding, the label has become widely used in studies of workplaces and education (Gee, 2008; Lave & Wenger, 1991; Wenger, 1999). Following Gee, I use the label to refer to networks of people and tools through which people learn new practices through participation and become able to do things they could not do alone. As such, a community of practice is as much a repository of knowledge and skills and artifacts as it is a warm community.

universities as communities is well established (Hochbaum, 1968; Jacob, 1957; Sanford & Adelson, 1962) and central to the dominant paradigms of student success.

In their ASHE-ERIC Higher Education Report, Kuh and Whitt (1988) elaborate the use of "cultural perspectives" in the study of higher education and define culture as "an interpretive framework for understanding and appreciating events and actions in colleges and universities rather than as a mechanism to influence or control behavior" (p. 3). Pointing to a growing body of work that makes use of make use of cultural perspectives as lenses, they suggest that this work might well "acknowledge and legitimate" the non-rational aspects of higher education largely ignored by dominant models of organizational rationality. They go on to offer a broad—and rational—definition of culture: "the collective, mutually shaping patterns of norms, values, practices, beliefs, and assumptions that guide the behavior of individuals and groups in an institute of higher education and provide a frame of reference within which to interpret the meaning of events and actions on and off campus" (p. 13). "Cultural perspectives" can be used, they suggest, to organize the study of ideologies, norms, and values as well as the processes by which these social phenomena are expressed. These perspectives also serve as units of analysis: Schein's (1985) taxonomy decomposes cultural perspectives into artifacts, values, and basic assumptions and beliefs, constructs that can serve as either a dependent or independent variables in studies of the environment in which colleges and universities are nested: organizations, subgroups within organizations, or individual actors and roles.

There is no question that culture has become a central interest in higher education research. In 1988, Kuh and Whitt were able to identify a substantial body of higher education research that adopts a "cultural perspective"; a February 2013 search for the subject terms "higher education" and "organizational culture" identified nearly 600 publications between 1992 and 2012. This work has enriched the understanding of and called attention to goals, policies and procedures, routine practices, strategies, and leadership activities as well as the way these features of higher education are experienced

by individuals and groups. At the same time, the general limitations of this research are clear. In the conclusion to their review, Kuh and Whitt reflect on the difficulty traditional social science research encounters in approaching culture:

The nature of culture (complex, mutually shaping, holistic, continually evolving, essentially tacit) suggests that traditional methods of social science research, grounded in logical positivism, are not capable of describing the multiple, overlapping layers of institutional culture. (pp. 102, 103)

Social scientists themselves, Kuh and Whitt participate in a common double reduction of the concept of culture: it is a substance that can be isolated, and it is, finally, "institutional culture," bound by categories that can be traced back, more often than not, to the work of Webber and Durkheim. Culture is a thing—even when it is a process—that has properties and can be portrayed; culture, though it is context, can be described apart from context.

The cultural perspective attempts to study, to borrow the words of Raymond Williams, "dynamic interrelations, at every point in the process, of historically varied and variable elements" (1977, p. 121). Yet the field of higher education has for various reasons taken up student progress almost exclusively in what Williams described as "epochal analysis" and Bahr (2013b) has more recently called "input-output analysis." The goal of this research is abstracting a system from process and explaining the relationships between a dominant set of features. This work has contributed important historical assessments and comparisons of periods and organizational types (Bourdieu & Passeron, 1990; Brint & Karabel, 1989; Clark, 1960, 1972; Grubb et al., 1999; Hurtado & Carter, 1997; Kuh & Love, 2000; Masland, 1985; Peterson & Spencer, 1990; Tinto, 1987), but it struggles to recognize the internal dynamic relations of ongoing historical process, a process that always includes relations that are still effective leftovers from past systems and also relations that are emerging in opposition to or as alternatives to the current system.

The culturalist strand of Cultural Studies connected to the work of Raymond Williams—theory that has played an important role in advancing the study of culture (Milner,

2002) but does not appear in Kuh and Whitt's review and is hard to find in the higher education literature—seems to address this oversight.⁵ Growing out of the adult education movement in Britain following the Second World War, Cultural Studies aimed at interdisciplinary, critical analysis of how social consciousness was made. Practice, on this view, is what Williams called the "living resolution" of specific material realities; it is neither wholly determined by nor independent of social structure. I develop, largely from Williams's work, a Cultural Studies framework grounded in three central ideas: Cultural Studies analysis focuses simultaneously on local and regional process; Cultural Studies analysis attends to the interaction of dominant and emergent practices; and Cultural Studies analysis describes the ways in which social structures organize effectively but incompletely meanings, values, and practices through traditions, institutions, and formations.

In Williams's social theory, the analysis of culture involves the description of (a) a contingent "(social and material) productive process," (b) "specific practices, of 'arts,' as social uses of material means of production (from language as material 'practical consciousness' to the specific technologies of writing and forms of writing, through to mechanical and electronic communications systems)" (Williams, 1980b, p. 243), and (c) the relationship between a productive process and practices. The cultural perspective in higher education research on student success often theorizes the second of these phenomena and occasionally the first but very rarely the third.⁶ Williams takes up the relationship between a historical way of life—what he tentatively called "a structure of feeling"—and the practices within that way of life explicitly. It is this relationship that "determines" history. Pushing against determinist solutions that define a general process (often an economic one) as

⁵ Williams is in many ways an odd choice for an analysis of the higher education pipeline; the more canonical theory of practice is that of Bourdieu.

⁶ Status-attainment approaches prove that such a relationship exists but the relationship itself is outside the scope of theory; approaches that position students as rational decision makers presume that they chose those practices that are efficient based on the information they have, largely bracketing both culture and practice; despite theorizing a feedback loop between individuals and cultures, social reproduction theories tend to adopt a deterministic relationship between historical productive processes and the practices.

causal and "Romantic" solutions that locate agency in the individual actor and her practices, Williams argues for seeing determination itself in terms of multiple forces and allowing for the interpretation of contradictions and dialectical interaction.⁷ Since this view constructs all practice as productive, it positions the work of analysis as "discovering and describing relations between all these practices" without first abstractly isolating some as causal and others as determined, a move that inevitably privileges known history, structure, and the outcomes of production to practical relations.

Williams's thinking about determination is closely connected to a second idea: hegemony. Like any serious adequate analysis of culture, Williams's accounts for the dynamics of power. Interpreting the work of Antonio Gramsci (1971), he distinguishes between (a) rule, (b) power expressed directly in political forms and coercion, and (c) hegemony as the complex interlocking of political, social, and cultural forces that includes and goes beyond culture and ideology. A culture—conceived as a productive process and a set of practices—is "practically organized by specific and dominant meanings and values" (Williams, 1977, p. 108), not formally but through the lived experience of individuals and groups. Viewed this way, forms of domination and subordination are "normal" processes of social control—both traditions and everyday practices—that are open to transformation. That is, everyday lived experience is defined by processes of domination and subordination⁸ that are continually renewed but also resisted. Since from Williams's view, the hegemonic⁹ is never total but always responsive, it allows individuals and groups to be both incorporated into a way of life and at the same time to use the practices that are part of

⁷ "In any whole society, both the relative autonomy and the relative unevenness of different practices (forms of practical consciousness) decisively affect actual development, and affect it, in the sense of pressures and limits, as determinants" (1977, p. 88).

⁸ Like Williams, I am well aware that social scientists prefer to think of social relations in terms of cooperation and that they shy away from nesting factors within an overarching process that, by definition, resists being reduced to rational factors.

⁹ Williams argued for the use of "the hegemonic" rather than "the hegemony" in order to resist turning the concept into a form.

that way of life to construct alternate and oppositional formations that force responses and adaptations in the hegemonic.

The final idea I draw from Williams is the organization of human activity into an effective social order through traditions, institutions, and formations. These three cultural processes serve as alternatives to the organizational features that the cultural perspective in higher education research relies on. For Williams, tradition does not refer only to "the surviving past"¹⁰ but to (a) "selective traditions"—versions of "a shaping past and a pre-shaped present" that contribute directly to processes of "social and cultural definition and identification" (1977, p. 115)—and (b) stranded traditions that serve as retrospective affirmation of a past that has been discarded. The struggle for and against selections of the past that can ratify a present order is a major cultural activity.

In turn, the establishment of a selective tradition depends, according to Williams, on institutions that organize socialization and incorporation and necessary processes of learning and education.¹¹ Williams does not conceive of institutions as stable mechanisms of social reproduction but instead as specific processes with particular purposes and effective relations. At the same time, though, any institution-as-process is full of contradiction and conflict since it is itself an expression of dominant, alternative, and oppositional purposes and relations. Any hegemonic is effective to the extent that it motivates "a (resigned) recognition of the inevitable and the necessary" role of dominant institutions (1977, p. 118), and any culture is shaped by its institutions and more importantly the interrelations and contradictions within and among those institutions. The effectiveness of institutions is most immediately recognizable in formations—conscious movements and tendencies, "literary, artistic, philosophical or scientific." Formations, according to Williams, consolidate specific practices, namely ways of acting in the world that enable historical individuals to be

¹⁰ That is, "a relatively inert, historicized segment of a social structure."

¹¹ That is, institutions facilitate "learning tied to a selected range of meanings, values, and practices" that constitute the foundations of the hegemonic (1977, p. 117).

positioned in relation to social structures expressed in traditions and institutions though always also to resist being position or to position themselves.

It is the focus on the practices engaged in by movements of people that distinguishes Williams's cultural studies from approaches he characterizes as "epochal analysis." Rather than defining culture in terms of dominant and effective practices, Williams considers residual and emergent cultural practices as well. By residual practices, Williams has in mind patterns of activity formed in the past but still actively expressing experiences, meanings, values that cannot be expressed within the dominant (he offers organized religion as one kind of residual practice) and that a dominant culture must incorporate and manage. Emergent practices and processes, on the other hand, are oppositional or alternative and not simply novel. As such, these processes and practices cannot be defined within a cultural dominant. Dominant traditions, institutions, and formations incorporate a set of practices that effectively define a social order, but these practices are never able to "include and exhaust" human practice. Pushed outside normative activity, residual and emergent practices tend to be labeled private or aesthetic or natural rather than effective social activity. Still living holdovers from past cultural process, residual practices can legitimize activities that sit in an alternative or oppositional relation to the cultural dominant. Emergent practices surface through "alternate" perceptions of others and relationships and new perceptions of the material world and possible ways of being in it (Williams, 1977, p. 126). Not yet socially effective, emergent practices are a reaching toward new forms of practice arising with new classes and formations. These practices are ever incomplete and under the pressure of incorporation and recognition and also moving beyond the dominant.

As a complex interaction of dominant, residual, and emergent practices and processes, a culture—or more likely some specific aspects of a culture—can be explained to some extent in terms of abstractions such as social class or media practices or supply and demand curves, "but there is always other social being and consciousness which is

neglected and excluded" (1977, p. 126). Attending to this other, and resisting the reduction of the emergent to existing structures¹² and a concomitant shift in emphasis from "the real location of all practice and practical consciousness," Williams characterized the general constitutive process in terms of a "structure of feeling," "a pattern of impulses, restraints, tones" that is "living result of all the elements in the general organization" (1961, pp. 64–65). This "deliberately contradictory phrase" (Williams, 1979) indicates a process that is not a universal or class-specific pattern but a general, experiential possession at a point in history; it is not ideology because it deals with public ideals and also their "omission and consequences, as *lived*" (1961, p. 80; emphasis added).

Williams's cultural materialism opens a vision of student progress that is defined by a general social institution and at the same time being redefined through the lived experience of students, staff, and faculty whose experiences and values are, by definition, never average.¹³ Within this framework, colleges do not simply facilitate a kind of one-way integration of students into academic and social communities though surely education does facilitate socialization of various sorts. As an institution, education passes along a tradition—"an intentionally selective version of a shaping past and a pre-shaping future" (Williams, 1977, p. 115)—by requiring individuals to learn a set of hegemonic meanings, values, and practices and by providing them selected ways of thinking. And colleges do indeed socialize students. But the concept of socialization is an abstraction that avoids or hides what students learn and how they are included within a hegemony. The learning of a selective set of meanings, values, and practices and even adopting a way of thinking does not determine the lived experience of students even though socialization is usually effective enough to

¹² This work, Williams explained, is challenging. "It is to begin the whole difficult process of discovering and describing relations between all these practices, and between them and the other practices which have been isolated as 'production,' as 'the base' or as the 'self-subsistent world,' in an extremely awkward and disabling position. It is indeed to begin this most difficult kind of work head down and standing on one foot." (1977, p. 94)

¹³ That is, Williams characterizes a method of analysis that attends to processes of social formation, individual development and cultural creation without making one process determinate of the others. In so doing, he creates space for the political and intellectual relevance of the activities of individuals and groups while insisting that for every personal act, a social fact that needs to be requisitioned.

sustain a cultural dominant. Rather, the process of learning what should be done often leads to confusion and conflict. Education, or any other institution, incorporates lived experience into a social order incompletely.

As a situated person, each student comes to school and participates in an adaptive, extensive, and incorporative social process but does so in historically "new" ways. In so doing, each student constantly "departs" from the institution of college—whether they continue to complete classes or not. At times, they engage in residual formations that shield them from the hegemonic; at other times, in emergent ones that push beyond it; at still other times, in dominant practices that are themselves being reworked as students take them up. Students' lived experience—the practices they take up—contributes to and is hemmed in by what they can become within the social process in which they find themselves. As that lived experience takes them beyond the dominant, they occasionally adapt the practices available to them and take up reflective and critical stances, hatching new forms of practice and joining groups that offer alternative and oppositional views of what college is for,¹⁴ all without departing from campus or abandoning their aspirations for degrees.

On Practice

A cultural studies approach like Williams's work turns to human practices in order to make sense of the ways in which individuals and groups make use of social institutions. Like more recent discussions of human activity, Williams had in mind the complex relationship

¹⁴ They use college, Williams (1961) might argue, to make a "good common culture" (10). In "Culture Is Ordinary," Williams argued that economic power need not come with ugliness, that popular access to education need not reduce education to the pursuit of competitive advantage, that popular learning is inferior to academic learning, that students use of college will drive out other uses. He argued that education is ordinary, "the process of giving to the ordinary members of society its full common meanings, and the skills that will enable them to amend these meanings, in light of their personal and common experience" (Williams, 1980a, p. 14). Education through its organization and content gives a society its cohesion, but as culture is passed along through education, the culture is not simply accepted but continuously reworked.

between human agency and social determinacy that Marx raised in his *Theses on Feuerbach*:

The chief defect of all existing materialism—that of Feuerbach included—is that the thing, reality, sensuousness, is conceived only in the form of *object* or of *contemplation*, but not as *sensuous human activity, practice*, not subjectively. Hence it happened that the *active* side, in contradistinction to materialism, was developed by idealism—but only abstractly, since, of course, idealism does not know real, sensuous activity as such. Feuerbach wants sensuous objects, really distinct from the thought objects, but he does not conceive human activity itself as *objective* activity. In *Das Wesen des Christentums*, he regards the theoretical attitude as the only genuinely human attitude, while practice is conceived and fixed only in its dirty-judaical manifestation. Hence he does not grasp the significance of "revolutionary," of practical-critical, activity (Marx & Engels, 1978, p. 143)

More or less conflating the constructs of activity and practice, Marx challenged the notion that humans and their tools—or the material and the ideal for that matter—are ontologically distinct. In his analysis, tools and routines are objectified activity. They are a piece of their makers and exist interdependently with their makers (Bernstein, 1971, p. 44). Whether a theory of human activity and practice is Marxist or not, such theories have had to account for the relationship between product and producer since Marx. Activity/practice is now broadly understood as neither subjective nor objective, but instead it names processes that embed the potential for change in the routines of activity.¹⁵

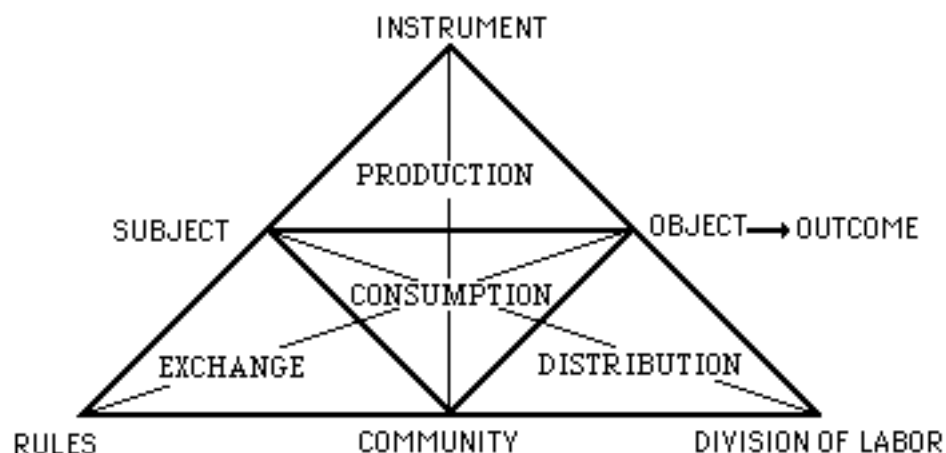
I now turn to the work of a diverse group of anthropologists, sociologists, and cultural studies scholars who have taken up Marx's challenge to avoid positioning human

¹⁵ Human activity/practice appears to have the power to produce artifacts that are at once simply more activity and at the same time enduring objects—congealed activity or Marx's "'objective' activity"—that can be separated off from activity though still always open to change. Thus, activity and practice increasingly stand for the "medium, outcome, *and* precondition for human thinking" (Cole, 1996, p. 138; emphasis added).

subjects and historical objects as polar opposites by attending to human activity/practices as objectifications or formalizations of material activity and not in some way external to activity. In the concepts elaborated by this interdisciplinary group that models object-oriented activity—activity shaped and directed by an entity that meets a human need—on Marx's concept of labor, I find a notion of practice that aligns with Williams's cultural studies and that can better guide the collection and analysis of data.¹⁶

In taking up this view of practice, I adopt Leont'ev's codification of activity as "joint, collective activity" that "begins with the making of tools" (Leont'ev, 1981, p. 208; see also Engeström & Miettinen, 1999). Activity or human functioning is distinguished from individual actions and behaviors and instead is conceptualized in "activity systems" that knit together subjects, objects, tools, and interactions in a system of object-oriented action (for a review see Engeström, 2001). As illustrated in Engeström's model (Figure 4.1), activity is a social

Figure 4.1. Structure of Human Activity



Note. Adapted from *Learning by expanding: An activity-theoretical approach to developmental research*, by Y. Engeström, 1987, pp. 73-82. Copyright 1987 by Cambridge University Press.

¹⁶ I take up the ideas of activity theory and especially Engeström's work to clarify my own notion of practice rather than to adopt a fully-formed analytical framework or method.

process that transforms concrete entities in the world into objects of activity; activity is a social process of meeting individuals' needs through the production of objects that correspond to those needs. The outer triangle links various cultural artifacts—from tools and subject positions to rules, communities, and divisions of labor—that have proven useful in producing existing or imagined entities in the world that are seen as meeting needs.¹⁷ The inner triangles organize four basic human activities (expand on production, exchange, consumption, and distribution). Any system of activity is linked with other systems that produce its instruments, subject position, rules, community relationships, division of labor, and object of activity.

Viewed as a sociocultural, historical process, activity is rife with contradiction. At once the individual production of an individual or group and at the same time an instance of ongoing societal activity, activity results from an individual or group playing out roles established through a division of labor to produce objects to use in satisfying needs. This same object, of course, has value within other activities and contexts within the context in which the object is produced. When producers come into contact with one another in a capitalist setting, an object can be used both to satisfy its producer's needs and also be exchanged based on its general value in the context. This dual nature of the object of activity is a source of a basic contradiction. To use an example from Leont'ev, a physician might buy a medical practice in order to produce health for herself and a community, but she must also hope that the number of sick people remains constant or increases so that she is able to fulfill her goal of producing health. The basic contradiction permeates all aspects of activity. Working with the same example, Engestrom notes that one of the physician's instruments, drugs, are always both a means to produce health and a commodity to be advertised and sold.

¹⁷ An activity system represents a set of concrete historical processes that are directed toward concrete, historical objects and mediated by tools, signs, norms, and relationships—in this way activity is distinguished from psychic processes, actions, or operations. As it unfolds, activity "singles out those properties that prove to be essential for developing social practice" (Lektorsky, 1984, p. 137, cited in Engestrom, 1998).

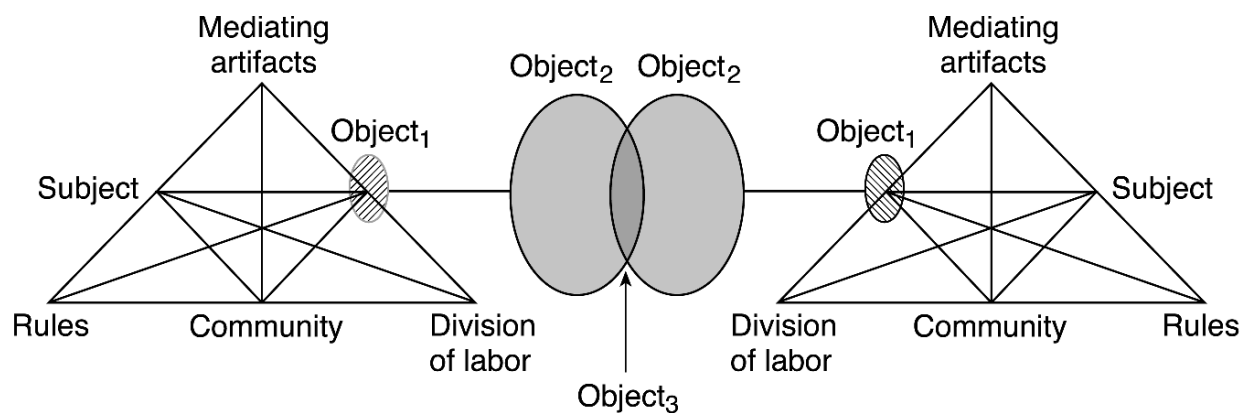
An inevitable feature of activity, contradictions also serve as a principle of change and development. In situations where socially established "rules" or "instruments" effectively block or limit a subject's ability to produce object for use or exchange, individuals and groups engage in new forms of activity, forms that may start as individual exceptions to routine practice but have the potential to become new social practices. Contradictions drive innovations that, if they are taken up by the community, transform the activity system itself. It is in this way that activity is revolutionary or "practical-critical."

Consider a simple illustration based loosely on the findings in Cox (2009a).¹⁸ A group of New Majority students is enrolled at a large urban community college. These students—the "subject" in this system—are part-time or straining to juggle a full-time schedule; they have significant commitments off campus to jobs and families and have limited academic preparation. This plural subject is defined by a shared object of activity: the completion of classes that roll up into a degree. The intended outcome is new opportunities in education and employment; unintended outcomes include alienation from home communities, the discovery of a passion for a field of study such as archeology, and others. Various instruments and rules and others mediate activity in this system; I will call attention here only to the division of labor. This activity system is mediated by a division of labor inherited from urban high schools and reinforced by under-resourced colleges: students come to class to get useful information and skills; faculty give students useful information and skills. In this activity system, a contradiction exists between the division of labor and the object. This compartmentalization of learning roles frequently keeps students from engaging content and skills that are not immediately useful in school and leads students without sufficient prior preparation to become frustrated and stop out.

¹⁸ Engestrom (1987) explores the contradictions inherent in school going. Students, one subject in this activity, confront a basic contradiction in their very position ("grade-maker" vs. "sense-maker") and the object that they are producing ("dead" signals for a labor market or "living" mastery of socially valued knowledge and skills). In this activity, students also must determine whether to adopt or break rules or whether to see classmates and teachers as "separate individuals" or a "team of inquiry."

Other activity systems are unfolding in the same situation and look quite different. Other students, for example, may be pursuing quite different objects such as remaining in the college community as long as possible or learning astronomy or maintaining parental support. Teachers likely approach different objects than students even though they may hope for similar outcomes (see Figure 4.2). Still other activity systems are generating new cultural artifacts that can transform the experience of these students.

Figure 4.2. Two interacting activity systems

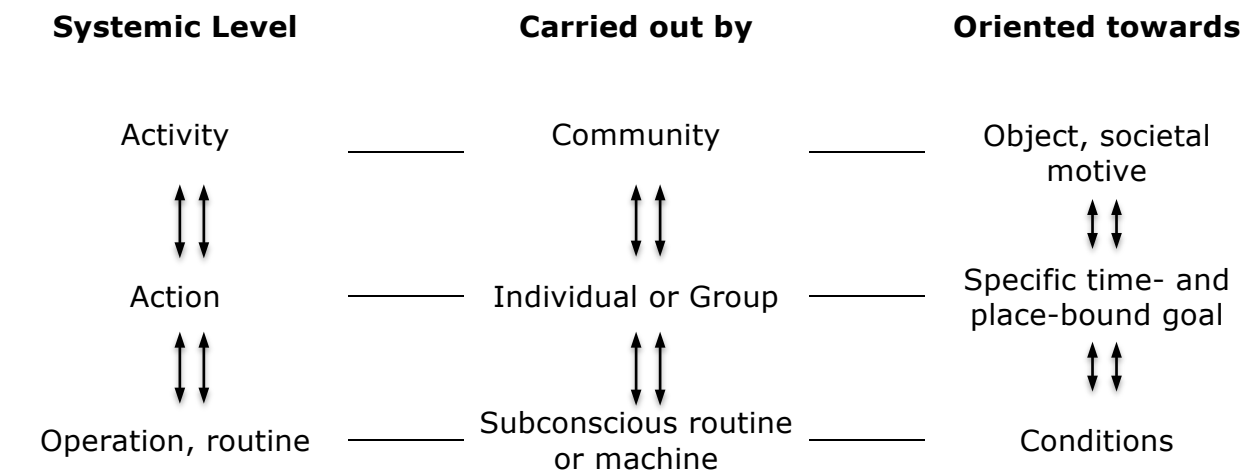


Note. Adapted from "Expansive Learning at Work: Toward an Activity Theoretical Reconceptualization" by Y. Engeström, 2001, *Journal of Education and Work*, 14(1), p. 136. Copyright 2001 Taylor & Francis Ltd.

Viewed as object-oriented activity, student progress is not only a response caused by stimulus or action directed at achieving specific goals. Rather, it must also be understood as activity that is directed and circumscribed by socially constituted objects of activity. Rather than being determined by individual biological drives or pre-determined goals, activity is "controlled from the outside" (Vygotsky, 1978, p. 40) through the common creation and use of artifacts. The distinction between object-oriented activity on the one hand and action or operation on the other is critical. As Figure 4.3 suggests, activity, action, and operation are distinct but dialectically related. Actions serve to realize activity, yet activity is composed of sequences of action. In a similar way, the goals of action trigger routines yet, at the same

time, the available routines limit what goals can be approached. Analysis of activity and practice viewed this way typically begins with the actions individuals and groups take up in order to achieve goals as well as the relationships between actions and successes, problems, and binds. As the relationship between action and goal is understood, analysis shifts up to consider why individuals and groups pursue goals and how actions and goals come to be related and also down to the operations and instruments through which actions are carried out.

Figure 4.3. An activity theoretical view of the organization of human activity



Note. Adapted from *Activity, Consciousness, and Personality*, by A. N. Leont'ev, 1978, pp. 66-67. Copyright 1978 by Prentice Hall.

Studies of educational attainment have characterized in some detail the ways that students' initial educational goals, expectations, and commitments are associated with student progress (Wells et al., 2011). While some of this work views student goals as a function of social structures (Sewell et al., 1969; Sewell & Hauser, 1980; Sewell & Shah, 1968), much of it works within psychological models of action, considering operations and actions (Pascarella & Terenzini, 2005). Like studies of goal-directed action in psychology, cognitive science, and sociology more broadly, much of the research on the relationships between students' goals and their progress takes the actions of individual agents as the unit of analysis and models a sequential process in which goals and plans function to regulate

individual behavior (Engeström, 1999). Theoretically and methodologically, studies of goal-directed action struggle to account for actions that are collective or socially distributed, much less for the role of mediating artifacts and culture. Because studies of goal-directed action tend to represent time in discrete units, the continuous and reflexive aspects of human activity are bracketed (Bahr, 2009).

Viewed as object-oriented activity, the progress of New Majority students takes on different meaning. New Majority students begin an educational pathway in order to produce objects that correspond to needs—a college education or the successful completion of a class or membership in a group or workplace credentials or space to explore ideas and experiences. But they approach these objects—what Engestrom calls "raw material" or "problem spaces"—through completing assignments and reading texts and other activities that are part of established historical processes. In turn, these processes "single out" what I will call practices—"goal-directed sequence[s] of activities using a particular technology and particular systems of knowledge" (Scribner & Cole, 1981, p. 236).¹⁹ As Marx's revolutionary and practical-critical activity, practices are sequences of activity that are found to enable individuals and groups to meet their needs and that are always open to being used in different ways to redefine needs and means of satisfying them. In acquiring practices, students adopt established tools, knowledge, and skill, but they do so creatively and potentially critically, adapting practices in ways that help them to meet and clarify their needs within the situations in which they find themselves.

To sum up, a study of student practices focuses on activity partially determined by individual agents, partially by social structures that guides students as members of

¹⁹ Practice has been used to theorize social phenomena as both constituted by both social structures and also agents. Cole offers two central illustrations. Giddens (1979) uses it to describe structures of socialization through which subjects are determined. For Giddens, neither environment nor inherent characteristics determine subjects. Instead, subjectivity emerges from social practice. Bourdieu (1977), on the other hand, defines practices as the outcome of habitus—"a system of lasting, transposable dispositions which, integrating past experiences, functions at every moment as a *matrix of perceptions, apperceptions, and actions* and make possible the achievement of infinitely diversified tasks" (p. 73). Scribner and Cole's (1981) "functional" definition has the virtues of applying to both conceptual and sensory-motor domains and describing activities with varying levels of social recognition.

communities to satisfy and simultaneously to (re)define their needs through the creation and use of tools, knowledge, and skills. A practice approach to understanding student progress analyzes student activity within social spaces that have been designed—for better or worse—to promote particular kinds of student progress. Student progress is the outcome of goal-directed actions that can be understood only in terms of salient activity systems: students put tools and systems of knowledge to use in contexts to solve contradictions inherent in those contexts on their way to achieving goals that can be imagined within those contexts. Such an analysis begins by representing a subset of situated, goal-directed, mediated actions of students. Preliminary analysis leads to findings about mediators that are both cause and consequence of object attainment. These mediators situate actions in historical systems of activity and point to the individual capacities and environmental features on which actions rest.

In the final section of this chapter, I outline an approach to the analysis of practices that attends directly to the ways in which humans pick up the overt and tacit knowledge and skills they need to participate in a social endeavor.

A NLS Approach to Student Progress

Both Williams's Cultural Studies and CHAT offer ways of looking between agency and social structure. CHAT narrows the focus to a unit of analysis: actions nested in activity systems. While I draw conceptually on the theory informing CHAT, my focus is on the ways in which first-year students become able to participate in college, and so I narrow in further on a group of anthropologists, sociologists, linguists, and historians who are sometimes gathered under the awkward label the New Literacy Studies (NLS). In the 1980s and 1990s, this group used many of the conceptual resources drawn on by Williams and CHAT to explore the ways in which humans become able to participate in communities outside their home community.

The NLS is part of a broad movement in the social sciences, emerging at roughly the same time that broadly Vygotskian approaches to language learning and cognitive development (Luria, 1976; Scribner & Cole, 1981; Wertsch, 1985, 1998) called attention in education research to social practices to which individuals are apprenticed within their various communities. NLS empirical work elaborated the ways that literacy practices are linked to ways of knowing and making sense of the world (Brandt, 2001; Heath, 1983; Scollon & Scollon, 1981; Street, 1984). As the scholars who make up this interdisciplinary group studied and theorized language use in context, they called into question the assumption that literacy and schooling have a cognitive effect that can be understood apart from the contexts in which they occur and the purposes for which they are taken up.²⁰ While it is neither a discipline nor an explicitly shared intellectual initiative, the NLS gathers a body of sociocultural analysis of language and literacy and development that has raised empirical questions about the sufficiency of individualist theories about thinking and problem-solving and, at the same time, offers theories of the development of the human ability to make meaning as a socially situated process—a process that takes place outside people's heads in their relationships with places, tools, technologies, and others. Rather than a narrow cognitive process with effects that can be isolated from sociocultural context, the NLS reconceives literacy and schooling as forms of social participation that have significant ideological effects.

NLS frameworks have been used to study the experience of English language learners in primary and secondary school contexts (see for example Gee, 2007; Moschkovich, 2002) and topics directly connected to the teaching of writing in college (Barton, Hamilton, & Ivanic, 2000; Horner, 1996; Lea & Street, 2006; Street, 2004). NLS

²⁰ Street (1984) called this "the autonomous model" of literacy. Chafe (1994) and Tannen (1985) argued that rather than cataloguing features associated with oral and literate texts, the features of language use might be studied within particular social practices (see also Gee, 2004, 2011c). The NLS has done much to call into question epistemological distinctions between primitive and civilized cultures and with them the notion that it is literacy—the cognitive ability to read and write—that makes humans able to engage in complex thinking and so to sustain complex social systems (Cole, 1996; Graff, 1986; Scribner & Cole, 1981).

frameworks are beginning to be used to analyze students' experience of college though most often with an emphasis on students' ability to write in academic Discourses or succeed as readers and writers in particular college class (Colyar & Stich, 2011; Henderson & Hirst, 2007; L. L. Johnson, 2012; Schachter & Rich, 2011). Cox (2009c) applies it tentatively to the "academic literacies"—habits of thinking, acting, speaking, and writing" that new college students must acquire if they are productively to engage their college education.

A focus on college students' understanding of their participation in school is hardly new (see Clark, 1960). Indeed, despite the paradigmatic status of his early work, Tinto has for some time preferred to explain student persistence in terms of "competent membership" that sounds very much like effective participation in a community of practice. Yet while important work in higher education is describing the context in which students determine what roles to play in college, the higher education literature continues to define student progress in terms of the attainment of degrees as a function of student characteristics.²¹ An NLS framework provides resources to reconceive student progress as activity aimed not primarily as attaining the skills demanded by college or adopting a set of hegemonic norms and values but as acquiring the capacity to participate in a community of practice and to switch between communities. To elaborate this view of what students do, I draw from the NLS a view of participation, Discourse, participants, and community. While I will use the work of Gee (especially 2004, 2007, 2011b) as my guide to the NLS, my interpretation of these concepts is influenced by the work of Kress (2003) and Street (2004) as well as a group of cultural psychologists (Cole, 1996; Engeström, 2001; Lave, 1993; Rogoff, 1990).

²¹ These limitations should be expected. Higher education broadly defines human development as a psychological concern and social processes as external to development (Pascarella & Terenzini, 2005). Sociocultural approaches to studying the experience of English language learners do not appear in a 2009 *Teachers College Record* review of the transition of English language learners to college (Rodriguez & Cruz, 2009). In his review of the contributions of theories of human development to understanding the transition to college, Guiffida (2009) focuses exclusively on psychological theories and characteristics.

Participation.

The NLS broadly proceed under the assumption that the capacity to participate in any common endeavor cannot be understood in terms of the decontextualized abilities of individuals. What matters is having acquired the right social practices. Within an NLS framework, humans take up and learn practices in contexts or spaces or what Gee has called "situated domains." Competent practice can be understood only within a social and historical context and within "an area or set of activities—[like an academic discipline or bird watching]—where people think, act, and value in certain ways" (Gee, 2007, p. 29). By extension, the activity of learning is learning how to situate meanings within contexts and domains, and as such, learning is an activity and a new way of experiencing the world. Any activity can be examined from inside or outside its domain. From within, activity is direct and interested interaction with the content of the domain that is rooted in actors' conscious or unconscious understanding of the principles and patterns that organize that content. From without, activity appears as a group of people who can be recognized as thinking, acting, interacting, valuing, and believing in certain ways that are appropriate given the patterns and principles that determine social practice and identity within the affinity group.

Gee goes on to argue that activities can be taken up in different ways. It is possible to enter a situation and domain as passive content and to learn the patterns and principles that are perceived from outside the domain with little intention of acting like a producer within that domain. In distinction, humans—whether they are "newbies" (newcomers to the domain) or experts—can engage in active participation, seeking to understand and learn internal design grammars. Beyond active participation, they can engage a domain critically, consciously attending to, reflecting on, and transforming design grammars. Unlike passive participation in which meaning makers master routine activities without being able to use them productively in the domain, critical participation involves seeing the semiotic domain as a design space in which individuals and groups see themselves to be manipulated—recruited to think, act, interact, value, believe, and feel in certain ways—but also able to

manipulate the space, even to the extent of undoing their existing mastery of design principles and engaging the domain and solving new problems in different ways. Critical participation, Gee argues, involves an openness to continually learning to experience the world in new ways, joining new affinity groups, developing resources for future learning (undoing routine mastery and approaching problems in new ways), and learning to reflect on semiotic domains as design spaces.

Gee's explanation of participation in situations and domains is nearly always linked to the concept Discourse (capital "D"). Gee (Gee et al., 1996; Gee, 1989, 2004, 2011c) uses "Discourse" to refer to a set of social practices—a characteristic way of talking, listening, reading, writing, acting, interacting, believing, valuing, and using tools and objects, in particular settings and at specific times—that enables individuals and groups to display and recognize particular social identities. To illustrate, he explains that as a linguist, he himself has acquired a kind of identity kit that required him to learn about linguistics but cannot itself be reduced to schemes of declarative and procedural knowledge of linguistics.

As members of families and everyday communities, individuals come by a set of "primary Discourses," and they pick up "secondary Discourses" outside early home and peer-group socialization. Always multimodal ("language plus 'other stuff,'" Gee et al., 1996, p. 34), Discourses provide individuals and groups with the identities (whos) and the practices (whats) that they need to participate in a domain and situation. Discourses summon people to speak, listen, act, read and write, think, feel, believe, and value in historically recognizable ways but at the same time allow them to flavor those ways of making meaning with their own individual style and creativity. Repurposing Krashen's (1985) distinction between acquisition and learning, Gee argues that individuals get primary Discourses through acquisition, a process of attaining something by trial and error through exposure to models and practice but without formal teaching. "Secondary Discourses," on the other hand, are acquired but also learned through teaching and other experiences that

promote conscious reflection on and some degree of metacognitive awareness of the knowledge and skill being attained.

Several important points about the activity of learning follow from this notion of Discourse. First, the mastery of a Discourse is through acquisition. Learning about the features of a Discourse can facilitate metacognitive awareness and deepen the use of the Discourse, but without access to guided immersion in the practice "you don't get in the Discourse, you don't have it" (2011b, p. 168). There is no functional fluency in a Discourse: users are recognized as in the group or not. The user of a Discourse who has partial control of the Discourse is effectively enacting part of an identity and announcing very clearly that he is not yet a competent participant. Second, literacy is the fluent control of a secondary Discourse. As such, literacy can be dominant or non-dominant—depending on the status of the Discourse—and powerful or critical to the extent that the Discourse in question can serve as a "meta-language" for critiquing other Discourses. Third, an individual's primary Discourse serves as a framework for acquiring and learning other Discourses. By extension, that individual's family and home community contribute to how she sees the world and also to how compatible a secondary Discourse is likely to be and to what will be involved in learning about it and acquiring it.²² But at the same time, a primary Discourse cannot be liberating in the way that literacy can. In order to reflect critically on any Discourse, an individual needs a Discourse in addition to the one in which he was initially socialized.

Finally, the structure and function of Discourses put non-dominant learners and teachers in a bind. Getting a dominant secondary Discourse—for example, one of those used by law students in law school—requires acquisition to the point of mastery. Those learners whose home Discourses share features with a dominant Discourse have already practiced some aspects of the new Discourse and feel relatively little conflict with the

²² Gee (2011b) points out that cultures differ in respect to the relative value of acquisition and learning, some tending to expose children to adult modeling a target practice until the child gets the knack, others valuing systematic instruction that breaks apart core Discourses into component parts, explains each, and tests the extent to which each has been learned.

models, settings, and practices that are part of the Discourse. Others may have home Discourses that are in conflict with a dominant Discourse. For instance, a law student whose primary Discourse values a close connection between language and lived experience or cooperation among group members will have to learn practices and take up identities that are at odds with his primary discourse in order to engage in case analysis or class interaction (Minnis, 1994). Moreover, learners with little experience related to the new Discourse are dependent on opportunities to apprentice in the new Discourse in order to acquire it. Since American schooling rarely provides such opportunities (Varenne & McDermott, 1998), these students may struggle to achieve adequate mastery of superficial forms (Shaughnessy, 1977).

Gee suggests that non-dominant learners have one advantage. Struggling to acquire a secondary Discourse forces a would-be participant to become consciously aware of what she is trying to do and what she is being asked to do. That is, she develops a meta-cognitive awareness of the Discourse that can be empowering in two ways. For one, if she manages to acquire the Discourse after all and if it is the kind of Discourse that allows for talk about how societies are arranged and how such arrangements might be resisted, she may find herself in the position of active and critical participant in the social spaces in which the Discourse is dominant. Even if she does not acquire the Discourse, she may develop strategies to make do, drafting strategies that dissassociate language in case analyses from everyday usages or conversational strategies that put her in a short-term competitive relationship with her peers and faculty.

Viewed as a process of Discourse acquisition, student progress is an ongoing social activity. As a participant in a Discourse, a college student in a developmental math class, or a middle-aged university professor who takes up competitive distance running, aims to practice—both acquire and learn about—the Discourse used by people who do developmental math at her campus or run marathons. In turn, while a developmental math student may chose to learn about a Discourse in use in a class, she will learn the Discourse

in meaningful ways only if she acquires it, if she engages in a process of trial and error the models and practices that she understands to be necessary to function in a way she wants to function. Competent participation, in this case, does not come about solely or even primarily through exposure to formal teaching and the memorization of key features of the Discourse. Meaningful learning of a developmental math Discourse results in literacy, the capability to situate meanings in a developmental math class at a particular college. Put a different way, meaningful learning makes a developmental math student able to pass as a member of the class (or at least some portions of it), able to recognize who else is doing developmental math and also to be recognized as being someone who does developmental math herself.

Competent practice, on this view, depends on this developmental math student's willingness to experience the world differently though she will decide whether to cultivate the identities and practices salient to developmental math passively, actively, or critically. Moreover, how and to what extent she acquires the new Discourse will be affected by the relationships between the developmental math Discourse and those she has already acquired. If her home Discourse includes the belief that "people like us" cannot do math, she will need to square that real world identity with a new identity that includes the capacity to do math.

Participants.

The NLS position humans as participants engaged in different ways in learning, "a process of changing understanding in practice" (Lave, 1993, p. 6). Learning is routine, ubiquitous, and humans are learners by definition. In concert with work in situated cognition, the NLS broadly conceives of agents as actors or participants. They are not so much individual minds or bodies that internalize and transmit preexisting, decontextualized knowledge or play out determined scripts as they are people engaged in everyday activity with and for others (Lave, 1993; Rogoff, 1990; Schön, 1983). Agents are active, interested, intersubjective, practical, and process-oriented (Rogoff, 1990). Always bounded by a

context, they take up problems that they "own" personally (Lave, 1997) and engage these problems not procedurally but based "on considerations aesthetic, stylistic, functional, procedural, financial, and academic as well as conceptions of self and other, and material conditions of work" (Keller & Keller, 1993). At times, they choose not-to-learn—though resistance to learning is construed as a meaningful, negative form of learning—because embarrassment, anxiety, or risk of deligitimation are too great or because interaction in the domain is blocked (Lave & Chaiklin, 1993).

In his analysis of video gamers, Gee (2007) breaks down the Discourse learner further. He finds that actors who become competent participants are willing to envision themselves in terms of a new identity, "the kind of person who can learn, use, and value" the domain and situation in which they will be a learner (2007, p. 54). More specifically, participation in a new Discourse in this case entails cultivating virtual, real-world, and projective identities. Extending this actor role to research on students in schools, Gee argues that participants in a classroom actively connect aspects of their own experiences and dispositions (their real-world identity) to their academic lives but are willing to act as members of new situated domain that they wish to join (a virtual identity for the classroom) and become able to project their own values, desires, choices, goals, and actions onto that virtual identity (a projective identity) in order to become the kind of student they wish to be. To wit, a successful developmental math student is willing to take on the ways of valuing, acting, talking, and thinking of people who use math in college-level classes without relinquishing her own purposes for being in school, and as she practices in her virtual identity as a user of mathematics, she decides what kind of user of mathematics to be.

The NLS view of agents provides several conceptual resources for the study of student progress in college. First, being a college student likely entails taking up new views of the world and the self. To be sure, a student can approach college as a self-aware consumer, getting a credential while changing as little as possible—Labaree (1997) argues that American colleges and universities are largely designed to support this sort of activity.

But students can also approach college as critical learners, taking up socially established ways of speaking, listening, acting, reading and writing, thinking, feeling, believing, and valuing, but as learners do so in ways that offer the possibility of personal style, reflection, and even critique.²³ Second, participants in any domain need access to social spaces. Students use other people as well as tools and technologies to think for them, and so they cannot be conceptualized primarily as heads that contain the important information in a domain and context or pairs of hands that are guided by that information (though knowledge and skills matter). Rather, in an NLS framework, students exist as pairings of individuals and environments; individuals can be paired in more or less powerful ways with the resources in an environment and have greater or lesser skills in leveraging the resources in that environment. Finally, in some domains, some participants should be expected to struggle to connect their lived experience with a virtual identity as member of a Discourse. In these cases, there is a need for what Gee calls "repair" or "an adapted level of play" (or a psychosocial moratorium) that entices the learner to invest considerable effort in trying out the new identity and provides enough meaningful success to warrant their continuing to play the role of learner in the domain.

"Community."

NLS analyses of activity presuppose that individuals are part of groups of actors who use common Discourses in the pursuit of a "common endeavor." They form communities of practice. Within groups, goals, procedures, roles, and power are organized as a situated "set of related social practices" (Gee et al., 1996, p. 10). Always social constructions, practices are singled out because they have been found to contribute to accomplishing the

²³ Drawing on the work of (Schön, 1987), Gee (2007) suggests that learners are continually involved in the a cycle of probing their context, hypothesizing, reprobing, and rethinking. This rethinking guided by an appreciative system, "a set of goals, desires, feelings, and values in respect to the domain being engaged with" (pp. 96, 97). That appreciative system is the place where "the affective and cognitive" and also "the social, cultural, and the personal" merge and come together (p. 97). An appreciative system can guide an individual or group to active and critical thinking about and the active redesign of a Discourse.

common endeavor.²⁴ To be sure, the endeavors that give rise to "communities" are pressured and limited by social structures, but an NLS analysis focuses less on formal principles regarding participation, membership, and organizational boundaries and more on the ways in which content is generated, individuals and groups gain access to the endeavor, and practices are recognized as contributing to the endeavor from inside or outside of the group. The unit of analysis is space of interaction.

Individual communities of practice—for instance, a local elementary school (Delpit, 1995; Gee, 2004), a law school (Minnis, 1994), or an electronics assembly plant (Gee et al., 1996)—support multiple endeavors and "underwrite" particular sets of identities and practices that make individuals recognizable but still themselves. The common lives of individuals are focused on acquiring and using some of the Discourses that are salient to this or that common endeavor. The NLS are especially interested in the ways that Discourses valued within a community align with, conflict with, or are disconnected from Discourses with which participants in apprenticeship are already confident and comfortable outside the community. While both theory and empirical findings suggest that individuals can and do reflect on the positions they are taking up inside communities of practice, those Discourses themselves interrupt and guide critical reflection on participation.

Beyond theorizing the ways in which semiotic activity regulates interactions within communities, the NLS has contributed to an analysis of the contemporary experience of life in public spaces such as school, public meetings, and the workplace. Like other approaches to analyzing organizational life (see for instance, Gibbons et al., 1994; Sennet, 2006), the NLS attends to a cultural transformation. *The New Work Order* (1996) is among the most developed of these analyses. The narrative goes something like this. Under the pressures of the of "new" or "fast" capitalism, Weber's "iron cage" is viewed as giving way to organizational types in which individuals and groups self-organize in casualized relationships

²⁴ Gee (2007) notes that identities and practices are valued within a group as norms and outside the group as effective means to some end.

characterized by a set of common themes—"networks, connections, interconnections, and the breakdown of hierarchy" (Gee et al., 1996, p. 49). Gee, Hull, and Lankshear (1996) observe that theories of business and learning and also schools and workplaces are being reorganized: in a context defined by market saturation and global competition both enabled by new information technologies, organizations now take as their central purpose continual innovation and customization (the creation of certain kinds of consumers) rather than mass production.

Consonant with this purpose, New Capitalist communities of practice are understood to position members as learners "who can learn and adapt quickly, think for themselves, take responsibility [often in teams for whole processes or tasks], make decisions, and communicate what they need and know to leaders who coach, supply, and inspire them" (Gee et al., 1996, p. 19). New Capitalist communities both empower participants as learners while, at the same time, ensure workers' over-the-top commitment to the company through an openly established Discourse that communicates goals and vision that go beyond profit to align all workplace activities and social institutions outside the workplace with workplace ideologies.

What's in View

In bringing Cultural Studies and the NLS to the study of the progress of New Majority students, I hope to supplement studies of student success that adopt status attainment, rational action, or social reproduction frameworks and, in so doing, avoid some of their methodological limitations—albeit by accepting a different set of methodological limitations.²⁵ I frame New Majority students as participants in communities of practice that

²⁵ As suggested in the review above, much of the research on academic pathways focuses narrowly on factors related to student and family characteristics, preparation, access, or outcomes that impede or more rarely contribute to student success (Deil-Amen & Turley, 2007). As a result, much of the work on the transition to college and student departure is haunted by "selection bias, reliability and validity of survey items, endogeneity, response rates and missing data, and survey attrition" (Goldrick-Rab, Carter, & Winkle-Wagner, 2007).

are on the edge of out-of-control: participants find themselves subject to indirect forms of control—visionary leaders, all-encompassing and widely accepted organizational values, and the distribution of knowledge across the entire organization so that no one individual or group can control the endeavor. Given this conceptual framework, I assume that participation in a twenty-first-century American community college is both alienating and empowering. On the one hand, students in such colleges must take up social practices that tend to place the control of resources in fewer and fewer hands while at the same time undermining social capital, patterns of informal trust, and the value of the skills and knowledge of individuals (Sennet, 2006). Participants are subject to values concerning schooling and work that overtly undermine existing civic spaces and norms as well as continual assessment. On the other hand, participants in twenty-first-century community colleges are "free"—based on their individual resources—to take responsibility for their own lives and build new identities that enable them to resolve challenges and take up opportunities. They are free to move on to new organizations and endeavors without obligation, "eager to stay and ready to go."

Viewed from an NLS framework, progress in college—like developing competence in any group—is a function of acquiring the right mix of Discourses and so becoming recognizable as a successful student within a domain and context. As such, progress depends in significant ways on the relationship between students' prior Discourses and those that are operative in academic domains that they seek to enter but also on the opportunities students have to reflect on this relationship and make use of apprenticeships to learn how to move between Discourses. Progress in a Fast Capitalist college program rests to a great extent on students' willingness continuously and quickly to define and engage new opportunities by reflecting on the capabilities they have and then actively adding to their tool kit new practices that position them to capitalize on those opportunities. Being a college student in a Fast Capitalist college, it is worth noting, is both liberating and

alienating; that is, successful students have to manage feeling both that they are competent participants and also that they must "upgrade" their game.

Chapter 5

Research Design

To explain narrative is to grasp this entanglement, this fleeting structure of interlaced actions.

Paul Ricoeur. "What is a Text? Explanation and Understanding." Hermeneutics and the Human Sciences. (1981)

In this study, I utilize what Creswell (2007)¹ refers to as a phenomenological approach, an approach that "describes the meaning for several individuals of their ***lived experiences*** of a concept or phenomenon" (p. 57; emphasis in original). On one level, this design is a response to two broad findings in the research literature on New Majority students. One, the "subjectivity of students" and the ways in which "they value, understand, and negotiate their open and broad access college contexts" are "severely understudied" (Deil-Amen, 2011). Two, assessing New Majority students' educational opportunities and attainment "depends upon first understanding their constructs of college more broadly—their imagined image of and responses to college, college professors, and college pedagogy" (Cox, 2009, p. 169). The growing body of research on the educational progress of New Majority students calls for studies of the ways that this group of students produces and experiences the worlds they find at college, studies that take as a unit of analysis the sociocultural practices of multiple individuals in contexts that scaffold those practices.

My research design is also guided by my understanding of what I am studying. Studies of the progress of students through the college pipeline focus on what is inside students' heads or in their environments or on interactions between what is inside students' heads and what is in their environments.² This study focuses instead on practice, a pairing of individual and context, an embodied relationship between them. Practice so conceived is

¹ In broad strokes, I draw on Van Manen's (1990) notion of human science research and focus on individual's orientation to lived experience rather than things, events, and behavior in an effort to arrive at a thoughtful, reflective interpretation of the educational attainment of individuals.

² Environments are filled with what Gibson (1977, 1979) called affordances, what an individual can perceive as possible to do with object and features in the environment; individuals have the capacity to recognize affordances and transform them into action. Activity is a function of the relationship between individual and environment and not of either affordance or individual's capacity alone.

represented in the relationship between cultural scripts and specific, situated uses of social resources. Practices emerge as individuals with histories and minds and bodies take up shared knowledge and tools with others so as to pursue common endeavors. This involves in part living out an embodied and forgotten history and taking "paths" made available (Bourdieu, 1990, p. 153).³ Yet, while practices tend to reproduce culturally dominant ways of being, they need not be approached as functionalist or determinist. Though practices unfold within established "systems," they are constituted through local and the embodiment of relationships, skills, and perceptions. Along the same lines as Williams, Bourdieu observes that "human practice, human energy, and human intention" cannot be entirely contained by a culturally dominant system practice always includes the potential for emergent cultural production—activity that produces alternative and even oppositional values. With respect to this study, practices—as systems and local uses of tools, knowledge, and skill—are always potentially the means to active and critical participation in contexts.

Because of my interest in the practices that New Majority students use to define and pursue entities in higher education that meet their needs, I turn from frequently used phenomenological methodologies that emphasize access to the intentions of individuals (Creswell, 2007; Moustakas, 1994; Van Manen, 1990). Rather than arriving at the meaning that individuals connect to their experiences, I seek to represent and interpret individuals' representations of what they do. In developing a practice account of successful college-going, I reconstruct inquiry into the consequences for degree attainment of student behavior or institutional or environmental conditions as inquiry into the ways in which individuals and groups take up available social resources from many domains to do what they need to do to get started in college, from choosing to enroll, to studying, thinking

³ Bourdieu suggests that practices appear to be the product of agency, because they are "the basis of schemes of perception and apperception through which they are perceived" and not because they are calculations. For him, practices are an "acquired system of generative schemes"; they are "infinite and strictly limiting" and so transcend the antinomy of determinism and free will. Personal style is possible but never more than a deviation. Practices allow for spontaneity without will.

critically, interacting with faculty and peers, learning content and skills, seeking help, and developing an educational plan.

In order to study practices so conceived, I designed interview protocols and participant observations and selected documents to represent human activity in texts (Ricoeur, 1981)⁴. Interview protocols were designed to elicit individuals' interpretations of their routine engagement with their environment, not their intentions or their environment. Transcripts, notes, and documents served as scripts that include both received patterns and also innovations that bring experience into language, interrupting lived experience only long enough to signify it so that it can be resaid from the stance of a reader. In the end, I aimed at a properly hermeneutical phenomenology that interprets textual representations of some aspects of lived experience in their contexts as a medium in which a subject—an individual or group who pursues an object—can appear (Engeström, 1986; Ricoeur, 1981). My analysis presumes that "to bring [experience] to language is not to change it into something else, but, in articulating and developing it, to make it become itself" (Ricoeur, 1981, p. 115).

Selection of Phenomena

Like all research on student progress, this study is bounded by what happens in a pipeline or on a path that sets forth from students' "pre-college experiences" through their "college experiences" to outcomes (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007, p. 11). What I study is informed by more than 50 years of research on student behavior and institutional/social conditions and the interaction between behavior and conditions. The dominant theoretical frameworks—Kuh and associates (2007) mention sociological, organizational, psychological, and cultural perspectives—define and value behavior and

⁴ My choice of method has emerged from my question and conceptual framework. Rather than viewing student success as the output of a production function, I understand it as the product and means of a cultural transformation. By extension, in order to explore factors that contribute to success, I have to allow success itself—the dependent variable of interest—to be established by the group undergoing to the transformation to suggest what the dependent variable is. Williams and Gee have helped me position myself in relationship to my topic and also to guide my thinking about phenomena (and so methods of data collection) and methods of interpretation.

conditions differently, but research drawing on these frameworks has come to a consensus set of "student behaviors" and "institutional conditions" that are causally related to students sticking around.⁵ A subset of these "behaviors" and "conditions" has been found to be positively related the engagement/involvement/integration and so the persistence of community college students.

In this study, I narrow my focus to the first part of the second step of the path—the entry into college. I collected and analyzed interview transcripts, images of campuses and classrooms, public documents, and observation notes as representations of the tools, knowledge, and skills that a sample of successful New Majority students take up on this step on the pathway through college. Drawing on the research on the progress of community college students,⁶ I gathered data concerning student practices related to a set of student behaviors (passing milestones, studying, interacting with faculty and other staff) and

⁵ While I wonder about whether New Majority students persist when their behavior given conditions results in engagement/involvement/integration in college academic and social communities, I am happy to start from the behaviors and conditions that have been found to be associated with persistence, and so a set of behaviors ("study habits," "peer involvement," "interaction with faculty," "time on task," "motivation," and "others") and institutional conditions ("first-year experience," "academic support," "campus environment," "peer support," "teaching and learning approaches," and "others") serve to bound the experiences in which I am interested. I do approach these phenomena critically. Models developed around these factors accept the assumption that all students adopt the goal defined by a social institution designed, in part, to exclude some of those students (Cox, 2009; Labaree, 1997). Cox (2009) notes that "the idealized images of college and college students inherited from the past have limited our ability to reimagine what college can or should accomplish" (p. 9). If they are engaged in goal-oriented action, New Majority students have tenuous and contradictory goals (Deil-Amen, 2011; Rosenbaum et al., 2006). If they are engaged in object-oriented activity, New Majority students may, in fact, not be pursuing bachelor's degrees. I presume that how these students "experience and find value in a college experience that involves commuting to campus and incorporating that experience into their work and family life" is little understood (Deil-Amen, 2011).

⁶ There is general agreement that New Majority students who engage in behaviors consistent with passing milestones—completing specific courses or sequences of courses or levels of education measured—are more likely to persist in the pipeline (Bahr, 2013a; Calcagno, Crosta, Bailey, & Jenkins, 2007; Leinbach & Jenkins, 2008; Roksa & Calcagno, 2010). Two more specific behaviors also stand out as important: (a) studying with others, especially in ways that promote consistent communicative interactions with "similar" students (Attinasi, 1989; Rendón, 1994; Terenzini et al., 1994) and (b) interacting with faculty or other college staff in ways that lead to information and resources (Bensimon & Dowd, 2009; Rosenbaum, Deil-Amen, & Person, 2006). Conditions that have been found to matter include (a) classroom experiences provide students with access to help from teachers and other students (Scott-Clayton, 2011; Tinto, 1997) (b) the presence of institutional agents who facilitate "a subjective sense of belonging" and empower students to overcome fear and get questions answered (E. A. Barnett, 2010; Cole, 2007; Cox, 2009b; Hagedorn, 2004; Karp, 2011, p. 2011; Rendón, 1994; Torres, 2006), (c) educational experiences that integrate academic and career goals (Deil-Amen & DeLuca, 2010), and (d) institutional opportunities to explore educational pathways without judgment (Attinasi, 1989; Collatos et al., 2004; Saunders & Serna, 2004; Zell, 2010).

institutional features (classroom activities, institutional agents, educational plans) (see Phase 2 Protocol in Appendix A).

Consistent with hermeneutical phenomenology, my interpretation did not focus on whether certain individual behaviors or organizational conditions matter but instead at representing the "socially developed and patterned ways of using technology and knowledge to accomplish tasks" that mediate the object-oriented activity of students at their colleges and then thinking in accordance with those representations so as to explain the practices that contribute to students successfully starting college. Following Ricoeur (1981), I sought to "withdraw from the objectifications and explanations of historical science and sociology to the artistic, historical and lingual experience which precedes and supports those objectifications and explanations" (p. 119).

Site, Population, and Sample

New Majority students are enrolled at a bewildering array of two-year and for-profit colleges and universities. To focus my study, I drew a purposeful sample. Data were collected from first-year programs at four two-year colleges that participated in a larger study of successful programs at Minority-Serving Institutions (MSIs)—the MSI Models of Success Study (2011-2013). Through a competitive process, the MSI Models Study identified in a pool of over 80 colleges and universities, 12 institutions—three HBCUs, three Tribal Colleges, three Asian American and Native American Pacific Islander-Serving institutions, and three Hispanic-Serving Institutions—with programs that make significant contributions to student persistence and learning. Four of these 12 institutions—Chief Dull Knife College, El Paso Community College, North Seattle Community College, and San Diego City College—are public, two-year institutions by accreditation and historical institutional mission. At these four colleges, the MSI Models Study analyzed a first-year program (see Table 4.1).

Table 4.1

Focal Programs

Program	Population of Students	Select Program Outcomes
CDKC Hybrid Remedial Math Emporium (2008-2013)	- Students who place into remedial math (between three-quarters and all of incoming students) - Less than 15 percent White; 0 percent college-ready in math	- Increased tenacity in developmental math classes - Increased completion of remedial math units
NSCC WDC Nursing Cohort Program (2012-2013)	- Incumbent healthcare workers who are interested in a nursing degree but have not completed the prerequisites for an associate's degree in nursing in a cohort program 39 percent White; 50 percent first-generation; 100 percent working	- Near universal retention - Comparatively higher GPAs
EPCC College Readiness Initiative (2006-2013)	- First-year students from a service area in which historically less than 10 percent of high school graduates are prepared for college-level math classes 8 percent White; 7 percent college ready in math; 25 percent of citizens in service area have any college education (in 2008)	- Decreased enrollment in lower levels of developmental classes and increased placement in higher levels of developmental classes - Improved math and English placement scores - Increases in completion rates in development math classes and gateway math classes
SDCC First Year Experience Program (2010-2013)	- First-time students who meet a threshold of financial and academic need 27 percent white; 33 percent first-generation students; 20 percent college ready in math	- Increased fall-to-spring and fall-to-fall persistence - More positive view of student support services

Note. Details drawn from public documents including grant proposals and institutional reports.

Chief Dull Knife College Hybrid Remedial Math Emporium.

Remedial math education plays a central role at CDKC. Of the just under 550 students who attended CDKC in 2011-2012, over 85 percent were Native American and over 75 percent were placed in remedial math classes based on the Test for Adult Basic Education (TABE). Two of the college's 13 full-time faculty members were math instructors. Historically, remedial math at CDKC has played the role it plays at many campuses. Placement score in hand, students enroll in the appropriate three-credit remedial math course—Basic Mathematics, Introductory Algebra, or Intermediate Algebra. Student outcomes mirror those at other institutions early in this century. In 2002, fewer than one-third of the students who placed into remedial education went on to complete any of CDKC

lecture-based remedial math class. Less than one-tenth of students who started in remedial math completed a degree or certificate. Many of those who passed remedial math classes could not use the math that they learned in college-level STEM courses (Madsen, Hodgson, & Ward, 2006).

In 2004, the college began to transform the program. First, it adopted a common, computer-based math learning system that supports a mastery approach to advancement in remedial math classes—students advance from one math topic to the next only after they can answer 80 percent of the questions on a computer-based assessment correctly. At the same time, the lecture-based courses became three-credit self-paced courses. In 2005, the courses were reorganized as self-paced topical "seminars" that students completed by "sections." In 2008, students began to sign up for one-credit or two-credit courses offered in a centrally located math emporium with the option to complete additional remedial math credits during that semester for no extra charge. In the emporium, the learning system serves as both textbook and practice space. When students log in on campus or at home, online or offline, they encounter a table of contents that tracks their progress. They can see what chapters, lessons, and assessments that they have completed as well as what comes next. As they read the textbook, they are able to toggle between descriptions of mathematical concepts and processes and practice problems. As they move through material, they are able to "jump" back and forth among topics and to "certify" competence by correctly solving at least 80 percent of problems on a criterion-referenced assessment. Practicing in the system triggers feedback on solutions that track right and wrong answers and also provide hints about likely missteps. For more detailed feedback, students can confer with the computerized "tutor" whenever and wherever they practice. This system turns remedial math study into an ongoing opportunity to solve new kinds of problems as fast as students certify mastery of the concepts that underlie new problems.

The initial shift to a self-paced three-credit courses resulted in completion rates that jumped from less than one-third to more than one-half. In fall 2005, 85 percent of students

who enrolled in the Math Seminar completed at least one section. More than 70 percent viewed classes and faculty positively; more than one-half reported feeling confident in approaching instructors and talking about math. Institutional data indicates that since the emporium was instituted in 2008, more students who start the remedial math sequence remain "active" to the end of the term. More recent progress data show a steady increase in the average number of "certifications"—proof that they have mastered at least part of the remedial math curriculum—that students earn. In a 2012 conference presentation, the lead math instructor observed that while many students still struggle with math, the college has seen increased enrollment in College Algebra and Pre-Calculus despite flat overall enrollment in the college.

North Seattle Community College Workforce Development Council Nursing Cohort Program.

One of a number of cohort programs in the Seattle metro area, the Workforce Development Council (WDC) Nursing Cohort Program recruited in 2012 a cohort of 32 current entry-level healthcare employees to a program that packages all of the prerequisites for an associate's degree in nursing with "wrap around" academic support. The program is a partnership between the College and the (WDC) of King County that is funded by U.S. Department of Health and Human Services Healthcare for All Nursing Careers Program. The cohort is established through a competitive process: industries are chosen based on their regional contributions; employers within industries participate based on their willingness to support their employees through the program; and highly-motivated students are selected based on employer recommendations and an interview.

The 32 students in the WDC Nursing Cohort at NSCC are more diverse than the NSCC student body; one-half are first-generation students. The program pays students' expenses and provides them with "navigators" who guide them through the process of enrolling in and completing courses and mediate with their employers to ensure that work schedules allow them to attend classes during the week as well as review sessions on

Saturdays. In exchange, students agree to complete all courses in the sequence with a grade of 2.8 or better as a member of the cohort. Employers meet with program administrators monthly to track student progress and work out accommodations—from adjusting schedules to reducing hours and subsidizing worker benefits—so that their employees can be successful full-time students. The model is working. In the spring of 2013, 91 percent of the cohort successfully completed the first year. In summer 2013, over 90 percent of the cohort passed the Health Education Systems Inc. (HESI) nursing school entrance exam.

El Paso Community College College Readiness Initiative.

The College Readiness Initiative (CRI) is a suite of programs that constitute a direct response to a regional policy. Charged with increasing the number of high school graduates who could meet the Texas Success Initiative standards upon matriculating to a college or university, the College Readiness Implementation Committee—co-chaired by EPCC and University of Texas El Paso leaders—studied placement data, reviewed published literature, and conducted focus groups. The Committee realized that at EPCC, like many other colleges, most students started college with little understanding of academic expectations or program costs and benefits. Students often walked into placement tests that would determine how long college would take without any preparation and, then, placement in hand proceed toward a major. Immediate improvements to levels of student readiness were possible, they hypothesized, if the college could help the students who arrived at the doors—both those still in high school and those arriving at the college with a high school diploma or GED—understand what it means to matriculate and also what resources they can use improve their odds of success.

This hypothesis led to the development of a six-step matriculation process that is at the heart of the CRI. The process begins with an orientation that serves as a sophisticated triage through which staff in the Pretesting, Retesting Educational Preparation (PREP) Program help students determine how ready they are for college, academically and

culturally, and in turn what they need to do to meet their goals. In this first step, students—whether they are adults coming to retool or tenth-graders considering their educational options—learn how college placement tests work, what placement tests cover, how placement test scores are used, and what they can do to prepare. They also learn about the degree programs and classes and paths to careers and further education as they take the next two steps in the process, filling out the joint EPCC/UTEP application and taking placement tests for the first time, often at their high school. These three steps are followed by a fourth step, an appointment with a PREP counselor who helps students make sense of their scores.

Post-placement counseling leads many students to make use of PREP "interventions"—the fifth step in the protocol—to refresh the math, reading, and writing skills assessed by the placement test and expected in college-level courses. In PREP computer labs, students have access to a computer-based learning system that provides detailed feedback on what students need to learn in order to be college-ready at EPCC. As they use the labs, they work with tutors who use data from the learning system to track and, when necessary, intervene with respect to the progress of each preparing student and help each student determine when it is time for the final step in the protocol: retesting that results in an accurate placement.

A comparison of the matriculation of EPCC students in 2003 and 2008 suggests that the CRI is changing how students begin their college education. While many EPCC students still began college in some remedial courses in 2008, fewer needed remediation than did when the program began and those who needed remediation spent less time in remedial classes.

San Diego City College First-Year Experience Program.

In 2004, San Diego City College received federal funding to develop student learning communities. The college used this program to build a successful first-year experience for students who test into remedial education. Leveraging what it learned about improving the

experience of entering students through learning communities, the college acquired in 2010 a second Title V grant to develop a suite of first-year services—a comprehensive orientation, placement assessments, advising, tutoring, and counseling—for all first-time students with academic and financial needs. Students who qualify for the program enter the college the same way all SDCC students do: after applying for admission and often financial aid, they complete English and Math Placement, attend a mandatory New Student Orientation & First Semester Course Planning, register for courses, and start college. As part of the FYE, however, students receive early priority class registration in their first year in exchange for signing a Mutual Responsibilities Contract that commits them to meeting with their peer mentor and counselor, drafting a personal education plan, participating in a series of campus events and service learning, and enrolling in 12 credits each semester in a "prescribed" schedule that includes the appropriate sequence of courses in English and Math and also Personal Growth classes. Most of the English and Math classes that FYE students take are supported by the campus Supplemental Instruction program. Initial assessments suggest that FYE students persist from fall to spring and from fall to fall at higher rates than they non-FYE peers and appear to be more engaged with the campus and their education.

These four programs were selected from a study that included over 20 programs because they share three broad characteristics. First, these programs are housed inside New Majority institutions (for a comparison of these institutions to other sectors on select characteristics see Appendix A).⁷ The four colleges are non-selective; none reported SAT scores or "percent admitted" to IPEDS in 2010. Like many MSIs, they offer cost-effective and accessible education close to the residences of students (Santiago, 2006). They are racially and ethnically diverse, with White enrollments in 2010 as much as 40 points lower

⁷ The concept of New Majority institution is metaphorical rather than analytical. The statistics gathered in Appendix A suggest that students at four-year public and private not-for-profit institutions attend quantitatively different institutions than do New Majority students. Of course, the four colleges in this study have more in common with similar colleges in their states, or in the case of CDKC, the American Indian Higher Education Consortium than in an abstract institutional sector.

than that at the average New Majority institution. A significant proportion of students at these four colleges seem to have a tentative commitment to getting through the pipeline. While these programs serve degree-seeking students, the colleges themselves tend to enroll student bodies in which relatively few students are full-time, first-time degree-seeking students and, with one exception, are unusually likely to be non-degree seeking students.

Second, these programs are designed with New Majority students in mind and support them as they begin their college education. Each program recruits and admits students who, for various reasons, are statistically unlikely to succeed in a traditional college setting. While the institutions generally report persistence and graduation rates that are typical for their sector, the focal programs report somewhat different outcomes (see Table 4.1).

Finally, there is reason to believe that students, staff, and faculty involved in these programs are accustomed to reflecting critically on the college pipeline. These four programs exist at MSIs, institutions that intentionally or unintentionally serve students whose earlier educational experiences have been shaped by such life experiences as immigration (Flores & Morfin, 2008; Park & Teranishi, 2008), racism (Closson & Henry, 2008), and life on reservations (Guillory & Ward, 2008). In educating their students, MSIs provide access to college education regardless of students' preparation, status, or circumstance (Baez, Gasman, & Turner, 2008; Beach, Dawkins, Rozman, & Grant, 2008; Palmer & Gasman, 2008). They address the barriers that specific communities of color face as they seek to participate in American social institutions as equals, often encouraging students to consider racial and cultural identity a central dynamic in education (Van Camp, Barden, Ren Sloan, & Clarke, 2009). Moreover, MSIs tend to be relationship-centered institutions focused on validating the educational aspirations and needs of students they serve (Minor, 2004; Phillips, 2003; Rendón, 1999; Santiago, 2006). Some MSIs go so far as to challenge openly conventional educational practices that exclude the students they are designed to serve. Drawn from MSIs, participants at my sites more often than not

understood postsecondary education as a process through which students draw on their own lives, values, and experiences and on their college experiences to determine what uses to make of college. Moreover, at each site, staff and faculty are engaged in formally and informally assessing the ways in which their programs contribute to beginning students' progress as college students.

The selection of documents, sites for observations, and interview participants was also purposeful. The MSI Models of Success Study collected public documents that represented each program and also brought together key faculty and staff from each participating program in July 2011, July 2012, and November 2013 to introduce their institution and program to representatives of funding agencies, researchers, and staff and faculty from other MSIs. These documents and presentations sketch out the institutional purpose of the programs. Study participants were recruited through a modified snowball sampling technique. Staff and faculty within each participating program identified students, staff, faculty, and administrators who were involved programs of study—in these four programs 94 individual were interviewed. At NSCC and SDCC, 14 participants were re-interviewed to create a sub-sample of students who had successfully completed their first-year and staff who had reviewed outcomes assessments of programs (for details on interview participants see Appendix B).

Data Collection: Description of Data Sources and Methods Used

I build representations of the practices of students and their colleges primarily from public documents, interviews, and participant observations. I have added to these representations of "the meaning . . . of [the] *lived experiences* of a concept or phenomenon" three other sources of data: statistics about each institution and program (from IPEDS and published institutional research), stakeholder presentations and reports that argue for different and sometimes competing interpretations of program purposes and

impacts, and memos and emails containing researcher reflections and participant responses to researcher reflections. All of these data have been digitized for analysis.

Public documents.

At the beginning of study, project staff developed a summary of the pipeline characteristics for each campus based on data from two National Center for Educational Statics sources, IPEDS and NPSAS. This campus overview was supplemented in Fall 2012 by a review of institutional websites, the collection of catalogues and fact books, and a search of electronic databases (Education Research Complete and ERIC) for journal and magazine articles concerning each institution. Subsequently, I incorporated program materials such as institutional mission statements; program policies, reports, and procedures; and program materials. Presentations made by program staff and faculty members were also collected.

The result is a database that contains official positions about student progress (mission statements, fact books, and press releases) as well as formal and informal interpretations of program features and impacts (convening presentations, correspondence). These insider representations are linked to those developed by outsiders (retention and graduation rates, research studies, magazine articles). Together, these documents constitute a formal narrative of student and institutional practices alongside a range of interpretations regarding the impact of those practices. Representations and interpretations of student and institutional practices were added to an Nvivo database.

Participant observations.

Researchers arrived for site visits one day before interviewing began and toured the campus and its surrounding community with camera and notebook in hand. These initial observation notes, in concert with public documents, served to establish an initial view of the setting in which each focal program operated. During the site visits, researchers walked through campuses with staff and students, listening for their interpretation of program spaces and activities. Between interviews, researchers spent time observing program areas without recording or participating in activities. They also talked informally with program

staff about both the activity in the sites and also the artifacts that, based on observations, seemed central to routine activities. At sites where we re-interviewed participants, researchers spent 60-minute blocks of time observing key program spaces such as tutoring centers, counseling offices, study sessions, classrooms. During these observations, we were able to observe interactions among staff and between staff and students. In informal debriefings after these observations, we asked staff and students a standard set of questions: Why do you go there? What do you do in there? What artifacts do you use for what purposes? What practices support doing what you need to do in there? Photographs, memos, and notes generated from these observations became part of the database.

Interviews.

In this study public documents present and interpret a formal narrative of student and institutional practice, whereas interviews represent social interactions of a different sort. Interviews were structured as opportunities for stakeholders to construct narratives about practices that contribute to getting students started in college, and we positioned ourselves as collaborators, appreciative outsiders who raised questions about the factors that "matter." As such, the interview transcripts do not serve as proxies for action; researchers did not attempt to use interviews to triangulate the artifacts, events, and behaviors that impact the progress of college students. Instead, the goal in interviews was narrative—coherent of accounts of plots, characters, and artifacts—about student and institutional practices drawn from our participants' repertoires.

This overarching approach to interviewing led to a consistent procedure. Interviews took place on campus in spaces adjacent to the spaces in which the programs were located. Participants either stopped in on their own or "walked over" with a trusted staff or faculty member. To the extent possible, interviews were framed as another instance of formative program assessment, a process that is routine for faculty, staff, and students in the programs in the study. Each interview was introduced with an invitation to participants to contribute to a "national study of Minority-Serving Institutions" that was aimed to

understanding "what really matters for student success."⁸ Transcripts consistently show investigators inviting participants to work with them to reflect on and interpret practices that contribute to students identifying and pursuing their educational goals. In their conversations with us, participants frequently pointed to places where the practices that they were narrating took place.

This study draws on 80 interviews with 94 participants at the four campuses. 14 interviews were second interviews with the same participant (see Appendix B for an overview of the sample). All interviews were semi-structured (Glesne, 1999) and occurred during multi-day site visits. Interview protocols (see Appendix C) served as points of departure rather than scripts. Questions elicited narratives about artifacts, behaviors, and events—including definitions of student progress, barriers to progress, and significant program features—through participants' stories about how they arrived at the program, what challenges they believed first-year students face in starting a college education, and what ways they participated in the program being studied. Participants who were re-interviewed elaborated further on the practices of first-year college students and the ways in which the program shaped the practices of first-year students.

Following an active interviewing method (Holstein and Gubrium, 2003), we invited our interview participants to play a role and we adopted a role ourselves.⁹ Over the interviews, we sought evolving conversations with participants, inviting them to help us—outsiders—understand an initiative in which they played a role. Lines of questioning developed to encourage study participants and researchers alike to represent—both to recall and narrate but also to interpret—social action (Bogdan & Biklen, 2007; Kvale, 1996; Yin, 2009). We frequently invited participants to make sense of a story and observation or to

⁸ It goes without saying that at the beginning of each interview, participants (a) were informed that the interviews would be recorded and transcribed and last between 30 and 60 minutes and (b) had an opportunity to sign an informed consent form (see Appendix D).

⁹ It was from these roles that we narrated and interpreted student and institutional practices—the substantive whats on which the interviews focused—and also qualified and developed the standpoints from which we told and made sense of those practices.

connect a story or observation with a comment or a phrase that had come up earlier in the interview. Throughout the process, we developed and shared notes and memos—sometimes with participants—to capture the concepts, categories, and relations between concepts and categories that emerged for us as we interviewed.

Data Reduction and Analysis

The database of texts was treated as a corpus of Discourse. All interviews were transcribed by a professional service, checked for accuracy, and imported into an Nvivo database along with public documents and participant-observation notes and pictures. In Nvivo, all linguistic texts were "autocoded" for program and participant. That is, each text

Figure 4.1

Autocoded transcript

SDCCSF1 What exactly do you want to know from the background? MB What I'm asking about your background, just what you're, where you come from, good or bad, what's your story. SDCCSF1 I'm originally from Santa Barbara. My mother is black and she has two different Indians, like two different Native Indians and some Sicilian. My father is white. I have never met him but for the majority of my life I had a step dad who is also white. I am the second oldest out of four but I have always been the oldest per se because my sister she's not mentally challenged but she's a little slow. So I've always been given the responsibility to take care of everyone. I've been homeless. C LIFE HAPPENS MB You've been homeless? SDCCSF1 Yeah, been homeless. My mom is still homeless with my brothers. They live in Santa Barbara still. They go between place to place. I moved up here because I couldn't handle it anymore. I was getting super depressed, couldn't focus in school. I got to the point of not trying to kill myself but serious thoughts of it or hurting something, someone because it was too much. So I came up to live with my uncle. Me and him don't see eye to eye so my mom kind of knew that it was serious because I don't really like him because he's a very controlling person. I have issues with controlling men because my step dad, who is now my ex step dad, was abusive physically and mentally to my mother. He's a very controlling man. So it kind of just, my whole life I've been a very go-getter type of person. I've always been in charge. I always carried the weight of my whole family, have to take care of everything. C FAMILY NEEDS Go with school I've noticed that it just kind of falls over into it also. Even when I don't feel like doing something I just have like this weird instinct to just keep going, this 2	weird drive that comes out of nowhere even when I mentally or physically don't feel like it. It's just something pulls me to keep going. C FAMILY EXPECTATIONS MB Are you homeless now? SDCCSF1 No, I stay with my uncle. MB Even though you don't see eye to eye. SDCCSF1 Yeah. It's humbled me quite a bit though. It's made me not be so boisterous because as I was growing up I was a very sassy, you're not going to tell me what to do, you're not going to control me, I'm going to do it my way and you're going to listen to me type person. But I mean it's kind of taught me that I became the person that I didn't want to be by doing that. S BECOMING AWARE OF YOUR HABITS So I'm kind of, I'm starting to find that nice little middle ground in between. Last semester was my first semester of getting straight A's, which was extremely exciting because in high school I was never a bad student, I just never was a straight A student. S HAVING SUCCESS I got B's and A's and C's, a couple of D's, but never F's never F's. Now it's my goal. That's what's kind of driving me now is I want straight A's throughout my whole time in college. That's what I want. And I want to be a psychologist but at the moment my main drive is straight A's. S HAVING A GOAL, S BECOMING AWARE OF YOUR GOALS is kind of what's keeping me going. MB Why do you want straight A's? 3
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was first associated with the program, and then sections of the text or whole texts were linked to individuals or groups—participants in interviews, authors of documents, observers. This initial step resulted in a corpus of texts representing a semi-structured dialogue

between researchers and participants. As an added benefit, autocoding documents makes the exchanges between individuals more apparent (see Figure 4.1). As protocols suggest, these dialogues began by exploring what brought participants to the program and what student and institutional needs the program met. From there, the interviews focused on specific student and program activities that contribute to student progress. At SDCC and NSCC, 14 follow-up interviews focused more narrowly on student activities related to student behaviors and institutional conditions that contributed to student progress.

A first round of coding identified blocks of dialogue that focused on student practices, sequences of conventional actions that first-time student took up or were observed to take up in order to progress in college and sequences of activity that study participants—students, staff members, and faculty members—took up to contribute to the progress of students. The process began with interviews of students and then proceeded in the following order: interviews with faculty, interviews with staff, interviews with administrator, public documents, researcher memos. In each document, I coded whole blocks of discourse that cohered around a unit of information, what (Gee, 2011a) calls "stanzas" and (Charmaz, 2006), "incidents." That is, I read for document sections or groups of paragraphs or sentences in which "authors" represent and/or interpret goal-directed actions that make possible successful participation in college (see Figure 4.2). Stanzas/incidents were coded with a mix of *invivo* and process codes to name the central action(s). These codes might be thought of as theoretical codes. I looked for and labeled stanzas based on the view of human practices offered in the previous chapter. That is, I looked for instances of "goal-directed sequence[s] of activities using a particular technology and particular systems of knowledge" (Scribner & Cole, 1981, p. 236). Yet though I looked for activity, the codes themselves name sequences of activity in ways similar to the names that participants used for these activities—where ever possible *invivo* codes were used to name sequences of activities in the participants' own words. In the first round, 1500 blocks of text were sorted into 26 groups—some blocks were entered into more than one group. Initial groupings of

blocks of discourse were reviewed and recoded, resulting in 20 groups that were sorted into 4 categories (see Table 4.2).

Table 4.2

Code Distribution

Grouping	Stanzas Codes (sub-codes)	Number of Participants	Number of References
Activity aimed at progressing in college	Total	74	743
	getting recognized (15)	70	185
	repurposing artifacts (21)	64	161
	repurposing classrooms	39	50
	taking up tools (13)	69	244
	working within traditions (23)	52	103
Activity aimed at designing educational environments	Total	74	418
	designing spaces (19)	64	148
	engaging an affinity group (21)	67	164
	entering portals (14)	35	50
	weaving school together with life (11)	34	56
Activity aimed at establishing agency	Total	67	253
	experimenting (29)	34	60
	finding advocates (10)	3	3
	flows together (5)	23	30
	getting honest (12)	14	22
	having fun (17)	16	19
	struggling (25)	28	40
	wanting more (27)	46	79
Activity aimed at establishing educational purpose	Total	71	232
	getting through class (12)	32	42
	going on (6)	65	153
	moving between worlds (5)	22	32
	seeking competence (3)	5	5

Note. Because some interview participants were interviewed in group settings, 74 of the 94 individuals who were interviewed were tagged as unique participants in the Nvivo database.

In a second round of coding, each grouping of stanzas was analyzed again, this time in an effort to understand the contours of the activity that united the group. In this round, I used process and invivo codes to label aspects of participants' interpretations of the ways in which they took up discrete actions as well as their interpretations of the objects of the activities in which students found themselves involved—I brought no explicit theoretical labels to this level of my analysis. This round of coding resulted in nearly 50 around

which served as a starting point for a third round of coding. In this round the passages related to concepts that surfaced in the second round of coding were analyzed again (and coded primarily with *invivo* and process codes) with a focus on for four theoretical concepts: discrete actions, subject positions that students adopted or were observed to adopt, the goals that students articulated or that were attributed to students, the artifacts (relationships, technologies, and bodies of knowledge) that students described using or were observed to use. This resulted in more than 200 codes. These round three codes were reviewed organized into narratives that related each the actions related to the kinds of activities in which students found themselves involved. These narratives became the starting point for the findings reported in the following chapters.

Figure 2

Sample Stanza/Incident for "Getting Through Class"

Interviewer. Wow. You're describing all of the study practices that most research says this is effective. How did you ... so here's what I'm wondering. How do you come up with all of these strategies? Is it, do you think that the program, the nursing program, the cohort program helped sort of suggested these things, or were you just drawing ideas from your own past? How did you become such effective studiers?

Student. I think kind of survival. We have to pass. There's a 2.8 GPA, which is very low apparently, but to people who work and have family responsibilities, and don't have all of the time to devote to studying, make it leisurely and fun ...

Interviewer. And were not just in high school, right ...

Student. Right. It's kind of hard.

Interviewer. Yes.

Student. So I just feel like you make so much more progress when you are able to interact with another human being as opposed to being on your own really. I mean you might have to read something 10 times to really understand or to remember it correctly. And when you're with somebody else, you can, I mean you can . . . usually what it is, is somebody will be like, no, remember that was just a little bit different.

Interviewer. Right.

Student. Talking to each other has been very helpful. And then making sure that we're all on the same page and doing it together.

Throughout the third round of coding, I paid particular attention to limitations and challenges that participants identified. The aim of this analysis was to develop a basic descriptive assessment of the activity represented in the collection of texts across speakers. The textual focus in this round was on content words, assertions, and narratives. I wrote

occasional memos to describe the contexts of apparently similar incidents. My interest was in considering the ways in which similar incidents fit into different and similar systems of activity and were triggered by different and similar lines of questioning. Given the conceptual framework of the study, I paid particular attention to words and assertions associated with norms related to college going as a tradition, colleges as institutions, and the acquisition of practices that make possible successful participation in the first year of college.¹⁰

As conceptual categories emerged throughout the process, I returned to texts in the corpus to check, elaborate, and qualify those categories and relations among them. The memos written in this process described the ways in which I came to understand the practices that are linked to getting New Majority students started successfully on their path to a college education. As analysis unfolded, I continued to write memos, increasingly exploring what I understand students, staff, and faculty believe to be successful student activities and also how these stakeholders view College traditions, student adaptations, and student innovations. These memos pointed to nascent Discourses that New Majority students in the sample appear to seek to acquire.

Validity.

Drawing on Gee's (2011c) approach to discourse analysis, I assessed the validity of my analysis in four ways. At a basic level, I ensured that my coding included the entire database and could account for linguistic detail. In each round of coding, I used Nvivo to look at the distribution of participants based on role and campus across codes at each level (coverage). This served as a check on whether my codes named actions and goals that

¹⁰ I have loosely adapted three of the tools Gee uses in analyzing discourse, the Discourse (big "D") tool, the figured worlds tool, and the Conversations (big "C") tool. Respectively, I coded for representations of using language, acting, interacting, believing, valuing, dressing, and using tools to enact socially recognizable identities and practices; typical stories—simplified models of reality that indicate conventional participants, activities, ways of interacting and using language, people, objects, environments, institutions, and values—that are accepted as true by participants or that participants invited others to accept as true; allusions to relevant public (institutional or social) debates over issues and themes.

appeared in multiple situations. As Table 4.2 above indicates, the codes tend to identify similar kinds of action across the first year programs. During the first two rounds of coding, I used Nvivo to search for nouns that participants used to name concepts and verbs that they used to name actions so as to notice the extent to which these phrases appeared in other interviews or in documents (linguistic detail). Moreover, because my approach to round 1 coding identified stanzas of activity, I was able to compare the ways in which different participants narrated similar activities and to write memos about similar character types and plot structures. These memos played a central role in refining codes in the third round of analysis. Wherever possible, I used *invivo* codes to name first- and second-level codes.

In addition to ensuring that my analytical categories were accurate and fit the data, I checked them for precision in two ways. First, I also I developed memos that examined the extent to which discrete actions, subject positions, the goals, and the artifacts that were identified in rounds 2 and 3 across participants and campuses were compatible with one another (convergence). I expected there to be variation in participants' representations of why they did what they did and what the outcomes of that action was, and there was. These memos enabled me to flag a set of categories for which this variation could be attributed to differences in campus context or program focus. In this way, I could focus my findings focus around codes such as "making classes work for me" or "asking questions" that appear to explain activity across settings and individuals. Second, the study design invited participants to assess researches emerging understanding of student practices (agreement) in two ways. Interviews were designed to ask participants to respond to concepts and activity described by other participants at their campus and at other campuses. At the second and third project convenings, campus contacts formally and informally responded to initial interpretation and referred researchers to additional documents that provided an immediate context for our interpretations. In my analysis, I marked and returned to interview passages

and documents that represented "native speakers" making sense of the interpretations that I was developing.

I believe that these four strategies—attention to coverage, linguistic detail, convergence, and agreement—offer an honest representation of the activity related to starting college for the students in the study.

Researcher as Instrument

Both the research question and the nature of the data in this exploratory study required me to take an etic position. That is, I worked from a broad, explicit framework and used a systematic approach to gathering and analyzing data in order to generate a representation the activity of others. These representations are, to the eye of an observer, partial and contradictory. They gain coherence through interpretation. The method offers a defensible selection of blocks of discourse, but the student practices and their meanings emerge from my engagement with what individuals and institutions offered me.

I take up those offerings as common property, what Williams might call the material form of human sociability. The college pathway that takes shape in the findings of this study were co-constructed by student and family, faculty and institution, and researchers. This co-construction was almost always explicitly interested, political.¹¹ For example, participants—including the researchers—spoke openly about their beliefs that students were able to achieve and should be supported in achieving their aspirations and that programs can contribute to students' progress; they were critical of barriers to access. These positions on student activity, as I assumed, often contained contradictions. For instance, students at all four sites talked about working math problems and completing math classes as an instrumental task to be gotten out of the way as quickly and at the same time explained

¹¹ The agenda underlying Williams's theory and research is political. He understands the development of knowledge that has the best chance of getting things right as the outcome of "mutual determination" or "common culture." He assumes that in a "complex" society, no two people will "possess cultural property' in the same way" (Williams, 1989a, p. 37).

that they wanted to be recognized as college students who could use math to solve problems. Again and again, this contradiction emerged between the college student identity students wished to enact and this tool—math problems—that they used to achieve the goal of passing as a first-year college student. I understood contradictions like this not as disingenuousness but as structural tensions within the student practices that my participants and I were representing. It is perhaps worth noting that such contradictions appear to be more apparent to a reader of transcripts and documents than they are to participants who are living with them, though many faculty and staff and more than a few students described specific contradictions in detailed ways.

As a researcher, I bring to these data the bounded view of a teacher who was a traditional student. I matriculated to a four-year college at age 18 as a full-time student in a very different social context, and my view of the first year of college is that of a traditional college student and the teacher of new majority students. Now more than three decades away from my own first year of college, I understand the activity of first-year college student more from that of a faculty and staff member than that of a student. I cannot pretend to understand the practices of New Majority students from the inside.

That said, I come to this analysis with broad experience with New Majority students. I taught college English from 1990 to 2009, primarily at open enrollment colleges, and during that time, as a tutor, student mentor, and adviser to student groups, I interacted one-on-one with hundreds of first-year students. As importantly, as a writing center director and the division lead at a community college, I have designed and assessed and revamped programs that support first-year college students. Like the participants in the study, I believe in the efficacy of educational programs, and I have watched students who, on their own admission, shouldn't really be in college pass.

Perhaps more importantly, I approach this project with a commitment of collaborating with students to make sense of their progress. In a 2003 application for a faculty job, I explained my understanding of the responsibilities of faculty this way:

In their 1998 book *BLUR*, Stan Davis and Christopher Meyer argue that U.S. culture in the coming century will be defined by speed, connectivity, and the growth of intangible value. They imagine a fluid situation in which actors must be able to deal in a mutual exchange. I am unwilling to be as optimistic about the Blur as Davis and Meyer are; I believe that we need to pay more heed to the health of community and local history and traditions. But, I suspect that they are right. Learning in the 21st century involves entering a fast moving network and noticing what is valued in the part of the network one has entered. Given the flow of information and the diversity of values, I understand learning as what Dennis Lynch, Diana George, and Marilyn Cooper have named "confrontational cooperation, a process in which people struggle over interpretations together, deliberate on the nature of the issues that face them, and articulate and rearticulate their positions in history, culture, and circumstance." We learn when we agree to risk what we already know and encounter new situations and use those encounters to rethink and restate what we know. This process is profoundly collaborative. We learn in the presence of others, drawing on their knowledge and considering their response to our positions as we rethink those position. Learning is also deeply ethical. A student may begin learning to improve her own situation (better understand and appreciate phenomena or get a better job), but she will quickly discover that improving her own situation in the long-term depends on her ability to contribute her knowledge, skill, and effort to the improvement of the human community in which she lives.

Like Williams, I hold out for the possibility of engaging in the co-construction of meaning through culture through meaningful acts of choice. In interviews and in the process of interpretation, my aim was at the "common determination of meanings by all the people, acting sometimes as individuals, sometimes in groups, in a process which has no particular

end, and which can never be supposed at any time to have finally realized itself, to have become complete. In this common process, the only absolute is "keeping of the channels and institutions of communication clear, so that all may contribute, and be helped to contribute" in a "free, contributive and common *process* of participation in the creation of meanings and values" (Williams, 1989, pp. 37-38).

This exploration was designed to promote a "free, contributive and common *process* of participation in the creation of meanings and values." Participants in interviews named concepts for researchers, but researchers and their questions contributed to the naming process. The process of interpretation here does not aim to arrive at true and certain knowledge about the pathways of successful New Majority students. Rather, I represent the educational activities of those students and the staff and faculty and administrators who work with them, inching toward some conceptual clarity about the activity that New Majority students pursue beyond the activity they are supposed to pursue in college. This aim is expressed in my choice to look at institutions with highly supportive programs for underrepresented New Majority students, my conceptual framework that presumes humans engage in expansive and object-oriented learning as a matter of course, my active role in relatively open interviews, and a coding scheme that aims at deriving themes from representations of activity rather than pipeline data.

Ethical Considerations

Mindful of Brown's (2003) reflections on the "emics and etics of researching Black colleges," I aim to describe the activity of students without prejudging it based on broadly shared notions of student success. In every setting, participants were given an opportunity to define student success and the academic pathway, and those local definitions bounded the study. Data collection and analysis was driven by questions about activity within specific contexts. In analysis, I consistently began with in vivo codes, under the assumption that participants can name the activities that matter. Participants were not asked to judge the

adequacy of their experience in relation to that at PWIs, and analysis also avoided that comparison. My obligation in this exploratory study was to represent student, faculty, and institutional goals, activities, and outcomes.

(Methodological) Limitations of the Study Design

The study is exploratory in nature, aimed at describing the college-going activities of a sample of successful first-year New Majority students. While the findings in the study does identify factors relevant to the participants and their colleges, the goal of the study is not to elaborate a model that can be generalized. Instead, it develops a set of narratives and themes that might be explored through other research designs, be considered in the design of supportive services and curriculum and instruction at the institutional level, and be applied and studied at the institutional level.

Chapter 6

Realizing Ends: Activity Aimed at Finding and Shaping Educational Goals

A traditional-aged first-year remedial math student at Chief Dull Knife College (CDKC) described the academic success of an older classmate this way:

I always looked up to her and I was like, "Man, even though she has kids, she has an all right life, and she still wants to do more and still wants to learn." I was like . . . I think a lot of people need to realize that you can go somewhere from here. So many people think you can't. I see so many people start here and then they just never come back, and they think you can't go anywhere from here. But you really can.

During our interview with this student, she portrayed CDKC math classes as a space in which she was working toward her future as a businesswoman. She connected it with building budgets and designing and running a business. Her remedial math classes at CDKC enabled her to "feel pretty good that I've come as far as to not hate [math] and dread it. . . . I always felt like math was for people that were smart or did construction or stuff like that. Now I'm like, 'Businesswomen need to know math, so I guess I need to know math.'" For her, knowing math is doing math, seeing "where I struggle and the formula of what I'm doing."

For this student and other students that we interviewed at CDKC, math class is one of many events that make up a life, not simply an education. These events take place on and off campus, on and off the reservation. An education is something this young woman needs to "finish"—"I've still always been that person that wanted to finish"—as part of her life. She and other students at CDKC are completing college classes on their way "somewhere," their way to becoming nurses on the reservation or to getting off the reservation or to understanding traditional practices for caring for the land more deeply. For

one of her peers, "going back" to college and completing remedial math classes is part of acquiring a new "habit" that leads her away from "struggling monthly, monthly" in a way of life "I can't be doing." For this student, a math class—she made no distinctions between remedial and college-level math classes—is part of her pathway to a bachelor's degree and a different life. For others, remedial math classes are on their paths to vocational certificates or simply to "confidence" and "hope."

Like the remedial math students at CDKC, the students we met in the First Year Experience Program (FYE) at San Diego City College (SDCC) and the Nursing Cohort at North Seattle Community College (NSCC) and the College Readiness Initiative at El Paso Community College (EPCC) start college with ends in mind that have more to do with building a life plan than, a long-time CDKC administrator mused, becoming "math majors." In most cases, students' ends are practical: they aim at the completion of a sequence of courses, a degree, successful transfer, recognition as a nurse, the skills of med tech or an engineer. Yet as they describe the practical goals that they came to college to attain, these students begin to elaborate ways in which their goals are connected to the expectations or aspirations that they have for their lives. They describe engaging in what I have come to call realizing ends. Indeed, these individuals are recognizable as college students in part because they routinely engage in realizing—defining and clarifying along with pursuing—purposes that include a college education.

In this chapter, I begin to assemble my interpretation of the activity of first-year New Majority students by looking at what a sample of these students are doing in order to make use of the content and tools, relationships and situations that they encounter in their first year of college. The MSI Models of Success database is a rich source of narrative reactions to a basic question, Why did you—a successful New Majority student—come to college? Together, these narratives yield a broad outline of the needs that students link with being a college student as well as the ways in which students articulate and refine those needs and the ways in which institutional activities limit and pressure what students do to

determine what uses they can make of their college education. Below, I take up three broad approaches to using college that emerge in these data. For these successful New Majority students, the central end is staying in college, and to that end they turn classes into a means of passing for college students. Yet while there is little question that the focus is on passing classes, these students work toward realizing two other shared ends. They frequently aim at (1) learning knowledge and skills that they serve to carry them a next step and/or (2) participating in some community of practice inside or outside school so as to enjoy the benefits and shoulder the responsibilities of participation without leaving their home community.

"Getting Through Class"

Realizing ends begins very strategically with a set of what students, staff and faculty alike labeled required "steps." Across the campuses in the study, students start college with a belief that, in a CDKC administrator's words, "I need to get an education because that's how I'll improve my life and the life of my children." For an EPCC student, college is a "gateway" to a life that will involve less "struggling" than the lives of his parents. Though in most cases a goal outside college brings these students to college, participation in college is, at least initially, passing classes in a program. The "first step" into college, a CDKC math faculty asserted, is calculated based on "survival" and not much more. When "you start," staff and faculty at NSCC explained, you have to "figure out your strategies," so students focus instrumentally on finding a toehold and determining whether and how they can manage to enter a program that will help them improve their lives.

"Surviving."

The script for the activity that gets students into "that program" is written into New Majority institutions. A veteran senior leader at SDCC explained that the "focus" on "steps" is state policy for community colleges. New Majority students in his state need "not just a goal, transfer or career, but an actual program of study by the end of their first year." His

students progress through a system that "can't have these wanderers, this vast accumulation of units going nowhere. You've got to get on track, you've got to stay on track and it's narrow, narrow, narrow." These students are "doing things" so that they can "finish": "the not subtle message is that we can't afford to have you sitting in classes when you're not going anywhere. Staying in a program means doing what we tell you." And, what students are told is to complete requirements for existing programs.

The experience of a nursing student at NSCC illustrates how this script is experienced. Her academic progress began, she explains, when she found out that a nursing program that was designed for incumbent healthcare workers "existed." Upon learning of that "first step, she "thought, "I am all in. I mean this is it. . . . I am going to do whatever it takes from my point to get through it, to get into that program." Asked why this program is "it," she told the story of completing classes that we heard again and again from other students. She had tried to complete the prerequisites for a nursing program once before, and she couldn't get into the classes she needed or struggled to get through them while fulfilling her responsibilities to her family: "I was like this just isn't my time, so I had to sadly push it away." This time, she believes, is her time not because she is ready to learn—she has completed other degrees just not the one that gets her to her end. Rather, this is her time because she is in a program that sequences every required class and offers them when she can take them. She has gotten a hold of a script that maps out steps through class in a way that she can complete given her life. This script is, she told us, helping her survive college.

Across campuses in the study, students survive because, in the words of another NSCC student, they manage to make classes "work for me." Three strategies are used by New Majority students to make classes work. First, they start on a track defined by someone else, and they start with the knowledge and skills, the experiences and relationships that they bring to college. Many of these students, a CDKC administrator observed, have had a "crappy experience" with school. They are often, she went on, adults

who "are afraid of school, have experienced bad things [in academic environments], but they're also ashamed of, embarrassed by the fact that they have to . . . they cannot even jump right into college-level classes." She and a fellow administrator explained—and students across the sample confirmed—that they are not accustomed to being "engaged" in academic settings, in many cases being forced to cover again material they have already mastered one day and material they have never seen before the next. Many of the students we interviewed, even some traditional-aged students with strong high school GPAs, described prior experience with failure in school.

I was struck by the fluency with which CDKC and SDCC students described their histories with math and or that with which working students at NSCC and EPCC rehearsed prior forays into higher education. Their experiences notwithstanding, many of these students described what amounted to an obsession with surviving to the next step. That obsession makes sense to a great extent because they are at programs in New Majority institutions that engage them where they are. "Getting placement right"—a phrase that was used at CDKC and EPCC—is shared across the programs. The College Readiness Initiative at EPCC and the FYE at SDCC engage students in the placement process so that they understand what counts as college readiness in math, reading, and writing and they can use college resources to improve their readiness on their own. CDKC has adopted a placement tool—the Test of Adult Basic Skills—and a common, computer-based curriculum so that students and their counselors and teachers have useful information about where they are starting, what they need to study, and what they already know. Despite being students on the margins of higher education, participants in our study talked frequently about gaining confidence in making it to their next steps and knowing what their next step was.

Because students viewed their initial progress as the completion of a sequence of requirements established by someone else, they shared this approach to moving through each class: break courses down into required elements—"the main topics that the teacher is trying to get across"—and master those elements in order. Students described isolating the

required components of each class so as to master each one at a predetermined level of performance. Progress, all participants agree, is measured in grades. To illustrate, earning grades is contractually part of the NSCC Nursing Cohort. "We can't drop our classes," NSCC nursing students explained in a group interview. "There's a grade point average that we just can't go below." Another NSCC student described getting grades as "survival":

We have to pass. There's a 2.8 GPA, which is very low apparently, but to people who work and have family responsibilities, and don't have all of the time to devote to studying, to make it leisurely and fun . . . It's kind of hard.

While "progress" in her education felt like the result of interaction with her peers and teachers, it was marked by passing. "You have to pass."

The focus on earning "passing" grades is shared across the programs. One CDKC student explained that failing to certify competence in a developmental math module or course meant "taking it again." An SDCC student explained success as a 4.0. Asked why, she explained that getting A's makes her "feel" like "I'm in college." The pursuit of that feeling, she added, is what drove her to talk with faculty about her performance and to "live in the tutoring center." Staff and faculty confirmed the focus on grades. NSCC faculty explained that college for their students at open access institution that is paying for students' tuition and wrap-around support and guaranteeing their admission to nursing school is, perhaps counter-intuitively, "hypercompetitive." These beginning New Majority students are completing prerequisites to impacted academic programs that require "a 3.8 or 3.9 overall just so you can get into nursing school." For these working students with substantial commitments off campus, falling below a 2.8 means falling out of the "program" and competing for those slots with traditional students. At CDKC, passing classes means, to use the phrase of one administrator, taking steps "without burning as many Pell semesters." An SDCC student admitted that getting straight A's made being at a community college "Okay."

An EPCC administrator summed up what it means for her students to survive in their first year: they use scores on placement tests and grades in classes to show "that you meet the requirements of college." The students in the study are bilingual, workers, parents, business owners, degree holders, people who earned A's in high school while living in a car. They are people who have managed to live their lives and get themselves into college and through their first year. They are, a tutor at NSCC mused, "busy . . . thinking about, 'I've got to pass this test, I've got to make sure my son's on the bus, I've got to make sure my husband's happy, I've got to make sure I'm sending money home.'" They have to estimate, this NSCC staff member added,

How much time do I have to do that, can I just compartmentalize it, like give me a recipe, let me get through this exam. There's all these competing interests.

Among those interests is what this staff member called a larger concern: "You're eventually going to be a nurse. This is important stuff: don't just get an A; comprehend it." Many students voiced an awareness of the "importance" of the "stuff" they encountered in their classes also emphasized that their success where they started depended on passing—on getting through the next assessment.

The programs in the study were organized around this student approach. At CDKC, for instance, the remedial math program was reorganized so that the math a student had most recently learned determined what one-credit unit she signed up for next. The EPCC College Readiness Initiative focuses on aligning at transition points—between high school and the first-year of college and between EPCC and UTEP—and then previewing programs and courses with students. Students in EPCC Early College High Schools described being nonplused by the transition first to community college classes and then to university classes because participation at one level was explicitly linked to the next. Access to dual-credit classes, a senior administrator offered, means that far more students begin their college career having encountered the topics that placement tests assess.

In similar ways, the cohort models at NSCC and SDCC commit students to completing requirements, and both use intrusive advising and individual contracts to let students know what the next step is and why. All of these programs aim at developing program faculty who provide students with a clear "focus" on "what they want you to learn." An SDCC math instructor, for instance, opens her developmental math course with a pre-assessment and required attendance.

I get perfect attendance the first three weeks because they're afraid I'm going to drop them. And so that gives me a chance then to respond to how they did on the assessment. . . . So I do my own assessment and then I do my own little counseling with them to discuss whether I think they might need to back up and what was their last math class and how much time they're really willing to spend.

At SDCC and the other colleges in the sample, completing requirements includes this sort of interaction repeated by mentors and supplemental instruction (SI) tutors and even computer-based learning systems. Students at CDKC, SDCC, and NSCC also all described using their peers to pace themselves as well. A NSCC student described "talking to each other . . . and then making sure we're all on the same page and doing it together." An SDCC student described "seeing" what her peers did to succeed and being "influenced," thinking "you could be doing the same thing." Each of the programs in the study calls attention to process for meeting requirements through collaboratively outlining next steps. Those steps involve using support or, staff and students acknowledge, developing strategies to survive in classes even when "difficult teachers . . . push so much content and they don't really give you a focus."

Passing as college students.

In the MSI Models database, the phrase "passing" denotes meeting performance standards, but I began to understand that the connotations of the phrase were of equal importance in understanding the ends that the students in the study were realizing.

Students who do survive their first classes come to pass for college students. That is, they come to use their education to be able to continue their education. Passing most often connotes "scrapping by" and going on, being able to make use of required learning. An EPCC counselor described her interaction with a student who retook the placement test four times in order to achieve a sufficient rank so as to gain entry to an allied health program:

I had a student that couldn't pass the writing assessment. She took the test four times and she's trying to get into the physical therapy program. She's got everything, everything but . . . She was sitting there and she was crying. I told her, "You know, yes, you can cry because you're upset, because you know this stuff and that's okay. But the thing is that is this the last opportunity you're going to have? No. Does this define who you are? No, it doesn't. This is just something that you're going through, and you're going to get it done. . . . As a joke I told her from now on anytime anybody asks you anything you're going to think of the reasons why you should do it or shouldn't. I go it's as simple as that. So you're going to get quick at it.

On her fourth try, the student got the minimum passing score. "She was," this counselor explained, "able to do it."

Passing in the first year means, a CDKC student offered, "knocking out general education" as she prepares for another academic program—in her case, at another institution. A CDKC faculty described it as learning just enough math to be ready to "go straight to College Algebra or into a Pre-Calculus or . . . into chemistry and not flounder." For students in the SDCC FYE, program participation includes agreeing to enroll in the math and English course "recommended by placement results" and "enroll in the next level English or math course for the subsequent semester." Being an FYE student is defined as a student who "successfully complete[s] the entire academic school year." To be sure, grades matter to the students in the study, but they were clear that passing need not mean excelling or even learning as much as possible. In fact, NSCC staff wondered at their

students continually "bouncing back . . . to make a 2.8" and stay with the cohort. Every quarter.

Passing, in these terms, appears to be disconnected from students' ability to meet performance standards and is linked instead to the opportunity to continue. One SDCC student was brutally honest: "I don't like school." She is willing to "try out some sociology, try out some psychology" and finish "my general education" in order to show she is eligible to study "business . . ., what I want to do for a living." An NSCC student explained her approach to passing as "getting down what the teacher is looking for" and then paused. She continued:

I know that's not necessarily like . . . that's not like . . . You want to learn the content but . . . There is a tension because you don't always have the time to really delve deep in the stuff that is going to be . . . I mean you try to but when it comes down to it, they are kind of feuding, so when it comes down to just being successful in the class. Yes, you do want to have the nursing knowledge . . . but often you don't have time to retain it. Often it is just this is what you have to learn and you have to learn it and you have to know it for the test, so that's what it comes down to.

This student is viewed by program staff as a top student, a student who according to her biology instructor has a better grasp of microbiology than many traditional students outside the Nursing cohort program. One of her peers who had already earned a bachelor's degree as a traditional student described passing as a New Majority college student in similar language:

I've got the Liberal Arts degree. Now I am all about vocational. I want to learn what I need to learn to do this job, but knowing that, it still is a challenge . . . Like I am in this mindset now: "I have no time. What's going to be on that test? because I need to pass that test." But there are times when that is hard for me. In A&P I know we just scratch the surface, and I

want to know so much more. There's no reason I can't learn it on my own but . . .

To sum up, these students complete classes—step by step—so as to show themselves "ready" for college. They come to college with diverse goals and they take pleasure in learning and interacting in their classes, but one end they realize in order to get started is to be recognized as being ready for more college classes.

Finishing Something

Like getting through classes, moving into a profession ties the activity of successful first-year students to explicit strategic goals that are often at some distance from their education and to a personal stake in learning. While these successful students frame starting college as pragmatic activity that needs to pay off economically, socially, and personally, they are actively engaged in what a CDKC administrator called "finishing something." A CDKC math faculty described the activity this way:

There was this one guy that just had a horrible time consistently staying in school. He'd get a little money, and then he'd go on a drunk, and he'd be gone. And I remember his final term here, he actually finished the introductory sequence and he was so happy about that. That was the only thing he actually finished at the school. . . . And that's . . . just so important is that the students have a chance to keep building. They don't have to go back to square one and start over again. They can keep building on the progress they've already made. And I think it helps build their confidence too. If I dropped out halfway through the basic mathematics, I don't have to go back and start at the beginning of the basic mathematics here, I can pick up where I left off.

Across interviews, participants described the work of college as consolidating their learning and development. That is, in addition to moving through classes towards degrees and

career opportunities, these students are directly engaged in empowering themselves as college-level learners and problem-solvers.

Often this activity is represented as finishing classes and degrees. Across colleges, students described completing an individual course or a sequence of courses or achieving a particular grade as a kind of benchmark they could build on. College leaders described the activity in terms of "staying enrolled" or "being college ready" or managing to take a "natural next step" from high school. Yet nearly all participants—even a traditional-aged student obsessed with getting A's—were leery about reducing "finishing something" to passing classes. Student "progression" is not "linear," a staff member at NSCC emphasized. Students do know what classes and programs they wish to complete and even what they must do to start, but "how I get there is very ambiguous." This ambiguity is due not so much to inadequate knowledge as to a disconnect between traditional notions of progress and the lives of New Majority students.

Our understanding of traditional college success is that you get into a college, and you get into a program, and you know your academic roadmap and then you take it, and you go through the classes, and you do it, and you're out. . . . And college is the main focus, and presumably you have whatever supports you need, and it's lovely. And that is not the case for the majority of our students, because they're working, because they're single mothers of three, because they've had cancer, because their dad dies or lives in another country, because they get evicted, whatever, whatever it is, right, because they're homeless.

Students confirmed both that they knew they were finishing steps toward their educational and career aspirations and that they were uncertain about how their current activity contributed to reaching those dreams. At CDKC and SDCC, for instance, students could name the classes they had completed, the programs they were entering, and in many instances the programs to which they planned to transfer. But they were unwilling to

speculate about where they would be in five years: "I'm not sure." One CDKC student fluently described an education plan of "going to school and working." She paused when asked what she was doing to move along that path. Moreover, at each campus participants named "successful students" who were currently not in school because they had gotten a "better job" or had a "death in the family" or were called up to military service. For most of the students in the study, the concept "successful student" includes individuals who choose to step out of school.

Community college students are finishing something in college that is, an SDCC leader mused, "iterative." The "old markers" of persistence and completion get at part of it, but there is more. The problem is, he went on, "I don't think we have a good measure of this right now." He speculated that an adequate understanding of his students' progress had to account for what they wanted to finish in college:

For many of our students who are first generation students we have to make this a good experience. Not candy and ice cream, but it has to be the kind of experience that they see as valuable and self-ennobling, if I can go that far out on a limb, . . . something that is attractive to them, and something that for many of our students is very different from what their lives have been up until now.

He acknowledged that this measure of progress is likely to be "kind of off-putting" for institutions used to assessing a pipeline to a great extent because it is hard to measure. After pausing, he speculated further: "Certainly a part of it is, 'Look, I can take on this work and be successful, and I have new friends, and I have new structures, and I have new abilities to go out and do things and get information.' That's a part of it." The notion that what students are finishing in college is a valuable experience for them runs through out the MSI Models of Success database. Participants in the study linked four strands of activity to finishing something.

"Functioning" as college students.

Finishing something means taking advantage of opportunities to learn. An NSCC nursing student—a woman who is completing 10 credits a quarter, working nearly full-time, and raising a daughter on her own—described what surprised her about her progress this way:

It's like when you have worked at an organization for years and years, you know kind of what to expect, what to do. So I think just being in school for so long it's kind of taken away the kind of the unknown intimidation of schools. . . . It's like I'm doing it, I'm functioning. I know what to expect. I know what to do, I know how to interact with my teachers.

Students in the study broadly subscribed to a similar view of what it takes to get a college education. This activity falls into two sorts, establishing "your own pace" and "what you need to know."

CDKC remedial math students—students who complete an accelerated curriculum in a math emporium—are prone to value finding their own pace. For these students who began college in remedial education, the act of determining the pace at which they were able "to get all your math done" fed motivation. Based on their educational goals, they described choosing to "relearn" material that they had—based on placement tests—already mastered or to skip such material and move straight to certify their knowledge and move ahead in class. Both approaches worked, and the opportunity to choose, based on the testimony of students and staff, feeds students' motivation and keeps them from being "stuck with saying you can only get this far when you have to get all the way to college math to get a degree."

Yet students across the study—traditional-aged students in transfer programs as well as working students in vocationally-oriented programs—described the importance of determining the pace at which they would pursue their education. An NSCC nursing student, for example, explained managing her "schedules." In large part because the expectations, assignments, and deadlines in her program were explicit, she was able to draw explicit

"boundaries" between her school life and home life—literally draw boundaries on a calendar. By determining what she had to cover, she could know that she had enough time to be ready for class, and she could explain to her family that she would be bringing books to barbeques and using her iPhone to drill anatomy concepts in line at the grocery store. Knowing the pace she that had to keep, she asserted, meant that this time in college she was able to finish her classes with the support of her family. For her and students at each campus, pace was a product of their prior knowledge, the ways they learned, the resources they made use of as learners, and the standards of performance they needed to meet. In many instances, "the computer" played a critical role in establishing a pace as students could access content in a variety of modes and get timely feedback from automated assessments or faculty and staff members. Access to campus factors in as well. One EPCC student preparing to transfer wondered about whether she could manage the pace of being a commuter student at a university—of having "to wake up really, really early." Whatever the factors, students told us again and again that the right pace is "your pace." Working "at your own pace," a CDKC student put, means speeding up or slowing down so as to avoid boredom and frustration and to "push yourself as far as you can."

Functioning as college students also includes finding out what learning is required at what level. An SDCC student and peer mentor labeled this activity as "dedication" to his education. For him, functioning as a student meant proactively making appointments with counselors or seeking out faculty in office hours rather than waiting. Other SDCC staff described students attending FYE workshops and student groups not just to satisfy FYE requirements but to clarify for themselves what they needed to learn—from the details of research paper format in "MLA" for upper-division courses to the focus of different psychology programs in Southern California. They used the program, one SDCC administrator suggested, to become "confident"; as confidence grows, they act "like this place is theirs."

At some level, this approach to functioning like a student runs against traditional educational norms. An SDCC math faculty described his approach to teaching, an approach that challenged the practice of letting the preparation of community college students determine their paths:

As mathematicians, we're very close-minded. We're very . . . we're taught to be like, "If you can do this fine, if you can't so what. It's not for you. You're not a science person. You're not a STEM person. You're not a math person. It's okay." But that's what they've been hearing all their life it's okay, and it's not okay. "You need this. You need to go forward and get you're associate's and get your bachelor's, get your master's. Wherever you're going, get your Ph.D. You can do it. This is just a stick in the road. You bumped on it, you tripped, let's get back up. Every time you fall get right back up. Every time you fall you just get right back up."

Successful first-year SDCC students, he went on to argue, have to approach what they are learning as activity that "is not supposed to stop you from getting where you need to go."

This vision of what college students need to do as learners was shared across campuses. For example, program documents from NSCC Nursing Cohort Program describe the program as an "Academic Ecosystem" in which learning objectives are developed around student learning needs rather than disciplinary traditions. Faculty and curriculum are developed for the program so that what students learn in each pre-requisite course and the level at which they need to know the material is made explicit. The goal is not, a biology faculty made clear, to "tell them not to learn stuff," but instead to help them link course content to their purpose in getting an education. This kind of support for narrowing the curriculum is "not a bad thing," a staff member and experienced nurse observed, "if they can get through it." Getting "through it" in this program means passing courses taught by college faculty with a 2.8 and passing criterion-based professional exams at the middle and end of the program.

In a similar vein, other programs focus students on what they need to learn and what it means to have learned it. Both the EPCC College Readiness Initiative and the SDCC FYE limit and make explicit the "choices" first-year students make in respect to their course enrollments. The first-year is designed, an EPCC administrator explained, to help students develop "some idea of really what they want to do and the direction they want to take" along with satisfying basic program requirements. A CDKC administrator framed the adoption a computer-based remedial math curriculum in the same terms. By fixing the curriculum, students and faculty work together "to beat the computer," and students move forward as fast as they can to cover a math curriculum that is aligned to college-level STEM courses at the college and in the state.

Recognizing growing "capability."

Beyond seeking to function as a college student, nearly all of the students in the study are actively involved in recognizing their own growing capability. That is, they are not only doing what college students do, but they are also keeping track of their capacity to do what college students do. Asked about her progress in the program, one NSCC pre-nursing student paused and explained that she no longer saw her progress in terms of "getting degrees" but as "all the little things, . . . you do all these things." Especially when conversations focused on first-year math or English classes, other students we interviewed fleshed out what those "little things" included. Across campuses students were surprised by their ability to "do" college:

Gosh, I can do math. (CDKC)

I think its like you can do a different amount of work, and better quality.

(EPCC)

I'm just surprised that I've gotten this far, just because it just seemed like such a big mountain or hill to cross over, and I'm here, and I've done it, and I'm about to go into nursing school, and I'm just like almost can't believe it.

(NSCC)

That I could do it. That was the biggest. . . . Everyone told me I could, but I never believed them. (SDCC)

Most often, students realized that what they could do was connected to completing sequences of assignments and evaluations that add up to college credits. But in several exchanges, what they could do extended well beyond school. A CDKC, for example, knew a short cut for calculating 15 percent off of \$27.50 on the spot; NSCC students explained sophisticated note-taking methods that worked for reading an anatomy and physiology textbook as well as for keeping track of patients moving through a clinic; a SDCC student explained how the time-management strategies that he was required to use in the FYE Program helped him successfully juggle two jobs while he went to school. Another SDCC student explained that for her college was a space in which she developed her "capability." For her, recognizing her own growing "capability, especially in math," kept her "coming back" for more classes and got her on an educational path and "ready to transfer."

Staff and faculty confirmed the importance for students of knowing to what extent they can "do school." Reflecting on the performance of these students and surveys of "student satisfaction" in the remedial math program, a CDKC math faculty confirmed this observation:

Students feel more confident about what they do now. . . . Even if they don't finish the program, they feel that what they have worked on, they know well. And I think that's important. And it's not just a false, feel-good confidence. It's that they know their abilities and what they're able to do in math has improved.

A SDCC math instructor described crafting an environment in which he invited students to realize that "they could be successful with the understanding that there are lots of things they maybe needed to learn, but they were capable." After a couple of turns in the interview, he added,

I think that these students are capable. I think they need support. I think they need us to believe in them, but I also think that we need to teach them, "If you feel like you're a victim, you're not."

Again and again in interviews, faculty and staff made explicit their assumption that New Majority students can do college despite what they believe about their abilities and have experienced in school. Getting started appears to include the habit of naming the experience of success. The opportunity for success is necessary but not sufficient. Simply feeling successful is important. A senior administrator at EPCC observed that it is critical that students—especially students who enter college with developmental needs—"feel successful" lest recognizing their own status as "underprepared" results in them "getting bored in [developmental] classes, stopping out, and getting frustrated and dropping out." But feeling successful by itself is insufficient. Instead, this administrator has found that students need to be able to ground their "sense of success" in activity. That is, beginning to finish something in college means, in the words of a CDKC administrator, that students narrate their own experience: "I'm finally moving, I'm finally getting this, I'm finally getting the solid base that I've never had in my life where." And, students and especially faculty across campuses frequently mentioned, that base has to be "solid." Recognizing capability cannot be an exercise in feeling good, "a false, feel-good kind of confidence." The recognition includes attention to placement and licensure test scores, classroom assessments, frank feedback from peers and faculty, and always success at the next level.

Framing challenging, relevant educational goals.

Finishing something in college does not end with recognizing one's growing capability. In addition to doing what college students do and reflecting on their own ability, students actively reframed what college is for. Asked about what she was becoming able to do as a student in the NSCC Nursing Cohort program, a student paused and then said,

that's difficult. . . . What it really takes is commitment and really . . . sacrifice, and dedication, and being . . . keeping yourself accountable and reliable to

know that we are all together, we're going to stick it through, and we can all finish together . . . if we make it, if we choose to. It's really a choice every day to do it.

This student went on to explain that she was choosing every day to become a person who can be "counted on" by her colleagues in school and at work as well as by her family. She elaborated her goal at some length. For her, being able to be counted on means being open to taking on the goals of a group, being willing to learn the tools the group uses, and being willing to take in and use feedback on performance. For her, the NSCC program—her college education—is a vehicle to becoming such a person. This goal, she admitted, is novel for her, not what she pursued in high school or in an earlier college degree. The academic content she is learning is important, but, she admitted, she has regularly struggled to maintain the 2.8 GPA required by her program. Even so, she feels that she is in reach of her educational goal of becoming the kind of person who can be counted on.

I offer this one story not because it is typical. The students in the MSI Models sample have goals that are as diverse as their academic preparations and personal situations. Rather, this story exemplifies the widely-shared practice of framing and pursuing educational goals that are relevant to New Majority students. This practice seems to share two characteristics. The first is simply choosing to be in college, to juggle resources and demands from inside and outside class in order to reach an educational goal without surrendering to fear, frustration, or resentment. Nearly all of our participants wanted us to understand that successful students in the four programs actively work out how to persist as "life happens." Students in the study generally agreed that coming to college was not a foregone conclusion even though many described the role that family members and high school teachers played in encouraging them to attend. While they tended to believe that college was necessary step toward a better life, enrollment in college was a choice. In the case of one CDKC student, going to college meant pursuing "outcomes" that are different from "what people are used to" and distancing herself from "a group of friends" and even

"family members." While she chose CDKC to remain near her grandmother on the reservation, choosing to go to college was choosing a different life, no longer being "a ninny-girl . . . a mama's girl, . . . making something of yourself."

This view of what it takes to start college was widely-shared across the the four programs. An NSCC faculty who observed that for her students a college education is about managing change "that all has to be integrated. That takes time . . . to build a new life." This faculty member and many students agreed that a college education is for them part of the "right change," the right goal, and it is their change, their goal and not one set by college. Successful students, an EPCC staff member reflected, learn about a college program and respond, "Yeah, I want that."

Pursuing "that", it turns out, is not primarily about getting A's in college classes. Asked what was surprising about their success, many students in the study pointed to their ability to deal with never-ending logistical challenges. These start, an EPCC staff member observed, with solving "the hardship of paying for school" and understanding and preparing for gatekeeping assessments. Once they are enrolled, students across campuses named "time management" as one of their critical goals. Getting an education depends, an NSCC student who had already completed one degree explained, becoming "smart" with every bit of "dedicated time" that is available. Students who succeed, an EPCC student mused, are those who are willing to plan. They "start thinking early," an SDCC counselor offered, and are "relentless in getting their questions answered." They do not, we were told frequently, waste their financial aid, and they do use "the computer," tutors, counselors, and faculty to deal with interruptions. These students, an EPCC administrator observed and others confirmed, "feel good about" completing a remedial classes or working with tutors or seeking out faculty in office hours rather than getting "bored" or "frustrated," fearful or resentful. CDKC students who manage to be in college, a science faculty noted, come to see college as "easier."

A second characteristic of the practice of framing and pursuing educational goals is thinking things through using the tools made available in college. The students in the study share this habit to a large extent because the habit is wired into their college experience. One of the challenges that first-year math students face, a CDKC science faculty explained, is that they typically have opportunities to use math to do things in the world only in upper-division courses. In their first year, many students

are looking at math from the standpoint, "Why do I have to know this?" It doesn't matter if you're in third grade or tenth grade. Somebody is telling you, "You have to take a math class because you just have to know this." They've heard for so long you just have to know this and their question is why. Why do I have to know this?

The developmental math curriculum at CDKC, this faculty member told us, is designed to help students see "here's why you need to know the math. When you walk off campus and you need to go do something, here's why you need to know the math."

The approach aims to offer remedial math students a particular educational goal: "It isn't just about understanding math and how it applies. It's . . . to think in ways they haven't thought before." During our visits, I was struck that other CDCK and SDCC math faculty described a similar goal and that a SDCC administrator extended the goal of thinking "differently" to the outcomes of counseling and mentoring in the FYE. Counselors, she explained, go beyond "the okay, did you take this class blah, blah, blah" to "Why did this happen, and do you want to talk about it, or can you explain it." Faculty and staff in NSCC Nursing Cohort program described the process of collaboratively rewriting and "adjusting" curriculum so that pre-requisite course included opportunities for students to learn chemistry, biology, and statistics and even the process of being a college student as the member of a cohort of wannabe nurses. One faculty member observed that some of her students were linking their learning about biological systems to "critical thinking" processes that they "had down" as entry-level health care providers.

Students acknowledged choosing to "think differently" but in limited ways. For example, in three separate interviews, CDCK students described learning, in one student's words, "to look at [math] differently," not as something done to them or something to be endured but as a tool that has value in school and beyond. They described using math they learned in pre-college classes to help children with homework or to make better use of spreadsheets at work or in summer research internships. But for all of these students, thinking in new ways was an abstraction rather than a habit. Nursing students at NSCC observed that their classes were "kind of tailored to people who are working with family responsibilities, who are maybe the first person in their family to go to college." Three NSCC students described faculty pushing them to learn anatomy and physiology, psychology, and/or anthropology so that they could "think like nurses." One sensed her education was making "sure you're prepared for nursing . . . so that you can have the information you need to apply it to that." In a group interview, three other students described the nursing case study that served as the final assessment in statistics and chemistry courses as "pretty advanced" and "exciting." As one student described this: "the actual instructor gets to design the case study, but we are applying the concepts towards a nursing application." Still, many of the academically most successful of these students, three faculty told us, appeared to be more focused on high test scores than "understanding the material" as nurses in training.

Following what you love.

If students were not always clear about the extent to which they were framing their education as taking up new ways of thinking, they were clear that their education involved finding what academic disciplines and career options would make them "happy." For example, as an EPCC student described how she eventually arrived at choosing a criminal justice major, she recalled beginning college aiming at medicine and in the midst of her STEM courses changing her mind:

I learned that science was not my . . . my . . . it wasn't what I loved to do. I thought I was going to learn to love it, but I didn't . . . I'm not gonna enjoy doing this the rest of my life. But I found that criminal justice ... I love the field. I love learning everything about it. Actually, at first I thought, "Oh, it's gonna be hard," 'cause the way the instructors made it seem like, "Oh, you have to learn the laws. You have to learn every single vocabulary word and you have to know it by memory," but once you're doing it and if you love it, you're gonna learn it and you're gonna enjoy doing it.

One of her classmates described confirming his interest in engineering through the joy he found in making things from scratch in the pre-engineering curriculum. A CDKC student described a similar experience: "In high school, I just loved Math. When I came here, I kind of, it was so weird. In high school I loved Math more than Science. But then when I came here, I kind of loved Science more than Math." She went on to list the science courses that she had completed, courses that she "enjoyed" and that made her "realize that I should become a tutor." In a focus group, SDCC students took up the question "Why did you come to college?" for over 15 minutes. As the conversation—one in which they frequently responded to one another's discovery of purpose—winded to a close, one student asked us whether we—researchers from distant universities—were surprised that for them finding a satisfying path was more important than finding a financially profitable one. "What do you think about not hearing that [we're here because we want to be able to earn more money]?"

Finding what they love, these students and others were clear, is an intentional activity. They described using classes, appointments with counselors, workshops and activities, journal entries and interactions with peers to uncover and confirm practices—both everyday routines like lab work and also kinds of problems like purifying water or diagnosing mental illness or negotiating immigration law—that they "love" or "enjoy" or that makes them "passionate" or "happy." They make use of opportunities that, according

to staff and faculty across institutions, are available or obligatory in the case of the three formal first-year programs. An SDCC staff member described the impact of required meetings with counselors this way:

Some students . . . come into the program with a very set and stern goal of becoming a nurse or something else that has a lot of job opportunities. After further exploring with them they'll say . . . It turns out, sometimes they're reluctant to say, but it turns out it's something that their family has instilled in them. It sometimes has a cultural aspect in play there too. And it's amazing to see them realize for themselves for the first time in their life they're an adult and they're able to make their own life decisions and no one else can dictate that for them. And a lot of them will make a whole 180-degree change from what their parents had wanted them to do to what they are actually going to pursue after we've talked more and really identified what their personal interests and abilities are, . . . and they'll have a whole completely different agenda that they really want themselves.

One of this counselor's students elaborated the process further. She started at City because her uncle said, "You're going to college." In FYE Personal Growth classes and meetings with her counselor, she found a career to pursue and then a major and, more importantly, excitement about "what I am going to learn today." This excitement, she noted, enabled her to struggle when classes got difficult. From her counselor's view, she became aware of her own abilities and interests, discovered opportunities that "she didn't know were available," and found "something more suiting in a career and major choice."

Students who described finding what they loved in college often described the danger of viewing school as a "routine." Some of the students in our study contrasted their approach to the first-year of college with peers who aimed just to pass. Seeing college as routine can compromise starting at all, an SDCC student told us. She felt that she was not accepted at a local four-year college because she "wasn't decided" about what she would

pursue. The EPCC student who described falling in love with criminal justice wondered aloud whether going to college to please their parents or because it "has something to do with their future" could sustain students. From her perspective, students who "don't want to be here" leave. NSCC staff recounted a student choosing to view the program as a requirement to be satisfied: he miscalculated the assignment grades he would need to earn the course grade required by the program and had to retake a course at his own expense. New Majority students who pass continue to pass because they connect finishing courses and assignments and requirements with something that they love.

Joining Communities of Practice

While the students in the study pursue a set of narrowly strategic goals, the ends they seek to realize are not limited to passing as college students and finishing an educational program. Beyond getting through classes, these students are using college to as a path toward more distant goals. They are "going somewhere from here." The SDCC student who told us "I don't like school" was succeeding as a college student but was uncertain about continuing. Much of her first year in college and the support offered by the SDCC FYE felt to her irrelevant because, it "is supposed to teach us how to be well-rounded. I already feel well-rounded." She was quick to explain the value of a supportive program for many students and to talk about what she had learned in her first-year courses. But "trying out" courses in academic disciplines felt purposeless to her "because I'm in sociology thinking like 'how is this helping me in business?' I'm in psychology, you know, thinking 'how is this helping me in business?'" For this successful first-year student, college is "some program" that connects her to people and opportunities outside school and gets her where she is going "faster."

To be sure, some students in the study are in college to complete a degree and so become, as several students put it, "well-rounded" and "educated." A few, one faculty member told and we discovered from students themselves, aim almost solely at satisfying

their curiosity. For most of the students in the study, however, the end of a college education is access to new social, economic, and, more rarely, cultural opportunities. Students often talked about their purpose in college in terms of joining an enterprise, an industry, occupation, or profession. For them, getting started in college involved doing things in order first to "realize" what was involved in entering different communities of practice and then to "satisfy" entry qualifications, both skills and knowledge and also credentials.

As I have worked with their descriptions of what they do to get started in college, especially to succeed in their initial classes, I have come to understand one central strand of this activity: claiming membership in new communities of practice.¹ These students are joining a common endeavor—credentialing in a professional group, being recognized as eligible for an academic program, becoming "educated," solving domain-specific problems—rather than entering warm relationships on campus. While students described feeling emotional support and trusting their peers and staff as important, they were as likely to identify with "communities" off-campus. It is the common endeavor that organizes their activity and that often requires of them the ability to be involved in and reflect on the entire endeavor including shared norms, values, and ways of acting ("extensive knowledge") as well as the ability to be "good at" some aspects of the common endeavor and so be a valued member of the community of practice ("intensive knowledge"). Moreover, what they know appears to be distributed across the practices of the community: what they know emerges as they use tools and interact in networks of relationships. Teachers and staff serve not so much, an EPCC faculty member told us, to "say what to do" but as to design spaces of interaction, ensure that students have access to tools within those spaces, and ask students to make their contributions to the community and their understanding of the common endeavor explicit. In this section, I focus on three interdependent kinds of activity

¹ Study participants rarely used the phrase "community of practice." I use it as it was defined in the Chapter 4 above.

that appear to be connected to joining communities of practice: defining endeavors, practicing participation, and claiming memberships.

Defining endeavors.

The students in the study realized the conditions for entering a community of practice involves through an iterative process. The process begins with interests. Frequently, students described arriving at college with specific career goals. What they want to do often emerged from students' responses to challenges that their family had experienced or beliefs about professional opportunities in the community where they aspired to live. Most students matriculated to campuses that are designed—in both "legal authority" and "philosophical bent," one SDCC leader put it—around the interests of the communities from which they came. At every one of the campuses, student often linked their educational paths to solving a problem their family or local community had encountered by becoming a businessperson, lawyer, health or environmental sciences researcher, educator, or health care provider. Two EPCC students described carefully designed strategies process for gaining access to programs that would enable them either to stay or to leave El Paso.

While staff at each campus talked about exhorting students to pick paths that lead to happiness and passion and hope, students' interests were frequently directly related to the economic returns of education. Students at EPCC, NSCC, and CDKC linked an education directly to a professional role and a specific job, in many cases with their current employer, that will enable them to provide for and also care for their children. A college education, one SDCC student argued, makes a person "versatile" and able to move to new opportunities when the present one "doesn't work out." While this student and others in the study described college as a means of exploring career and academic interests as well as a more nebulous process of finding "what makes you happy," few students were interested in being college students. One NSCC student recalled "working at a part-time job in a restaurant" so that he could be a college student. That was, for him, a different purpose in being in college and one he could no longer afford, whether he was interested in it or not.

In addition to approaching college as a means to achieving off-campus interests, the students in our sample also shared the habit of developing a plan to pursue those interests. An EPCC ECHS student, for example, observed that she and her ECHS peers "have a goal or plan to succeed in life . . . strive for something better," and she distinguished their "plans" from the approach taken by her peers attending traditional high schools who view school as a series of assignments and grades:

Yeah. They just say like, "Oh, well, I'm gonna go . . . I'm gonna go have the college life. I'm leaving home." "So like what do you want to study?" "I don't know yet." I was like, "How can you not know? You're already gonna be a freshman in college. How can you not know what you want to do with your life?" And they say, "Oh, I'll figure it out later." But I think that's the big difference. Here, it's like everyone has the mindset. Once you come in, you already have to be thinking like a college student. Over there, they can do whatever they want. They don't worry about that stuff yet.

Having the college mindset at EPCC and other campuses involves finding out how long programs take, where they are located, and where they lead. Students "worry about that stuff," and, in most instances, they explained in detail what topics lead to the math proficiency required in an academic program or what kind of teaching and learning different programs emphasize or what kind of involvement—time and effort—it takes to pass.

It is clear that the students in the study did not simply happen on this information. Students, staff, and faculty all talked about planning as a formal or informal first-year requirement. The purpose of gathering information about professions, several faculty and staff members emphasized, is not to value one path over others. An SDCC math faculty described laying out the math requirements of various professional trajectories and asking:

"So which do you want to be?" I ask them . . . It's okay. I don't care which one you want to be but at least be informed of those decisions that you're going to make." I think that's part of my job is to inform them. "Why are you

here? You're here to be a scholar. I don't care about students. I really don't.

I don't care that you're a student. I care that you're a scholar."

Scholars, he went on, come to understand what and why they study in ways that enable them to use their education to contribute in a program or a profession. While other staff and faculty did not use the label "scholars," they appeared to know the kind of student. Several observed that "scholars" defined this way appear to move more efficiently through their first-year and toward participation in the groups that do what they hope to do. At NSCC and SDCC, institutional research shows that "scholars"—students who participate in workshops or meet routinely with counselors or regularly and autonomously make use of campus resources—earn higher GPAs and make more efficient use of their "Pell semesters." Scholars, one SDCC staff member observed, are not given a "road map that very first day of school" even though many first-year students want one. Instead, they appear to be willing to be engaged in an iterative process of learning about the endeavors that they are joining. At NSCC, SDCC, and EPCC, staff members talked about providing students with the tools to build maps rather than the maps themselves.

Students in the study made it clear that such a road map was of limited value in any case. Plans are conditional on students' lives. A CDKC student explained frankly she was at the campus only because studying there enabled her to live with her grandmother: "I told her, I need to spend as much time as I can with you. Then when I leave, I'm not coming back. I told her." Though CDKC started her education, she planned to finish and use her education in places and communities of practice that she could not see from CDKC. An SDCC student explained the limitation of a first-year road map differently. For him and his peers, "things happen," and what they can do is to take steps "to see what happens next . . . Do I really want to do this for the rest of my life?": "I kind of do have a clear [plan]. . . but it gets a little blurry . . . in your first year."

He and other students elaborated a process that one CDKC student called "switching." As they developed clear plans about what endeavors they would pursue, they

went through a process of comparing what those plans entailed to their academic strengths and interests as well as the credits they had already earned. At both CDKC and SDCC, students described choosing transfer destinations based on math and science pre-requisites for the programs in which they were interested. An EPCC student based her decision to start with an associate's in nursing because of the "hands on" focus on the EPCC curriculum in comparison to her understanding of curricula in baccalaureate programs at nearby institutions.

For some students, the evaluation of their plans begins when they arrive at college, often with good high school grades, and find themselves placed in remedial courses. They have to work out the quality of engagement expected of them. College, one SDCC student observed, is "serious . . . it's not like in high school." In the experience of one CDKC faculty, the difference has to do with expectations about how students approach content. He recalled a student telling him, "You know some days it's really hard because I know you're going to make us think every day when we come in here." "Thinking," he explained, is short hand for solving problems. An NSCC tutor said that the new expectations can be as simple as arriving on time for class and as complex as working with a group to understand a topic or solve a problem and then turning in independent work on the same topic or kind of problem. Many of the students we interviewed are making sense of "academic values" and coming to "understand this world."

"Switching" also includes a consideration of broader expectations. EPCC, SDCC, and NSCC students aiming at careers in healthcare all reflected on the responsibilities that come with their decision. An EPCC student justified her decision to be a medical technologist rather than a nurse based on her desire for a more limited scope of practice. An SDCC student who was working toward transferring to a neuroscience program talked about his interest in research over clinical practice. Staff at NSCC observed that students in the Nursing Cohort program had to become comfortable with the "the idea of patients' lives

being in their hands" as well as the expectations about their knowledge of biological and psychological systems and their clinical skills.

Practicing participation.

In addition to defining what endeavors they might join, these beginning students are engaged in trying their hands at these endeavors. For students in the study, practicing as member of a major or career or profession is wired into the first-year. They are in programs that, as an SDCC leader put it, "tighten the chain" between student goals and educational activity. At each campus, all participants described a similar process. Assessments led students to "requirements" or "incentives" for taking core courses. From the point of view of administrators, getting assessment "right" meant each student started college in the "right" math and English courses or, in the case of nursing students, STEM sequence. Students varied in their assessment of assessment. The first course is in some cases a course that leads students to realize "okay, I can write" and that leads others to manage to survive some "class the school made me take." Across experiences, the students in the study ticked off the requirements they met or were set to meet on their paths to their educational goals.

I was struck by the extent to which students in the study were cognizant of the requirements of participating in college. The programs at NSCC, SDCC, and EPCC require students to meet with counselors or mentors who scaffold career and academic planning. For EPCC students, meeting with a counselor is a condition for taking placement tests and enrolling. At SDCC and NSCC, students sign a contract that commits them to meeting regularly with counselors. At SDCC, that contract includes the development of a plan. Students in the CDKC remedial math program place into an aligned curriculum through which, one student explained, you "get your math done." "Your math" in this case is the math this individual needs for her purposes. One CDKC student listed the courses she had completed—from basic math to pre-calculus—and then explained that she would pick up calculus at the Colorado School of the Mines: "I'm going into Chemical and Environmental

Engineering." Another explained stopping at college algebra because her goals did not require "a lot beyond."

The requirements that these students meet extend beyond those related to accruing credits. One EPCC student described taking classes at UTEP and learning to "get through a big campus." Another recalled realizing that she need a particular placement test score to qualify for her the program that she wanted to enter and using PREP resources to work toward that score. A CDKC faculty described one-time remedial math students coming back to the college in order to build GPAs and STEM backgrounds that would make transfer possible. Beyond accumulating credits, these students are making their way through programs that are aligned with the educational and work experiences that students hope to take up next.

All four programs described institutionalizing processes for tracking the ways in which first-year students were meeting program requirements and using that information to trigger interventions. The programs are designed for students who are "coming to create a life or a better life from where they've been" as an FYE leader explained:

I think that they somewhere along the line recognize the fact that [college education] will allow them to get a good job or allow them to live a life different than what they were used to. I honestly, I don't know if this is a fair statement, but I'm not sure I've ever come across anyone at this level who has come to community college strictly and solely for the purpose "I just want to learn," but they recognize that learning is a part of the process.

"The process" at SDCC and the other colleges appears to involve participating in college-educated groups. While these students practice being contributing members of college classes and SI study groups, they also talk about working as researchers on federally funded projects or participating as volunteers in community organizations through service learning.

Thus, these students seem to practice "creating a life" or "living a life different from what they are used to." This activity is scaffolded by a program like the NSCC nursing cohort that "packages" courses—in this case, transferable nursing pre-requisites—for working students. Students talked about coming to think like nurses and to acquire the knowledge of biological and social systems that underpins good nursing practice. Staff and faculty described designing—and students appreciated—"contextualized instruction" in nursing prerequisites math and chemistry and biology. Again and again, they described designing assessment that do not "make things easier" but do guide students into nursing school with the knowledge and skills they will need to interact with nursing faculty and preceptors. Whatever their feelings about the SDCC FYE requirements concerning career counseling, students spoke fluently about the jobs to which their degrees might lead and ways in which they were optimizing their ability to transfer. This same dynamic is evident, though to a more limited extent, at EPCC where college degrees are in many ways indirectly redefined as a professional requirement for participating in a college-educated workforce and society in the El Paso region. There, "swirling" students receive EPCC associate's degrees whether they apply for the degrees or not, an administrator explained. They become degree holders when they have stayed with the endeavor long enough and earned enough credits, even if those credits are earned at UTEP.

Claiming group memberships, moving between worlds.

These students participate in college from where they live. To be sure, most of the students in the study saw college as a means to becoming "educated" and moving away from their home communities that, for some, seemed short on education and opportunity. Yet even for a Native American student who was pursuing a degree to get "away from here," a college education is a tool that can be used at home. She made it clear that her plan included moving outside of her home community to find opportunities and "explore." Nonetheless, she and many other students in the study held onto the belief that as a college-educated people, they would become able to move back and forth between the

communities with which they and their families identified and other groups in which they could put their education to use. For them, getting started as a college student appears to involve claiming membership in new communities of practice (affinity groups) while at the same time using the tools and relationships they discover in that new community of practice to pursue a shared endeavor of significance to them and their home communities.

Nearly all of the students described matriculation to college in terms of their families. For some, an uncle or cousin or parent said, "you need to go to college." For others, choosing to go to college meant choosing to stop associating with friends and even family members. Many of our participants emphasized the extent to which the lives of students in the study are tied to families and communities and can be unbalanced by the death of a grandparent on a reservation or another continent. They described students' need to work and participate culturally and financially in their families while they go to school. They were also frank about "the havoc" caused in a rural community when "a big shipment of meth [comes] into town" or a bad decision after a night of drinking or a breakup that leads to homelessness. Students who succeed must, an SDCC student offered, come to terms with "feeling that you're responsible for what you do with your education." But for these students, a CDKC faculty observed, being a responsible person comes with complications.

Students are more likely to succeed are generally the person who's responsible in the family. And because they are the responsible person, they get stuck with "I have to watch my sister's kids, I have to take care of my auntie who is in the hospital." And because that person is a successful person, you know, the person that's responsible, they end up getting drawn out of the academic sphere, shall we say, because they have to deal with the problems of the family because nobody else will deal with them.

Given their responsibilities off campus, it is not surprising that students typically seek out educational opportunities that are "right here to them," as an EPCC administrator put it. Yet, while the opportunities often must be local, the students in the study—faculty

and staff emphasized—told us that those local opportunities must be "college-level" opportunities. Colleges are "communities at an arm's length," a CDKC administrator explained, to ensure that classes transfer and students have the opportunity to engage an institution that emphasizes "professionalism," unbiased assessments of performance, and equal access to resources. CDKC students, one of his colleagues underlined, need to learn know where they stand academically so that they can start an education that is neither frustratingly repetitive nor overwhelmingly foreign. To find a space from which they can engage their education, a NSCC tutor told us, "you've got to understand this world" from academic and professional ethics to disciplinary habits of problem-solving to the implications of "jumping a social class and the costs [of becoming educated]." They need to learn, participant after participant told us, what use to make of faculty office hours, why where they sit in a classroom is significant, why their peers and college professionals are asking the questions that they ask.

Reflecting on what made them successful students, students themselves talked about the importance of being in a new community of practice with new expectations about how they talk and write and manage their time. As one EPCC student put it, "It's not like middle school." These new college-level communities of practice, he added, "open doors." Reflecting on the experience of graduating from an EPCC Early College High School with an associate's degree and more than a dozen University of Texas El Paso credits and a scholarship to study electrical engineering at another regional four-year college, he talked about the significance of "being exposed to a lot of poetry. . . . And, that kind of also encouraged me to be a more well-rounded person. And, keep searching for good things." As he elaborated:

A lot of other people hate math, or hate . . . They don't understand why would you want to do that. But, I've seen, I've been involved in the mock trial team here. And, I've seen a lot of students that were Pre-Med majors, or they were initially something else. But, as soon as they got in to that club, or

as soon as they got exposed in to separate aspects of kind of like a debate thing, they actually knew that that's what they wanted to do. And, they actually, they're actually set on that goal also. So, we're set on different goals, but we, I've seen the same growth in them also. And, the same want to continue learning.

Other students reflected on the importance of knowing "more than one thing" or moving past "discomfort" with intellectual challenges or "branching out" from reference groups from their neighborhood or cultural or ethnic group. One SDCC student described moving between communities of practice and becoming versatile, able to say "I [have] had a job, I'm really good with English skills, I'm really good with math skills, but also, I drove a bus, so I know how to deal with people." Another SDCC student and peer mentor said that she and her peers were "learning so much more about myself . . . how to be successful in certain environments and different workplaces by just communicating with different people."

For these students, claiming membership in new college communities of practice involves moving between home and college rather than simply becoming competent members of academic or social communities on campus or engaging in appropriate academic behaviors and contexts. Consider this story from a SDCC faculty member.

Instructor. Yesterday this poor young lady didn't show up for my class and she's one of the good students in there. She's really bright. She really tries hard, and she's really always there. She tells a student, "I can't make it. My aunt got killed down in in Tijuana yesterday and my uncle is in the hospital. I've got to go deal with that for my family." What am I going to say? No, you need to come to class? You just had a death in your family. I'm not going to stop you. But okay so that affects the class. . . . I mean one death. Because one student knew and then the others . . . the one student told the others, and all of a sudden they all knew before I did. It was like, "Oh yeah she's not going to be here. There was a death in her family, terrible

accident." I'm like, okay. That's going to blow the top off my class. I mean they're not listening to me. They're thinking about death. They're thinking about wow my uncle just got killed last week and oh my best friend just died in a drive by and all this happened.

Interviewer. So what do you when this happens?

Instructor. I slow down. I slowed down and I reviewed. I slowed down and we talk about . . . "Man, what do you guys think?" . . . We stop doing math because what's the point. They're not listening to me. I'm wasting my time. All I did was back them up. Now they're backed up even further. So I stop, and I deal with the human, the human part, and I just slow it down. Let's review, what do you think about this and where are you at and let's look at some of the past information. So I just use it as a time to review. I know it's cumulative. I know my final is cumulative. "Hey let's go look at some problems that you might have had with graphing or let's look at some of the problems you guys, what do you guys think about this." So I just slow down. I think a professor needs to be well aware of that and we're not trained for that. We are not trained for that whatsoever. We are trained to go A, B, C, D, E, F, G. They don't understand H, I, J but that's okay because I did H, I, J and that's their problem, K, L, M, N and that's all we're taught. And it works. Yes, it does work but not for me. But not for me. And I think if you're going to be teaching basic skills I think it's different. It's so different. It's rewarding and frustrating all in one. It's agonizing, it's annoying, it takes a lot of energy. It takes a lot of energy to do basic skills this way.

In this interview and in many other discussions of teaching and learning, the contours of membership in a community of practice became explicit. In this case, the common endeavor was developing a specific capacity—in this case the basic math skills that make continuing a college education possible. If students are not able to participate in that

endeavor, if they are not able to "listen," then progress stops. Doing math, this faculty member explains, requires extensive knowledge: membership in the community of practice rests on their being able to engage all of the topics and processes and not on having been exposed to them or mastering some. Membership is "rewarding and frustrating" as well as "agonizing" and "annoying" and intense largely because membership means being able to contribute to the common endeavor in the present as well as to come and go as goals and situations demand.

Many of the faculty we interviewed view their role in part as designing spaces and providing the tools—from content to computers to strategies for studying—that students need in order to participate in new communities of practice. In this instance, this faculty member guided students in varying pace ("slowing down"), reflecting ("we talk about it . . . we stop doing math"), and shifting focus ("let's review"). Other participants—students, staff members and faculty members—described faculty and staff engaged with students in similar ways, as guides who do the work of college with students. Rather than organizational members who own the curriculum and manage access to professional knowledge and skill, faculty in the study variously play the role of designers who, a CDKC administrator observed, "sit down beside the student, right there having the conversation and engaging one-on-one." In the case of CDKC, faculty teaching loads, this administrator added, can no longer be calculated based on how many three-credit courses they teach. Their work is measured in "face-to-face time" or "lab time." They are becoming accustomed to teaching in an emporium where two or three faculty might work with the same students. An EPCC faculty member who played a leading role in developing a math emporium made a similar observation.

In many ways, the interaction of SDCC faculty with SI tutors and learning center staff and of NSCC faculty and staff in an instructional team lead to a similar role for faculty. They are experienced members of the community of practice, members who know the Discourses (capital "D") to which students aspire and are prepared to perform these

Discourses with and for "newbies." That is, these faculty members have "the math skills"—CDKC administrators and STEM faculty assured us—to teach college calculus classes to students who "hold their own" when they transfer. But in first-year classes across the colleges in the study, what counts as a "qualified instructor" cannot be reduced to content knowledge. Among their most critical teaching practices at CDKC, for example, instructors listed the ability to see when a student gets "stuck" in a problem and the ability to call together an "organically forming cohort" so as to help remedial math students support one another's learning. More importantly, three different instructors described the importance of learning how to make math "matter" to CDKC students who have learned to "fear" it.²

Again and again, these educational professionals described themselves as "advocates" or people who are "out there" and "invested" in local communities; faculty who, as a CDKC math faculty put it, "just try to connect with students personally, just directly." "They're people," he added, and then spelled out what that meant:

There have been times when students would come and talk to me about their personal problems and I do what I can to help in those areas. If a student will come to me with reasons or excuses or explanations about why they weren't there I make it pretty clear that my first concern is their welfare and their welfare in my mind includes them learning math but it's not limited to that. That matters to them.

At each institution, staff and faculty members self-identified as "people." Some self-identified as members of the communities that the college serves. Whatever their personal background, nearly all faculty described engaging with local communities. At SDCC, for example, they described as part of their professional practice creating opportunities for

² Students who are completing this alternative curriculum describe a remedial math career that focuses on what they need to learn rather than what is included in a course. They progress at their own pace, and, to their surprise, they often complete more math content than that covered by the course for which they registered—some students complete the equivalent of 9 credits in a one-credit semester long course. For them, the work of remedial math appears to be the use of a set of integrated tools. They observe and interact with computers, peers, instructors, and tutors to learn the math that they need to get where they are going.

students' parents to be involved in their transition to college and opportunities for students to serve their local communities for college credit. At all four campuses, faculty and staff members were directly involved in research and development initiatives that expanded students' opportunities to move into campus communities of practice while they lived and worked in their home communities. They described cultivating sources of financial aid that enabled students to become full-time students and also to serve as an "emergency fund" that enables them to continue to build their educational momentum even when, as an NSCC staff member offered, "you can't pay the electric bill, the garbage disposal breaks, the dog runs away." These educational professionals seemed to position themselves between students' home communities and professional communities of practice in college.

The experience of another CDCK math faculty seems to exemplify space in which many of the faculty and staff that we interviewed were situated. For her, part of being an instructor was "making sure to attend some kind of event here in Lane Deer somewhere near the beginning of each semester so that students see me here and see that I'm not just here for work to make money":

I'll just run errands. I'll walk to the bank on my break or walk to the little general store or something just so students see me here and see that I know something about the community and I'm not afraid of it or like I'm invested. So I've gone to a couple of the basketball games for the college team and I participated in a clown dance in the fall and just did some things. . . . It's kind of like a mock powwow. People dress up in costumes and dance to powwow music instead of their traditional regalia. One of the [staff members who lives on the reservation] said, "You should do that some year." So she got me a costume and didn't tell anyone I was doing it. So I danced in it, and . . . I got second place, so I had to take my mask off. When I took my mask off everyone was like, "Oh my God it's a white lady, or oh my God that's a teacher." Even [the CDKC President] didn't know and [he] was the one giving

out the prizes. He just laughed. So I just try to do stuff like that when I can just so students see that you're out there and I think that helps to break down some of the mistrust or discomfort or whatever it is they feel between white teachers and themselves.

The opportunity to interact with faculty and staff who are "out there" helps facilitate students' entry into communities of practice on campus. In addition to presenting students with "qualified instructors," the colleges formalize this process by connecting students to "personal growth professors," navigators, and College Readiness counselors. These staff, one non-traditional EPCC student told us, make doing college seem possible for her. She went on to explain that it was on meeting a counselor who seemed to understand her situation—she was unwilling to take out loans or to "waste my time"—that she decided to take up an opportunity to use a computer lab and College Readiness tutors to prepare to start a med tech program while she continued to work and take care of her children. When she spoke with us, she spoke as a student who, though self-conscious about her accented English, had started taking classes. By spending time in the PREP program, she became college-ready in math and had become able to pass pre-calculus.

The location of college communities of practice in contexts that include students' "worlds" matters. Consider another story offered by the SDCC math instructor who "slowed down" for students.

This is the kind of thing that happens in my class sometimes. A young lady, African American, straight A student in everything but math. She can do anything. She goes, "I have straight A's. This math is killing me. . . . I'm going to quit. This is it. I'm done." I go, "What! You're one of my best students. How are you going to quit? You know what's going on. You're just making sign errors. Okay, what's the problem here? Let's fix it, let's work together. Give me tomorrow. Give me tomorrow, please. Come back tomorrow." She was ready to quit. She said, "I'm done." I said, "Just give

me tomorrow." A lot of times students will quit on you as professors because they don't know any better. They don't know how to react to these new feelings of maybe learning something new for the first time and really struggling with it. . . . How do you get someone not to quit? Because . . . See, I was a quitter. I was taught how to quit. . . . These students. Why are they here so long at the community college level? They don't know how to finish because they're having a hard time just starting.

His classroom and many of the other experiences that participants emphasized are anchored in students' worlds. He explained it this way: "I don't teach math the way I understand it, for sure. . . . I teach math the way I think that they understand it." He takes this approach, he observed, because by teaching in a space between the Math Department that he has co-chaired and students' worlds, he "gets [students] to go further faster." He is able to position students as "scholars," learners who can handle "accelerated programming" and learn "more curriculum than is necessary . . . more than what is necessary to pass that class."

In sum, he views his students as members of college communities of practice. This view is widely shared by the participants in the study. Students, staff, and faculty who are engaged in programs that are effectively guiding first-year New Majority students into college appear to believe that these students are full-fledged members of college-level communities of practice and as such these students are also engaged in learning with and for their home communities.

Realizing Ends

The students in the study—students who have successfully completed their first-year at a two-year college—start college most often with uncertainty and fear, even when they are well-prepared. Starting college for them includes realizing—discovering, clarifying, and pursuing—their purpose for being in college. In this chapter I have outlined three areas of

activity in which student engage in order to realize their own purpose for being in school: "passing," "finishing something," and joining communities of practice. What seems to cut across this activity is a stance, a set of spaces of interaction, and a set of tools. These students are cultivating student identities that enable them to follow scripts reflectively. They recognize both the restrictive requirements that they must meet and acknowledge both their successes and failures in meeting such requirements in the past. In so doing, they cultivate a student identity that takes responsibility for not quitting this time until they have a "new life." This stance emerges in enriched spaces of interaction. The students in the study survive traditional classrooms. They most often realize their ends in other spaces where opportunities for blended learning make visible alternatives in pace and purpose. In these spaces, they use their access to formal and informal advisors and counselors, appointments and workshops, tours of college spaces. Listening to multiple voices about what goals are possible, they reflect on whether they need to slow down or speed up to meet the goals that they have chosen. This reflection is mediated by a suite of tools: the scripts of college-going passed on and modeled by peers, advisors, counselors, and faculty; intelligent tutors, formative feedback on their interests, pace, and mastery of content; tours and simulations and plans.

These students do not appear to aim at becoming traditional college students, members of academic and social communities. Instead, they seek to be college students who have realized enough of the qualities of successful participants in academic programs to pass. College is for them not so much an end as a social space where they have a chance to try out practices that are, they believe, valued where they are headed. It is to the ways in which they find and make space for themselves in college and the practices they take up that I turn next.

Chapter 7

Making Space(s): Activity Aimed at Gaining Access to College

In this chapter I turn from the ways in which successful beginning New Majority students turn college into spaces and tools that define and meet their educational needs to focus on the (inter)actions in which they engage in order to pursue their educational needs. Beyond making sense of why they were in college, the students in the study described two kinds of efforts. One, they act to make sense of the institutional space in which they find themselves, discovering and interpreting the norms and values that govern interactions, possible interpersonal relationships, and participant roles. Two, they pursue sequences of time- and place-bound goals and produce their education, action by action. In the next two chapters I explore the activities students pursue to make space for themselves in college and to meet the demands of college and complete assignments and classes. In this chapter, I take up the ways in which students are organized into and (re)organize an institution, and in the next, I explore the ways that students take up everyday practices to make do.

At one level, my exploration is conventional. There is a widely shared consensus that the success of all college students is a product of *where* students go to college—"institutional conditions"—and *what* they do there—"student behaviors." For example, the model developed by Kuh and associates (2007) posits that student outcomes are related to the intersection of six institutional conditions (first year experience, academic support, campus environment, peer support, teaching and learning approaches, and "others") and six aspects of student behavior (study habits, peer involvement, interaction with faculty, time on task, motivation, and "other"). This conventional model explains student persistence and growth as a product of the intersection between students' characteristics and prior experiences the conditions they encounter at their college, and their behavior there.

On another level, my study has little to do with the interactions of background characteristics, "institutional conditions," and "student behaviors." That is, while the factors Kuh and Associates (2007) list have served as a starting point for my study, I focus on student activity rather than characteristics, conditions, and behaviors. Study participants acknowledged that who the students in the study are, what conditions these students encounter, and what behaviors they adopt all matter. Yet, by necessity and inclination, these students and their colleges are also taking up what Williams labeled residual and emergent cultural practices as well. By doing the work of getting New Majority students started in college, they are putting college to use in new ways.

The MSI Models database provides a rich repository of representations and interpretations of what first-year community college students are required to do in order to progress and also what students, staff, and faculty observe first-year students to do in order to progress. While the successful New Majority students in the study made it clear in interview after interview that they need college to pay off in local labor markets and at transfer institutions, they also described educational practices that appear to enlarge and potentially enrich those instrumental goals. Many students who are bound on what one NSCC student called "the vocational track" are also choosing to use college to explore their sense of self, their home cultures, and the lives that they are living. For them, college is at once a means to a degree and also an opportunity to be involved in a cultural tradition or a religious group or, as a SDCC student put it, to "find ourselves." Some students—along with the staff and faculty members who support them—described putting New Majority institutions to the uses of a traditional liberal arts college, and, in so doing, they grant legitimacy to activities that sit in an alternative or oppositional relation to the now dominant goal of the efficient production of marketable degrees and certificates. Some students described discovering ways to repurpose traditional academic practices and tools so as to use college as a "way out" of family situations or regions or as a part-time job or as access to a state or federal subsidy or as a means of what a NSCC tutor called "class jumping."

As I combed through interviews in data analysis, I saw the representations and interpretations of many of the "institutional conditions"—"resources, policies, programs and practices, and structural features" (Kuh et al., 2007, p. 11)—that have been shown to matter to student success. Participants in the study were conscious of the resources and policies that define students' entry into college, the programs and practices that are available to them as they start their college career, and the places they take those activities up. As I reflected on their representations of these conditions, I began to outline a tradition, "an intentionally selective version of a shaping past and a pre-shaping future" (Williams, 1977, p. 115). I came to view the institutional conditions that these students encountered as they started college as requiring them to learn a set of hegemonic meanings, values, and practices and also providing them selected ways of thinking. I became equally aware that this tradition does not determine the activity of the students in the study. For them, learning what should be done in college is full of confusion and conflict. They arrive at college with lived experiences that shape their experiences in the institution. In turn, their experience in college—the practices they take up in school—both is hemmed in by what they can become within the institution and also potentially takes them beyond both their prior experience and the requirements of college. The participants in the study frequently call attention to the way that students and programs are adapting the practices available to them and taking up reflective and critical stances, hatching new forms of practice and communities of practice that hold alternative and oppositional views of what college is for, all without departing from campus or abandoning their aspirations for degrees.

In this chapter, I begin by overviewing the tradition in which students find themselves and then explore what they do to get in and what they do to make space for themselves within the tradition.

Participating in the (Selective) Tradition

Early in the coding process, I began labeling incidents with the code "following traditions." During a focus group at North Seattle Community College (NSCC), two pre-nursing students called the question as they reflected on the extent to which students are able to adjust the structures of institution. One summed up the reality succinctly: "If you show up, you show up. If you don't, you don't. It's your grade." One of her peers elaborated the idea: "If you think about . . . like the way that college works. I mean, this is a process that's been going on for . . . it's kind of a tradition . . . the status quo." It is a tradition, a NSCC tutor asserted in another interview, that was "frankly to some degree in my point of view constructed for the Gentleman's Club."

New Majority institutions, many study participants told us, enroll many students who have a very "vague" understanding of college. For them, successfully completing a degree is required if they are to "improve their lives," but the institution itself, a NSCC administrator observed, presents a "baffling system" that seems to operate based on the interests of others, on principles of "territoriality." In this tradition, most New Majority students subscribe to specific goals—a degree or transfer to a four-year institution—that are "not well-informed." Their participation is governed by "hidden rules" that often leave both students and teachers overwhelmed by the need to learn and teach "everything" in a domain since what they need to learn to progress is often opaque. For them, this system requires frequent "big steps" across "gaps" left between levels that are rarely "aligned." In this space, students focus on completing sequences of courses that appear organized by level and program but are untethered to the interests that brought students to college in the first place. To pass in this tradition, students adopt other people's plans and learn "generic" skills while they never quite leave their own "box." Success means getting to the next "step." Getting there means passing "three-credit" classes.

Within the tradition that participants recounted, faculty are contracted as discipline experts who "expose" students to content and ensure levels of student performance. Yet,

faculty expectations and sometimes course content appear to students to become lost in complex grading systems or idiosyncratic styles. In response, most students "shoot for a grade" or "what passes" in settings in which they do not understand the "application" of knowledge or skill. In such settings, progress is often focused on "basic skills"—even though no college wishes to be a "basic skills college"—and on "building skills" and "seeing content." Moreover, students attempt to progress, a NSCC tutor observed, even though they "don't really understand how it works yet" and in some cases "can't even decode the first paragraph." Students are stuck trying to write down everything or writing down nothing and "taking it in by osmosis." They "memorize and regurgitate" and then seek out answers to questions about their understanding of content and "argue for points." Those who "get it" are unconcerned with those who don't. As a Chief Dull Knife College (CDKC) math faculty member put it, many enter a cycle of "register for three credits, not make it through three credits, and eventually get discouraged and go away." They learn, a San Diego City College (SDCC) math faculty observed, to quit and move on when they fail or to conclude, "I didn't put in enough time."

Study participants emphasized that students need to see and even learn to participate in this tradition and, at the same time, take advantage of contradictions in "the way that college works" to rework college to meet their needs. Significantly, the participants in the study share the narrative of what the first year of college involves for most New Majority students, and they are involved in consciously reworking the same narrative. At one level, accepting a character role within the selective tradition is viewed as necessary if students are to be recognized as college students. After all, whatever else they seek in the first year of college, these New Majority students seek the status of college-ready students, a status that for most is neither part of a family entitlement nor one that they have acquired through prior experiences. At another level, aspects of the tradition and to a lesser extent the tradition itself appears to them to be an institution in-process and in some respects contradictory to the educational goals of New Majority students.

In the incidents that I coded "following traditions," I read a narrative that feels familiar. In the MSI Models of Success interview transcripts, I read stories about the ways that the places in which I have studied and worked since the early 1980s are organized and also many of the activities that my students and I have taken up, consciously and unconsciously. Participants also tell a narrative about a social space to which students come in order to "get somewhere," one CDKC student told us, primarily by starting degrees but also by learning how to make use of the space for other ends. The narrative is about a diverse set of endeavors. While everyone seems to be involved in moving students toward degrees, students have some goals in mind that are not shared by staff and faculty and vice versa. These endeavors all seem to revolve around what I will call "content," the knowledge and skills that students come to study and that institutions develop, curate, use to build new knowledge and skill, and sell. But what people chose to do with the same content and with each other depends on the interests or endeavors that bring them to the space as well as norms and values that define roles, organize content, and allocate status. The space is littered with processes that produce content: participants mentioned classes and textbooks, lectures and published research and also the Kahn Academy and study group conversations, parents' experiences and observations of experts at work. Most of the time, content and processes that produce content are located within programs and disciplines, so that, say, in the biology department, representations of anatomy and physiology are organized by system and subsystem while in the nursing department representations of the same content might be organized by process of diagnosis and intervention. In the following sections in this chapter, I offer a look first at how students in the study locate themselves/are located within the first year of college and then at the activities through which they gain access to the tools and interactions that support their progress on their chosen pathways.

Passing through Portals

As they reflected on the activities that contributed to their academic progress, the

students in the study often described artifacts and interactions that gave them access to college-level content. Nearly always, they entered college through the organizational processes that define the institution of higher education. They explained negotiating application and admissions processes, placement tests, formal relationships with staff and faculty, and performances that enabled them to pass credit-bearing courses. What these students appear to be less aware of is the extent to which their practices as college students are altering those processes. At each of the four colleges in the study, administrators described the organizational stress that their students create within the institution they manage. As a tribal college, an administrator there told us, CDKC was founded to manage this stress. She described the college as "an open enrollment institution serving a specific closed population that needs virtually 100% remediation for the foreseeable future." Educating students with diverse educational experiences and aspirations is what CDKC does. She found "disconcerting" arguments for limiting access to "remedial education" and thereby the pathway into college for underprepared students:

At a tribal college, you either make it work or you pretty much might as well close your doors. This is a discussion we feel as tribal colleges, and I feel intensely here. . . . We need to make it work. We can't lose funding. . . . We're the last best hope to prove with evidence and documentation and assessment that we can make it work.

Whatever else they are doing, CDKC are forcing a social space that has historically marginalized them to recognize them, if only then formally to exclude them. Administrators at the two borderland colleges in the study described having to come to terms with this same institutional stress. At SDCC, a vice president observed that "data and a sense of experience" had led to the realization a decade earlier that "increasing numbers of high school students coming to us as first-year students are increasingly unprepared to be successful in college level courses" and are arriving at a moment when the institution has fewer resources to educate students. He went on to describe the FYE as a "structure"

designed to meet this challenge by offering a "tradeoff": the college provides a rich point of access, and students get on a pathway.

When you assess into certain levels of English and math that's what you take your first semester. You don't put it off, you don't delay, you don't start wandering through the curriculum taking what your friends like or what you heard about. You start on the pathway to what we know to be a successful pattern, which is start with what you need to build up to and then move into the college level curriculum. . . .

So I think our real decision was providing structure. Now, I'm not going to say any old structure will do but you could have each of these individual things, and we had many of these individual things available here and there on campus. I think you start building a student expectation that goes out more than two or three days from where they're standing right now. They can begin to see what a semester looks like and that helps them picture an academic year and then a goal and a conclusion coming into view, be it graduation or transfer. I just don't think that having a student come across raw, even to a wealth of opportunities and services, is sufficient. I think you have to put them together in a package, you have to introduce the student to the package and then you walk them through at least their first semester if not the entire first year so they get used to that new pathway.

An El Paso Community College (EPCC) vice president pointed to a similar challenge—the college readiness of incoming students—and offered a similar process that puts students on a pathway before they matriculated. At NSCC—the institution most recently designated a "Minority-Serving Institution"—this stress is perhaps felt most profoundly among the institutions in the study. The college, an administrator explained, serves a rapidly diversifying neighborhood; traditional, White students seeking transfer degrees make up a smaller part of the student body than ever before. The college is wrestling with how best to

empower students who are learning English, living in immigrant communities, and working full-time in their struggle to get started on a college education.

The institutional stress that is part of educating growing numbers of underprepared students is transforming the point of entry to college at these institutions. For example, many students described routinely using a suite of digital portals—from no-stakes attempts at placement tests to computer-based learning systems to course management systems to Facebook—that expands their access to college-level content and to interactions with peers, staff, and faculty far beyond class time or even the hours their college is open. They make substantial and often sophisticated use of portals outside the classroom including formal supplemental instruction programs (SI) and student support services as well as conversations with peers and family members and even employers about college going.

In some instances, these portals are designed to empower students to generate new content and styles of interaction. SDCC FYE students become FYE peer mentors who develop new content for FYE workshops. Faculty in the math emporiums at CDKC and EPCC observe students using computer-based math learning systems to establish informal cohorts of students who are struggling to make sense of the same content, cohorts that from students' perspectives serve to frame and answer questions about math and about negotiating college. Students in the NSCC pre-nursing cohort complete formal mid-quarter Small-Group Instructional Diagnostic evaluations of their courses. Several of these students described using textbook descriptions and online animations and faculty-generated PowerPoint slides not only to access content but also as points of departure for the development of customized descriptions and visualizations of course content—new "textbooks" that they shared with their peers. In this section, I describe four characteristics of these portals that make them useful to students in the study.

Markers of "where they've left off."

Most of the students in our sample of successful first-year students have made inconsistent progress toward their educational goals. Students themselves described

stopping out of school to raise children or care for family members or make rent or get out of a homeless shelter. Campus staff and faculty members acknowledged that students were more likely to be successful if they made steady progress and also that their students' academic progress was likely to be interrupted. A CDKC math faculty member explained that given the realities of their lives, many of his students depend on portals that help them keep track of "where you were when you left the last time."

Various portals support this kind of activity, computer-based learning systems that keep a record of student performances or case-management-style advising systems or formal educational and career plans. In some instances, points of access are designed to document incremental progress. For example, in several of our interviews at SDCC, administrators, staff, and students referred to "the office." Run out of the First-Year programs office, the SDCC FYE "office" is a place where students come with questions and where mentors, counselors, and faculty file "those forms . . . that keep track of who is doing what." While other portals that keep track of "where you left off" were less formal than the FYE "office," they seem to share its basic qualities: these points of access to college provide students a point of return where they test what they have accomplished so far and see a record of their (inconsistent) progress.

These different portals play similar roles. Reflecting on students' experiences with a computer-based math curriculum, an CDKC science faculty told us that the database in the system enabled the college to allow students to pick up where they left off and so to keep from "doing all of this stuff over again." This record of past performance had the effect for one student of showing him that he was "more capable than he thought" and making it possible for him to complete the remedial math sequence. In a similar vein, an EPCC Early College High School faculty member described the dual enrollment classroom as a space where faculty and students routinely identify the content that students will encounter at their next institution and link that content to "what you know." This sort of classroom served as opportunity to "recall what you know" and become "prepared" to encounter

"something that you don't know." As an EPCC math faculty told us, a math emporium provides students who struggle to maintain consistent attendance an opportunity "to be here . . . all the time."

Across these experiences, students appear to use what an EPCC College Readiness staff member thought of as a "second opportunity" or "second chance" "to realize what I need to do." That kind of point of entry leads them, she explained, to begin to ask, "Can I solve this? Does this make sense?" more often than "What do I get [on that assignment]?" That is, these portals include opportunities for students to assess the capabilities that they bring back to the situation. They may engage content through an intelligent tutor that enables them "to go through every question and see what you did right and even what you did wrong" or a teacher projecting statistics about the relationship between the frequency of meeting with SI tutors and student GPAs or an instructor reminding students of what is on the calendar and what is in the grade book. These points of access to college are defined in part by assessment that is immediate and formative; it always includes, SDCC faculty and students told us, information about "where to get help" and what the next "steps" are.

Pathways to futures.

The discussion of educational and career pathways is now ubiquitous in educational research and policy. I take up that term here in a more limited way, namely, to indicate the role played by programs of study—formalized sequences of educational opportunities that lead to some explicit goal. Beyond keeping track of where students have been, effective portals at colleges in the study engage students in representing where they are going and mapping out pathways to their futures. In a group interview, two NSCC staff members emphasized that unlike "traditional students," the students that their college serves in programs like the WDC Pre-Nursing Cohort often get lost in an institution that "silos" financial support, registration, academic support, and instruction in different departments. Working students and students who have historically been failed by American education won't stick around "waiting on our college to come through with resources." It's not, they

added, that these students are unable to meet the demands of college but that they find the "complex system" that was designed for traditional students to be an ineffective portal given the other demands in their lives. By their own testimony, these students are looking for points of access to college that enable them to connect college explicitly with where they are going and to set out on their pathways. Three discrete kinds of pathways emerged in our interviews: pathways to further education and careers, pathways to competences, and pathways to community development.

The predominant pathway that guides students in the study into college guides them to the education they will need for a career. The program we studied at NSCC is a career pathway by definition, but students at other institutions were no less likely to explain their entry into college in terms of starting on a pathway to a career. As participants in the study emphasized, most of the students in the study come to college with a vague notion that college leads to a job. The programs in the study are effective portals in part because they familiarize students with formal career pathways in mandatory orientation sessions and meetings with counselors and workshops. At EPCC, faculty and staff members explained, students talk about different programs and careers as they go through the placement process. These conversations lead many to find "the incentive to accelerate" through remedial services. College for many of these students is redefined through first-year advising and instruction as progress on career pathways. A CDKC student who started college "hating math" talked about becoming comfortable with learning math—even acknowledging "I guess I need to know math"—as she worked through real-world problems in remedial math classes and was guided by remedial math instructors to complete the requirements for a business program. EPCC Early College High School students and SDCC FYE students see banners of transfer schools across their campuses and become engaged in what three EPCC staff described as a "healthy competition" in which they try to qualify for campus tours and scholarships.

In the process, an EPCC counselor explained, their conception of the pathway firms

up:

So now [through a campus tour] they set foot in the university. They get a feel. They overcome the intimidation, and they start becoming excited. Again, I come out with the dreams. I have this board [that tracks rising SAT scores and campus visits]. . . . And they want another college trip. Why is that good? Your ticket to come on the first tour was any student who had registered and had taken the SAT and ACT. That was their automatic ticket. Now for the bigger trip, it's a minimum ACT 22 or 1000 on the SAT. I mean they're going for it. They're already signing up for it because now they know the meaning of a 22 on the ACT. They know the meaning of 1000 SAT. So now they come in. "27. Am I going?" All right. "1400, am I going?" We're getting those scores now whereas in the past, they didn't know the relationship "What's a 22? What is it for?" But now when they know that a 22 assures them admission, a 25 assures them scholarships, they're surpassing that.

A SDCC counselor observed that the "exposure helps motivate them even more toward that goal of transfer and ultimately reaching their career goal." At both EPCC and SDCC staff assured us that such exposure was a formal program requirement.

In addition to motivating students, portals that make explicit pathways to the education students need for careers makes sound financial sense for the students in the study. Students across the four programs in the study described taking a more efficient path by accelerating through remedial course work and not "wasting" their time on courses that are not part of their program. Early College High School students pick up college credits as high school students and automatically qualify for scholarships; students in the NSCC pre-nursing cohort trade commitment to the program for a full ride; SDCC FYE students register early and complete the classes they need for their degrees at a higher rate than their peers; CDKC students who "finish their math" become eligible to work on summer

research projects. The career pathway, an EPCC staff member observed, "opens doors" for students and their parents who come to "see college as an option they never had before."

While one or another career pathway is the chief point of access for nearly all the students in the study, many students in the study reported that they resist seeing their education as merely job preparation. In a focus group, a SDCC student made a clear distinction between education that leads to a job and the education that students in the study pursue:

I worked so many jobs, after jobs, after jobs, and now it's like I see how career is important and going to school is important to get that career instead of just having a job, after job, after job. It's not like back in the older days where you get that job that your grandfather did, and you're with that company for a long time. Now-a-days with the economy, everybody's getting cut, and the hours . . . They're trying to keep everything under the healthcare requirements. So it's important for me to go back to school. And it's more interesting for me to go back to school because I'm more willing to learn it, and I'm sort of like a sponge because it's something that I want to do more than I have to do.

Entering college on a career path may make college relevant for students for whom college is necessary but not a social entitlement. That relevance, students told us again and again, makes them better students. It enables them, I came to realize, to use formal educational pathways to cultivate a range of competences while they pursue career pathways. Consider the reflections of a non-traditional student who started her college education at the very beginning of the remedial math sequence at CDKC:

One of the things I think, again, I don't know how the other teachers do it but what [my teacher] has taught me is how to think about math in, I guess, a practical way. I think about, "Why do you do it this way?" or "What's the best way to get the answer?" Not, "I have to do it this way because the book tells

me to do it this way. There might be a simpler more practical way for me to figure it out." So I was able to take those ideas and give them to my son who maybe was struggling with a particular chapter in math. I was able to say, "Look and watch how I do this." And it was easier and made sense. So that was good. Thinking that it does matter like [she] was saying about percentages. I always struggled with how do you figure out the percentage of a bill or a check at the restaurant or whatever.

This student told us that her success in math classes notwithstanding, she would not take much more math. Her goal was to be an early childhood educator on the Reservation. She "didn't need much more math." Yet her peers and teachers saw in her a student who is "going somewhere," a kind of role model. Faculty at NSCC spoke of pre-nursing students in similar ways. They are racing through a rigorous curriculum, learning the STEM they need to pass classes and prepare to be nurses, but many also exhibit a "sense of wonderment" about microbiology or anatomy and physiology or the anthropology of health care. Like the woman at CDKC, two NSCC students observed that the demands of their lives—and neither their intellectual ability nor their curiosity—led them to limit their exploration of course content. They learned what they needed to learn. At the same time, more than one student reminded researchers from big universities that they too are using college to "find themselves" and pursue their "interests" even though they do so on a limited budget.

Still another pathway that makes college accessible for the students in the study leads to what I began to code as "community development." All four institutions in the study were leveraging funds from federal and state agencies and private foundations to build specific educational pipelines. Students at CDKC, for example, described getting their start in college through federally funded programs designed to cultivate Native American STEM professionals who are able to solve problems and develop new technologies in Indian country. In a similar vein, SDCC cultivated foundation funding to add a service-learning component to the FYE program so that first-year students could see how college education

might be put to use in agencies that serve their home communities. The College Readiness Initiative at EPCC and the pre-nursing cohort program at NSCC each thread together funding from various sources to build pathways to degrees that are relevant in local communities and labor markets respectively.

The students in these programs had varying levels of awareness of the design of their portal to a college education—in one instance, a first-year CDKC student schooled Study researchers on a national program that guides American Indian students into medical fields. Most often, they saw the programs that gave them access to college as opportunities to pursue their "interests" and enter a field with long-term professional and economic returns. They did understand, based on their conversations with students outside their programs, that their entry into college—defined by frequent check-ins with faculty and counselors and peer mentors concerning their education and career plans, tours of four-year campuses, opportunities to do research in the summer and service learning through the year, and a host of other opportunities—was not typical. Even a student who sought more independence grudgingly conceded that the program "is there for us to be trained for the world." Two EPCC students explained how their programs were aligned to local career opportunities, from the selection of classes and content to choices of pedagogy.

From the point of view of administrators, pathways to community development potentially recast the entry into traditional academic programs as responses to local interests and needs. In one instance, an EPCC administrator pointed to a neighborhood in the distance and recalled the design of an Early College High School:

When we were putting [this Early College High School] together, we knew that the students we were going to draw from were going to probably come to us less prepared than they would be at other districts. We also knew that they were going to back to or homes, have different pressures there, sometimes even pressure to work while they're in school because the family needed that income. So while we were putting all that in place, we knew that we were

going to have to set up as many support systems as we possibly could to help those students succeed. I think through the years we've gotten better and better because again originally we had some issues that since then we've addressed. I think the selection process is going much better now. The buy-in from the community is much greater. They now have seen many of the successes that have been caused by the early college high school experience. I think because of that we are getting the student that comes in more focused, more prepared. We're not just trying to go out there and get any bodies. We're literally working with them to see what their interest or not and if that is not something that they're interested in, let's say they're being pushed by the parent, then again we can help facilitate that conversation and then they can make the decision whether this is truly for them or they just want to go next door to the high school.

Two students from this school who we interviewed knew none of this history, but they were conscious that they were on a different pathway from their peers "next door" and that this pathway had made transfer to a four-year school a reality for them as first-generation college students. They shared two other characteristics. As tenth-graders, both had selected academic majors with the intention of becoming professionals that could meet regional needs. Both also wondered aloud whether, given their family circumstances, they would be preparing to transfer if they had not found this pathway.

While students in the study were aware of each of these three pathways, these pathways often blur. In describing his access to college, one SDCC student recounted in detail a conversation with his cousin—a successful college student—about what he studied. Together, they "brainstormed" and "even wrote down" what he "could do fluently" and what he "wanted to learn." Already working as an athletic trainer, he let his interest in the human body lead him to more questions and the review of a hospital web site department by department, "radiology, neurology, occupational therapist, like all that. I chose

pharmacology, pharmaceuticals. . . . In the very beginning, that's what interested me." As I probed about how that interest evolved as he went through the SDCC FYE, he paused and then said:

You know what's funny about that actually . . . my Myers-Briggs Type Indicator score . . . I forgot which were the top five professions for me, but one of them was anesthesiology and another one was like real estate or something. So I got that information even after [my cousin and I] brainstormed on what I wanted to do. I was just thinking like I think that's . . . It's confirming it. That's my goal. It took a lot for me to know what I wanted to do. On top of that too, like I was saying, my hobbies, my qualifications, everything, but at the same time is where like, of course this economy we live in, where is the money going? . . . At the very end of the day, you've got to make rent, right.

Like many students in the study, this student got started in college because he found and entered a portal that enabled him to construct a pathway that makes financial sense in light of his personal and cultural interests.

While these pathways are effective portals because they provide and promote "structure" in an education, they also encourage acts of what I came to understand as academic independence. Students in the study viewed their access to college primarily as an opportunity to choose a pathway rather than as an opportunity to join an existing academic or social community on campus. CDKC students in two focus groups emphasized that the opportunity to choose their own "pace" was central to their success. They connected their accelerated progress through a remedial math sequence directly to being able to come back to math problems as many times as necessary at times and in places of their choosing. NSCC faculty emphasized that for their students, independence means the opportunity to commit to a vocational program without first having to match predetermined academic selection criteria. Given freedom from the need to earn a "4.0" in their initial classes gave

students who "in general classes would have failed out in the first quarter or two" access to education, and it "allowed them to really explore and develop skills and develop confidence and really see in themselves perseverance."

Across campuses, participants told us that academic independence contributes to a successful start in college by making college interesting. As EPCC staff explained and participants across the study confirmed, the act of choosing a path opens opportunities to "start to figure out what you want to do" and "what will make you happy." Students and staff alike told stories of students having to distinguish their own educational pathway from the pathway their parents had chosen. Even in the NSCC pre-nursing cohort program, the most narrowly vocational program in the study, students and staff described choosing the program out of a "passion" for the vocation. In introducing themselves, students narrated life stories that brought them to nursing, and staff talked about an interview process that selected for students more on the basis of their vocational commitment rather than their prior academic achievement.

The students in the study describe a connection between choosing an interesting pathway and doing "interesting" intellectual work. Many of the students who we interviewed, the phrase "interesting" had a different force from the phrase "interests." An EPCC student explained that in choosing first to attend an Early College High School and then an engineering program, schooling had "evolved from a means to provide for your family to a means to . . . knowledge." He was, to use the language of an EPCC math faculty member, doing "interesting work" or learning at a "conceptual level" and not just doing "these 20 problems." "It definitely makes a difference," a SDCC student said, "if it's interesting." Doing interesting work for her meant working toward "a full understanding" and becoming willing "to actually sit down and study it, like know it." Doing interesting work can make a student, another SDCC student told us, "a fast learner," a student who "pays attention . . . just makes the effort to actually complete the work."

Inspirational interactions.

To be sure, the students in this study access college by way of the interactions that are enshrined in the tradition: they encounter faculty in classes and office hours, staff in advising and counseling appointments or at help desks, and peers wherever. But the colleges in the study are steadily transforming interactions that define the first-year of college, experimenting with case-management approaches to advising, emporium-style classrooms, supplemental instruction, and various blended learning techniques; they are arranging classes and programs so that students meet up with faculty, staff, and other students in learning centers, discussion forums, text messages, "personal growth" workshops, and campus tours. The goal is interactions that motivate students to believe college is "something you can do," as one EPCC counselor explained it. Participants in the study called out three qualities of interactions that are "inspirational"—a phrase used multiple times at each site.

From the view of the participants in the study, routine interactions become inspiring when students recognize that they are engaging advocates, people who "have their interests at heart" or are "invested in them" or "value them." They described the importance of faculty who were present in learning centers and who responded to emails, who taught a tribal language or taught math in ways that convinced them that math was "for them" too. One SDCC administrator recalled conversations with students who were "surprised that there's this kind of support at the beginning"—that the FYE existed and that the college and the FYE staff were so invested in their success. These interactions inspired them, other staff members at SDCC observed, and led some students to "see a calculus professor in the same way that they see their personal growth professor," a person with a stake in their development. Several faculty acknowledged that their inspired students led them to rethink how and what they taught and turned them into advocates for New Majority students despite their finding these students "hard to love."

Interactions with advocates—everyday interactions like classroom discussions of

writing assignments or math problems or advising and tutoring sessions or brief exchanges before and after classes—often promote what several participants called "scaffolding." In these interactions, students feel able to restate their questions and prior understanding and confusion in dialogues that honor their role as student—dialogues in which they are expected to try out technical language and expected not to get it right. These interactions result in "clarity," a SDCC English faculty told us, and "clarity motivates." First-year SDCC students, he and some of his colleagues reminded us, have learned to associate being confused or intellectually challenged with failing. Inspiring them to take on new challenges entails "giving them enough structure so that [they] feel like they know what they're doing but then enough room" so that they have to engage in "divergent thinking." They need, this English faculty member went on, interactions with experts—teachers and support staff as well as peer tutors—in which they hear again about what they are mastering and also demonstrate their level of mastery in a situation where they can "receive help." These interactions are not, he emphasized, "reteaching." They are instead scaffolded practice in which students "call the session" and then with the help of an expert assess what they have "accomplished."

An EPCC staff member elaborated further why the clarity that emerges from scaffolded practice in college going matters. From her perspective, students need to articulate their beliefs about college going and then hear "reasons why [college] is possible." That is, they need to engage in on-going argument about why "they can do it." If the reasoning is sound, they begin to believe that they can achieve higher placement test scores or make it to college algebra or stay with a cohort that must complete two classes every quarter with a 2.8 GPA. Again and again, participants in the study described instances of students successfully seeking out clarification through text messages, discussion board postings, and interactions with faculty and peers before, during, and after class. The activity of "relentlessly getting their questions answered" transforms routine interactions into opportunities for translation during which students listen as others restate college-level

content. Staff at all four campuses asserted that the students in the study are marked by a willingness to keep asking questions until they are able to explain what they once did not understand to others who "need help." Moreover, they appear to be as likely to ask questions about how to derive a formula as to ask questions about how to find a scholarship. These interactions empower them, a SDCC peer mentor and former FYE student thought, "to utilize the freedom of college."

These scaffolded interactions with advocates are inspiring in part because they are accompanied by a "feeling" that participants struggled to explain. An EPCC Early College High School student mused about what it felt like to finish his high school education at the same time that he took junior-level engineering classes at a regional four-year university. It was, he said, "personal":

I can't really explain it. It feels good to learn. And after a while you understand that I'm not just here to get a job. I'm here because I like doing this, and I like solving these problems. It's kind of fun in the end. So, it's kind of . . . I don't know, you kind of get obsessed with learning new things.

Participants at each campus talked about what I came to think of as the experience of progress. At CDKC, administrators and faculty spoke of "the joy of learning" and students "catching fire" as learners. CDKC and EPCC students described, not without surprise, getting "really into my homework" and getting "lost" in learning, finding school to be "fun." In a striking understatement, a CDKC student who was just completing the remedial math sequence sighed and said, "Yes, I feel pretty good that I've come as far as not to hate [math] and dread it." At CDKC and NSCC, other students linked the feeling of progress to fluency with "shortcuts" that led to deeper levels of understanding. In several instances, students at each of the campuses linked doing "really well" in one situation—a remedial math or chemistry class or the English portion of a placement exam—to doing really well in another situation.

The students in the study described points of access to college as powerful to the

extent that they provided them feed back to their progress towards interesting ends and provided that feedback in inspiring ways. Powerful portals provide opportunities to experience progress, experience that seems to lead to "hope . . . hope that they can learn" and then "excitement" about "what they can learn," a CDKC administrator explained. One SDCC student who had surprised herself with a 4.0 first-year GPA confirmed this notion. The evidence and feeling of progress, she thought, made her "okay with being so studious."

Designing Educational Spaces

As they pass through portals into college, the students in the study tend not to approach college as primarily as a self-aware consumer who is getting a credential while changing as little as possible—an activity that Labaree (1997) argues American colleges and universities are largely designed to support. These students are attending institutions that do not confer much social status, and most of them progress through these institutions inconsistently. In one interview, a CDKC faculty member reflected on the ways in which his students move toward degrees. "You would like to think that as soon as they leave here two years later they're going to complete their nursing program," he said. "But I follow students." The progress of his students, he explained and his colleagues confirmed, is not ensured by access to educational programs. He offered two stories to illustrate the point.

There's one student out there that because she had gone to [Montana State University in] Bozeman first before coming here and hadn't done well at Bozeman, and then she came back here. Bozeman's policies are you have to have a 3.0 or above to get into the school of nursing, and, no, we don't care what other school you went to. Here's what your grades were here at Bozeman. So you're going to have to come back [to CDKC] and take these classes. You're going to have to get your grade point up above 3.0, and then [Bozeman] will give you consideration for getting back into the school of nursing. So she's actually completing a year this spring and hopefully she'll

be up to the 3.0 which will let her in. Had another student [at Bozeman] that had two deaths in the family in her spring semester a year ago, and down here you need to be involved with your family on those things. It resulted in failure, and then she had to reapply. She's still here on campus right now, but she was just notified this spring again that she would be readmitted to the program. So she'll be going back.

Their prior educational experience and their social and cultural commitments disrupt the educational progress of many of the students in the study. Their lives have not set them up to "do well" in college. In addition to access to classes, they have to find educational spaces in which they can "do well" while they meet the demands of their lives away from campus. For most of the students in the study, making progress in college appears to demand that they approach their education as critical learners who are willing to take up new ways of speaking, listening, acting, reading and writing, thinking, feeling, believing, and valuing. That is, they have to become what Gee and others think of as "designers." Willing to spend time in physical or virtual spaces in which they have access to people, tools, and technologies that will enable them to "do well," these students are actively learning the principles and patterns that organize content in the space and the sorts of identities and practices that people take up when they work with content in the space. Moreover, they understand that the patterns and principles that organize classes and programs both limit what they are able to do as college students and also are open to manipulation. In this section, I explore the ways in which these students and their advocates find resources, develop skills in leveraging resources, and rearrange¹ resources so as to make college programs into powerful educational spaces.

¹ Any hegemonic is effective to the extent that it motivates "a (resigned) recognition of the inevitable and the necessary" role of dominant institutions (Williams, 1977, p. 118), and any culture is shaped by its institutions and more importantly the interrelations and contradictions within and among those institutions. The effectiveness of institutions is most immediately recognizable in formations—conscious movements and tendencies, "literary, artistic, philosophical or scientific." Formations, according to Williams, consolidate specific practices, namely ways of acting in the world that enable

Liminal spaces.

As I reviewed the ways in which students talked about inhabiting the programs in the study, I began to see these programs as liminal spaces—spaces between students' lifeworlds and the institutions from which they hope to graduate. The four colleges in the study are clearly liminal educational spaces. As New Majority colleges, these institutions are positioned between jobs and careers, high school diplomas and bachelor's degrees, interests and expertise. As importantly, these four community colleges inhabit cultural and social, even geographical liminal zones. EPCC overlooks the Mexican border and enrolls a student body that is more than 85 percent Hispanic. At CDKC, tribal elders teach the Cheyenne language and science faculty direct studies of local water quality funded by the National Science Foundation. All of the colleges are home to social services and transfer programs. It is not surprising that the students in the study—successful first-year students—are learners who seek out liminal spaces so as make going to college "easier." These students appear to look for, create, or fall into spaces with two qualities: proximity to their lives off campus and the low-stakes availability of the tools of the trade.

Proximity.

In order to explain the significance of the location with a college campus of Early College High Schools, an EPCC staff offered an example:

I'll give you [one ECHS] as an example. Some of [that principal's] students were just having a hard time thinking of themselves as college students because they weren't going to a college—their early college is an old elementary school. So she was trying to establish that college culture. And the faculty are credentialed, but students don't think in those terms. Once those EPCC professors started going to the campus this last semester, now they really feel like they are in college, and a few of them are actually going

to EPCC. Not all of them are ready. Not all of them have passed the [placement test],

"Feeling" like a college student, she went on, is not the product of a test score or a curriculum. The feeling results from time spent in places with people who are doing what college students do. In the EPCC context, promoting that feeling has meant bussing ECHS students to a college campus and limiting the number of ECHS students in any given college class: "We try not to stack a class with early college students, because if you have a class of 20, and 18 of them, you're kind of losing the whole point." The point, a NSCC administrator argued, is not simply "co-location." It is social proximity that facilitates "connections" between beginning students and people and resources already on campus: "The idea is support that just permeates everywhere and then everyone is connected. That's my dream." Other NSCC faculty and staff named the dream more simply as a "net of support."

Students sought out and arranged three sorts of proximity. The most obvious is temporal: they are oriented to classes and programs that they are able to fit into the schedules of working families. As one CDKC student put it, going to college at all "depends" on college matching up "your work schedule and your availability to do it." At each of the other campuses, working students detailed arranging their academic lives to fit into their off-campus lives. Many of the full-time, traditional-aged students in the SDCC FYE program spent their entire day on campus, but again and again they described fitting that time commitment into a long-term plan for getting to a degree, a job, a career; often, they worried about not having a job. At every campus, students described learning time management as critical to their progress and in many instances grudgingly conceded that they needed to use campus resources to help develop that skill.

In addition to arranging their participation in academic programs to overlap with "master calendars," the students in the study preferred to participate in programs that were spatially in between their lives and their colleges. The students in the study did not describe their first-year as going *away* to college. EPCC Early College High School students, for

instance, described an incremental transition, first between dual-credit classes at their high school and college classes at a collocated EPCC campus, then between that co-located campuses other EPCC campuses, and then between EPCC and a regional university located between two EPCC campuses. Some described this transition as moving from "small" to "big" institutions or classes and explained seeking out spaces that were, as a CDKC student put it, "not too small and not too big." They also looked for educational spaces that were located between where they lived and worked and where they were going. CDKC students talked about possibilities of CDKC leading to additional educational opportunities in Billings and Bozeman and other cities in adjacent states; traditional-aged EPCC and SDCC students saw their college as positioned "close to home" and as a stepping stone to four-year public universities in their cities. NSCC students spoke of the NSCC campus as a space that they came to from where they currently worked and hoped to work with an associate's degree in nursing. A college is a place to pass through on the way "somewhere."

In addition to finding temporal and spatial liminal spaces, the students in the study look for educational spaces that are staffed by people who sit between their pasts and their futures. They were vitally aware that college staff and faculty often expected them to "adjust" to the ways of speaking, listening, acting, reading and writing, thinking, feeling, believing, and valuing that are enshrined in the institution. While they were willing to comply, these students looked for advocates who could support something akin to linguistic code switching. At EPCC, one student put this strategy straightforwardly: "Most of the faculty at EPCC are also from Mexico," and "they make the class very understandable. . . . I guess they take more time to teach the material." She went on to explain her interactions with her counselor who shares her story of immigration and attending high school and college in a second language. For her, that counselor—who in a separate interview spoke candidly about using Spanish and encouraging students in Spanish to practice their English with her—could explain program requirements and guide her through the placement process in ways that were "understandable" for a student still becoming college ready.

Students described NSCC navigators and SDCC peer mentors playing parallel roles. A NSCC pre-nursing student who had made two false starts on her college education explained that she sought out teachers who are passionate and who are positioned in between college and her lifeworld:

Well, for me, I really like the fact when people can . . . I'm more of a visual, and if you can tell me then I think I can understand it better or maybe remember better. So, really teachers who are passionate about . . . what they are teaching that absolutely, they just are excited, and they love it, and they want to share it. Then it really kind of . . . I don't know, it helps me . . . I don't even know. It helps me understand in a way because it doesn't feel like it's some kind of torture that I have to just sit and listen to something that is not relevant or that I don't understand. Really, I like to be able to ask questions and have people answer.

In this case, the student tries to arrange her education so that she learns from another learner rather than a faculty person who professes. And she is as willing to learn from peers as from teachers, as long as she is "able to ask questions and have people answer."

Program administrators and faculty at all four colleges spoke repeatedly about the need for "adjusting" learning and teaching practices and faculty development and, in some cases, course and degree requirements and hiring practices so as to create interpersonal proximity. "We need to do it differently, obviously," a CDKC administrator asserted:

The standard way didn't work for our students once upon a time and was anxiety inducing, and now they have math phobia Why would you stand up there like a third grade math teacher and try it all over again the same way? Let's pull up the flash cards, everybody line up. Okay, what is this? Oh, so I can be embarrassed one more time in my life?

What "we need to do," she argued, is to find the "right mix of people."

In a focus group, NSCC staff and faculty members involved in the day-to-day operations of the Pre-Nursing Cohort Program reflected on what the "right mix of people" do. A staff member used the metaphor of a net into which people jump to escape a burning building:

We're here to help. They can jump. They can take that leap of faith and they can do it and not crash and burn, whereas the other students, if something happens, if their kid gets in the hospital or if they lose their job, or if they're, whatever stuff happens, there's just nobody that's kind of overseeing, and supporting, and nurturing, and kind of providing.

To get started toward a nursing degree, she urged her students had to find space to jump into that gives them reasons to believe that "they can do it and not crash and burn . . . if something happens, if their kid gets in the hospital or if they lose their job, or if they're, whatever stuff happens." They need a space in which they believe that somebody "is kind of overseeing, and supporting, and nurturing, and kind of providing." Another staff member—a member of a non-profit that promotes workforce development—elaborated on this idea. From his point of view, students in the pre-nursing cohort need spaces that mediate the financing of their education, learning opportunities, and personal development. Spaces in which they have "built-in" access to tutors and teachers who are "interested" in the success of New Majority students as well as timely financial aid, financial counseling, childcare, and "rent assistance and car repairs" when they need it.

The MSI Models of Success interview suggest that in these four colleges, students are pressuring their colleges to create spaces managed by "people" who are positioned between their students' worlds and the institution. The pressure is both negative and positive. All four colleges have substantial data indicating that their—student that they serve by "mission and inclination"—stop out of traditional curricula and that these same students have different outcomes if they are engaged with tutoring and support services, SI, and learning centers. "The data," administrator after administrator told us, are pressuring

institutions toward case-management and customization, toward the creation of liminal educational spaces.

Strategic engagement.

Students engage programs positioned between students' lifeworlds and college in a distinct way. As a NSCC faculty member put it, "taking the jump" into college meant that students were prepared to take on "these high expectations" and then become members in networks that "help them think about how to be students and think about how to deal with the material." Other participants confirmed his observation. In their practices, engagement for New Majority students seems to mean finding spaces where they can talk frankly about requirements and approach their education as a project to be completed.

The participants in the study were quite clear about students needing to meet "high expectations" and, in so doing, become "college ready." They sought out situations in which they engage in what a SDCC staff member called "getting honest." That is, they relied on the availability of opportunities to rethink their basic assumptions about college going. A CDKC administrator explained the way in which some students and faculty in STEM programs began to problematize "the notion that everybody gets to go to college." CDKC students who successfully entered STEM programs, he said, were faced with "hard choices" about how they would remain members of their families and communities on and near the reservation as college students and college graduates. That belief did little to prepare them for the academic demands of STEM programs or to finance an education that began in remedial classes. This administrator went on to explain how faculty developed a basic science seminar to engage underprepared students in doing science and learning math as well as to talk about the requirements STEM programs and college going. Most students left the seminar, he observed, with a new assumption about college going: "If you work your butt off, you can go to college."

Students at CDKC and other colleges described opportunities to come to peace with requirements. Many took classes from faculty who, based on our interviews with faculty and

staff, "see students from a holistic view, not just from an academic standpoint" as "human beings" who are learning content and meeting requirements for their own purposes.² These students explained coming to the "realization" that "getting off the reservation" or away from the "struggle" they saw in their families or to "my dream" entailed "exploring opportunities" and adopting new behaviors. Pointing back to interactions with counselors and in workshops, students in the study often spoke fluently about the "requirements" that they had to meet in order to take advantage of these opportunities. At SDCC, engaging requirements is hardwired into the FYE: students contracted to complete required Math and English classes in their first year; at NSCC, students understand that whatever happens at home, they have to complete their required courses and exceed a minimum GPA; at EPCC, students described taking a placement test months or even years before matriculating to college so as to take personal responsibility for being college ready. In several instances across campuses, students explained how preparing to meet requirements opened opportunities—admission, scholarships, relationships with professionals, jobs—and also how failing to meet or choosing not to meet certain "requirements" had altered their educational plans.

Students in the study use opportunities like these to understand program requirements and also to reflect on their assumptions about college going. Across sites, students described in detail their understanding of how they learned best and what they needed to do to position themselves to meet expectations about the mastery of content. Consider the case at NSCC. In a focus group, one student explained that her program was unique in that it selected students already working in the field who "wanted to advance and make themselves better." One of her peers added that joining the cohort invited him to

² To be sure, these students are aware of how they learn because they are in programs that require them to think about how they learn. The NSCC Pre-Nursing Cohort program, for example, selects faculty who will adopt a "method of instruction" grounded in adult learning theory and has infused those principles explicitly into review sessions and counseling appointments. This institutional influence notwithstanding, students across the sample recounted learning about their "learning styles" and about strategies for learning and then went on to explain what they had done with that information so as to be among the students that we interviewed.

think of himself to as "the cream of the crop" in school and at work. In a separate interview, another NSCC student explained that for her the opportunity to join the cohort resulted in "a mixture of excitement about the possibility of being in college and moving on with your career and nervousness because . . . we understood there could only be so many people accepted." "Working against the computer" in the CDKC remedial math program and developing an educational plan at SDCC had similar effects. Students leveraged opportunities to think about their own development. As a SDCC student observed, "[participation in the FYE] gets me thinking a lot, and it's like, 'Oh, what am I going to learn today that's going to help me in the future.'"

Across the programs, one of the central strategies students described for meeting program expectations was engaging classes and majors as projects they were completing or as means of getting hired on projects related to their educational goals. In some instance, school literally was project work. At NSCC, for example, students were employees selected to participate in intensive professional development program that happened to lead to a degree. At CDKC students learned math and science as paid employees on NSF-funded research projects. In some cases, the project was virtual. At SDCC and EPCC, students described entering programs—the FYE and an Early College High School, respectively—as part of a long-term strategy for funding a bachelor's degree and entering a profession. CDKC remedial math students and EPCC students completing their high school diplomas through the Gateway program described school as coming to work, which included using a computer to make note of what learning still needed to be done and to do that learning. SDCC FYE students described service learning as "volunteer work, and they like it."

Viewing college this way seems to reframe college from, to use a SDCC student's words, "knocking out my general education" to "learning now what will help me four years, ten years down the road." In participants' explanations of school work as project work, three common themes emerged. First, project work leads students to "make good use" of tools. The students in the study describe actively seeking out tools. For example, CDKC

students who were working their way through remedial math lesson by lesson in a computer-based learning system set up the software at home and at work. In so doing, they put themselves at the top of the list to receive a surplus computer from the college, and a faculty member told us that "they make good use of [the computers]." Similarly, NSCC students who worked for Group Health discovered that they had better access to research databases at work than at the college. One of them described using a mediation process that he used with patients to help resolve problems he and his peers were having in adjusting their work schedules with their employers. Across the campuses, students described making use of learning centers and counselors as well as intelligent tutors and web-based tools. In part because many of these tools were built into their programs, students saw using them as normal rather than exceptional. Administrators across programs told us that they were developing strategies for reallocating and leveraging resources so that the tools students are using can be built into the "projects" that students are working on.

In addition, viewing college programs as projects to complete seems to change students' views of faculty. Students in the study often described them almost as project managers who provide resources. A CDKC student who was completing her remedial math education thought of her teacher as "accepting and inspiring and helpful"; he exists to answer specific questions that enable her to get "unstuck." In a focus group, she and her peers talked through their feelings about the intelligent tutor in the computer-based learning system. It could be useful, they thought, in keeping them focused on the concepts they were learning, but a consult from their instructor was for most preferable. It was more efficient and targeted. A NSCC student went so far as to describe staff and faculty as "a mom and dad that are doing this hard stuff for you. . . . You can focus on the stress of the class and the work."

Finally, completing an education by completing a series of projects seems to develop, a SDCC administrator told us, "a sense of efficacy for [students]. It's something that makes

them feel strong and empowered." Students in the study—at SDCC and the other colleges—described going to college as choosing a program and "making something of myself." As programs were framed as projects, programs—these students conceded and others confirmed—pressured students to move at a "reasonable pace." While many of these students were using college to explore opportunities, that exploration seemed to happen one project at a time. Moreover, that exploration was "amazing" when the project was tightly linked to students' prior experiences and future goals. A NSCC student told us that "dealing with the actual work that you're familiar with and the jobs we currently have is just amazing. . . . It gives me more knowledge in that field to reach higher, move further in my medical career." SDCC staff described FYE students learning to cold call service learning sites and becoming able to explain their educational goals and their needs as they attended workshops and counseling sessions. This strategic view of college as project rather than entitlement seems to allow students to engage in academic work as part of everyday life. Framed as a project college is less foreign and "easier." It feels, many told us, like something they can do.

Partnerships for inquiry.

When we asked her why she planned to finish her bachelor's degree at a small, regional university, a NSCC student stated with confidence: "[It] has smaller classes." In thinking through why "class size" mattered, she began talking about finding a campus where "resources will be a little easier to manage . . . easier to get ahold of somebody, easier to network in that support system." Then she paused. "I think keeping a support system is really a big part. No one can succeed by themselves. We all work in teams." This first year student who, on her own admission, "flunked out" of college on her first try synthesized one of the design goals shared by most participants. This goal was to seek out and rearrange college spaces—from learning centers and advisor's offices to classrooms—to set up partnerships that help them make use of the content they encounter.

"It's okay."

A CDKC remedial math instructor paused when asked about how she guides students to "develop a deeper conceptual understanding" and, in so doing, to become designers as they move through remedial math classes. She explained tentatively that they had to feel "comfortable" solving ill-formed problems with math, and then she elaborated one of her core strategies for making college spaces comfortable for CDCK students.

I let them work with partners or however many people they want to on those [inquiry problems]. I start the very first day of class doing [an inquiry problem]. So right from the beginning they realize it's okay to talk to their neighbors and ask questions and help each other. So it sets up an atmosphere of collaborations that kind of lasts throughout the semester. The inquiry lessons sort of trickle out by the middle of the year—I do most of them up front. But that atmosphere of How did you get that? Can you explain that to me? kind of lasts throughout the year. So they get to know each other at the beginning and they feel comfortable talking to each other. For our students I think that's important because sometimes they don't feel comfortable asking the teacher or they don't want to ask the teacher all the time because then other students see them raising their hand and they don't want to sound dumb.

Across the campuses in the study, students described learning that "it's okay" to talk to partners about their learning. They are, to use the phrase of a CDKC administrator, "willing to go above and beyond" traditional learning arrangements. These students see as routine collaborating staff and faculty to design effective educational spaces. A NSCC student described staff, faculty, and students as being on "the same level field. I'm learning from you and at the same time, they're learning from us." She viewed her program as an educational space that is not simply about "lecture": "We see that interaction [between staff and faculty and students]. It's not like the professors are like, 'Alright, you know I've got

lecture to do.' They all know why we're all here. We all know why we're all here, so we allow folks to have the floor."

As one CDKC remedial math student put it, college is space in which students "get with" instructors in order to "make it a lot easier for me." Many described initially being surprised that their instructors were open to learning from them and about them. Going to college in this kind of social space, a SDCC staff member explained, led students to "get honest" about the ways in which their lives affected their academic progress and the resources and behavioral changes that might lead past barriers. Students themselves described selecting from a suite of resources—office hours, meetings with peer tutors, intelligent computer-based tutors, SI, study groups, conversations with family and friends, and a host of Internet resources—based on their current level of comfort on campus and the demands of their lives away from campus. Staff and students at SDCC and NSCC observed that students' confidence grows as they feel first safe to and then obligated to double back and apply their growing knowledge in the presence of both content-area experts and peers.

As students designed educational spaces in which they are comfortable "to talk to their neighbors and ask questions and help each other," they seem to benefit from as well as drive the development of two kinds of institutional partnerships. Foremost are partnerships among staff and faculty. NSCC faculty and staff were nearly unanimous in linking the persistence of students in the pre-nursing cohort to weekly co-instructional meetings, meetings in which "it's okay" to talk about students who are struggling and curriculum and instruction that needs to change. Faculty, review session facilitators, and SI tutors and counselors work together and "really tease out where the gaps in the knowledge occur." These gaps, the program Navigator added, can result from students' study strategies or events in students' lives as well as ineffective approaches to teaching the content that students need to progress in a pre-nursing program. In the meetings we observed, we documented a widely-shared willingness to take up "challenging conversations" with staff and faculty who feel "territorial and angry" when others "get

involved with what is going on in their classes." These conversations include discussions about "adjustments" to instruction and assessment and "a plan" for engaging each member of the cohort. Versions of this kind of partnership are taking shape in the SDCC FYE and SI programs and the EPCC and CDKC math emporiums. Across the colleges, students spoke of knowing and responding to a network of faculty and staff who were tracking their progress and pushing and pulling them toward relevant resources.

The institutions in the study are also engaging in broader organizational partnerships. EPCC staff told and retold a decade-old story of beginning to share course syllabi and outcomes and student progress data across levels and institutions and cultivating "wonderful partnerships" through which "we have worked collaboratively to help students become college ready." One administrator noted that the college "gives findings" about student progress to feeder high schools and to transfer schools in ways that quash "competition" and avoid laying "blame" for leaks in the pipeline. These data are used, another administrator added, to facilitate "reverse transfer," and the willingness to share information about students' progress is strong enough to allow EPCC to grant associate's degrees to students who leave the college before graduating but complete EPCC degree requirements at a partner institution. Administrators at the other colleges in the study described similar sorts of partnerships aimed at facilitating student access to academic programs and research opportunities or developing faculty or reallocating scarce resources. The needs of New Majority students often press the colleges in the study to become "okay" with sharing student information and even students.

Partners who are "going to keep coming back."

As the students in the study design and set their designs on educational spaces in which they are comfortable "to talk to their neighbors and ask questions and help each other," they appear to look for and cultivate a particular kind of partner. A NSCC administrator acknowledged that his students often encounter others who "expect students to come here and be prepared, be ready. If they're not, then [students] need to deal with

[their lack of preparedness]." Students at all four sites at times described their peers in these terms. The pervasiveness of a deficit view of students notwithstanding, this NSCC administrator described his "growing sense" that his colleagues and students were beginning to take a more "holistic view," becoming more willing to partner with students concerning their progress. A CDKC math instructor called this kind of partner a person who has earned students trust as a "guy who's going to keep coming back."

In her description of her interactions with two "amazing teachers" of a first-year learning community, a SDCC student identified four characteristics. First, these partners serve as a point of reference. She explained that because partners are "compassionate" and "are going to help you whether you like it or not," students use them to define "this is what we're going to do" and "this is what is." Other students frequently described partners—fellow students as well as staff and faculty—as guides at moments when "I don't know what to do." A SDCC faculty member added that beyond clarifying what needed to get done, she gave students "ways to get the work done and demonstrate to me that they got the work done." In listening to partners, students "set the bar" and make the work of college going "easy."

Second, partners "push for community." They not only serve as a point of contact but connect students with others. The SDCC student's learning community faculty, she recalled, guided students in developing "a personal network":

[We had to] go find people in the classroom that you can get their number from so that you have someone to contact. That really also started the whole ball about getting contacts, because if I don't understand something maybe another student will or if I don't remember the homework they can tell me, something like that.

Other students filled in what "that" might include. The members of students' networks held them "accountable" while understanding, as a NSCC student said, that "you [always] have something else to do." At times, members of the network "walked them over" to access

specific resources or to talk with a teacher. At other times, students used networks to gain access to childcare and financial aid, campus jobs and "emotional support." In the case of several NSCC students, their "built-in" program network included their employers and who enabled them to reduce their hours at work without losing their positions or health benefits.

Third, partners "want you to . . . It was high, [my learning community instructor] wanted us to reach high even in [basic studies courses]. . . . He would like push us." Partners are invested in "guiding students through the process," a NSCC faculty member told us, and they are "flexible," students and staff emphasized. They are also frank about expectations and what students must do at each step of the process to meet those expectations. Students did not want their partners to be "mommy" or a "babysitter." Instead, they are trusted others who expect students to be "serious" and guide them to a level of performance that students need to transfer or "pass your NCLEX" or "to make it [at a University of California campus]. Frequently, students described appreciating a partner who some of their peers saw as "mean" or "strict" because that partner unflinchingly demanded that they do college-level work and also was prepared to do that work with them. As the SDCC student put it, "they were pushing and you could tell that they had faith and that they really were willing to help."

Finally, interacting with partners, this SDCC student observed as "just a side note," "really helped me feel more confident in my writing." Interaction with partners—especially in remedial classes—provides students opportunities to value their own work as students.

Because sometimes I'll be writing, and I'll write something . . . , and I would never really tell anyone or show anyone. I showed him some of my writings, and he's like, "This is really pretty." I love metaphor, and I love writing that is just kind of deep. He said, "This is really good." And he kept encouraging me. Then I would send him emails of different things that I would write, and every once and a while he would be like, "Have you written anything new?" I would love to hear it. So just him encouraging and saying, "No, you can do

this." . . . It felt really good, just having the teachers actually interact back and saying that. You know they care. It showed that they care and it makes all the difference.

Affirmations like this—and students at all four colleges described such interactions—seem to lead students to recognize staff, faculty, and other students not only as simply as role players, but as people with a history who are themselves learners. This SDCC student interacted not so much with an English teacher as with a writer, and in turn saw herself as a writer whose prior experience could be built on. An EPCC student described realizing that like her, her counselor had immigrated from Ciudad Juarez and completed college courses while she was learning English. That recognition, she explained, made her willing to risk speaking up in her college classes in accented English. These affirmations seem to lead many students to see the end of college going as building capacities rather than simply passing classes.

"Organically-forming cohorts."

Staff and faculty across the colleges in the study observed a basic bind that faces students who progress inconsistently when it comes to joining partnerships. On the one hand, they benefit from participating in partnerships that "help them think about how to be students and think about how to deal with the material." On the other hand, traditional cohort programs "don't work" in most New Majority institutions. A CDKC math instructor explained the bind this way:

[We] have been doing cohorts. It's not the traditional idea of cohorts because that doesn't work in this kind of a [remedial education] framework. The students are not there on that level in terms of physical presence. You cannot count on maintaining a cohort across an extended period of time. But the idea of dealing with specific concepts in smaller groups that can be then spread across larger periods of time is something that has really kind of gotten my attention. That's what we are working on.

Rather than membership in a formal community, his students need "small groups that are there on that day and that need to deal with the same concept." Recognizing that their first-year students struggle to participate in a cohort across time as well, SDCC administrators loosened requirements in the FYE concerning full-time enrollment and looked for structures to complement a traditional learning community program. NSCC established a New Majority student cohort by making participation in a cohort part of students' work lives and incentivizing membership with wrap-around support that included paying tuition and fees.

Instead of partnerships conceived of as "physical presence" that lasts "across an extended period of time," the programs in the study are promoting what a CDKC administrator called "organically-forming cohorts":

As math instructors are observing the students and trying to keep them moving, they're going to settle out into groups. What I foresee happening then . . . if we have the flexibility and enough coverage . . . what I would like to see happen . . . is as [these groupings] occur, the instructors we have on tap have the flexibility to see that happening in real time and then are able to say, "Okay, by Thursday we see six students that will be right here, and we're going to use Thursday to pull them aside, just that group of six and do that prescriptive intervention just as it's needed at that point.

Versions of this kind of learning space were in place at each of the colleges in the study. As participants described designing and participating in them, they returned to three characteristics.

For starters, organically-forming cohorts give students "options" or flexibility for engaging material. CDKC students emphasized that being able to decide whether to work independently or in a group was ideal because it was more likely, in their experience, to result in small groups that shared an interest in a question at a point in time. Given the lives and educational experiences of many New Majority students, SDCC staff told us, these groups "are difficult to organize." Faculty and staff described various strategies for showing

students that joining a group was a good option. One SDCC faculty member described establishing an "attractor pattern" by "connecting the dots" for students: "I explain, 'Here's why you want to be in this class because this is what this means for college and this is what it means if you don't have these skills. Which group do you want to be in?' And then at that point the students can make the decision." In his class, as in the FYE and the NSCC Pre-Nursing Cohort, students sign a "contract" that formalizes their choice to be interested in learning with and for the group. At CDKC and EPCC, faculty and staff gather students who are struggling with the same problem or concept based on data from a learning system. One CDKC faculty recalled saying to a group, "come with me to this room across the hallway or whatever, and we're going to deal with just that."

These cohorts also make it more likely, students told us, that each student will hear a response to her or his "exact" or "specific" questions, questions not only about content but also about program requirements and relevant resources. These groups provide multiple responses to a given question often from more than one voice as students with different levels and kinds of experience, tutors, and faculty and staff participate. A SDCC English instructor explained that in addition to individual conferences (organic cohorts of two), she used "a lot of collaborative learning in the classroom":

So a lot of teams and different groupings because I think that they can really learn from each other. Students who may have strengths in one area can teach those who have a strength in another area. I make use of that diversity in the classroom, and I find a real openness and willingness and enthusiasm on the part of most students with different types of learning.

Students frequently called our attention to the importance of hearing an explanation in more than one way from more than one person. A SDCC student elaborated the benefit at length in describing her interaction with a math teacher:

I really connected with him just because also once again he was another teacher who explained things in so many different ways. He didn't do it in all

the different techniques of explaining things, but he understood that there's more than one way of doing a math problem and that some people . . . I like short cuts. I'll remember a short cut faster. If you show me the short cut, I get it. Then I also like that . . . because he really knows it. You can tell he knows it up and down. . . . To me I like the history of things. Sometimes, especially when someone is so, you know, especially with math it just explains why. Like, Where did this come from? I get there's a short cut, but why? So he would literally sometimes go into this tangent about why this was what it was. It felt really good. For the most part I could follow him, and then every once and a while he would lose me, but the fact that that I was like, oh, because of him showing me all these other ways what he's saying makes so much sense. Then he just kept reassuring like this is what this is. This is how you do it. So I was like, okay, I get this because he kept showing it different ways and it just made sense. That helped me have a connection, which made it easier for me to go and ask him questions. Because sometimes I've noticed, even with myself, you don't really want to go and ask your teacher in their office hours because you're like I'm not getting you in class. You're not making sense and you're explaining it this one way and why waste my time.

In addition to diversifying channels of feedback, organically-forming cohorts are efficient. These groupings, participants affirmed, don't "waste time." Students select into them based on what they know and how they learn, and, as a CDKC administrator observed, these groupings make more "instructors" available to each student "at any given time":

Each of these students has a different learning style and each of these instructors has a different learning style. By making them all accessible to one another, I've just exponentially increased the chances of somebody finding a way to work their way through wherever they're stuck as opposed to putting

them in three separate classrooms. Assigned separately, they're stuck with whoever they get stuck with at that point.

Finally, organically-forming cohorts often invite students and teachers to see the role of teacher as a very porous one. Across the colleges, our participants noted that traditional faculty members tend to be inadequate partners for the students in the study. Program administrators and faculty explained that faculty who wanted "to teach math majors" found program students to be underprepared and the programs themselves to be intrusive. NSCC staff were philosophical about the disconnect between many campus faculty and the needs of the Pre-Nursing Cohort program. A staff member observed that little in the professional life of a NSCC "transfer faculty member" "encourages" her or him to talk to faculty in other programs or to the staff who support students. A long-time faculty was more frank about the current tradition:

The traditional community college model is you have a single instructor, as you know, in a classroom dealing with 25 to 35 students. If students don't pass, well, you've done your best, and you hope they get tutoring and things like that.

Some faculty, participants at NSCC told us, elected not to be involved in the pre-nursing cohort when they learned what it would involve, and other who took up the challenge balked at allowing others—including a Navigator who met weekly with students and students' employers—to have input on the ways in which they designed instructional spaces. In a focus group, the staff and faculty who managed the NSCC pre-nursing cohort recalled a course that nearly ended in a "train wreck" in which a faculty member expected this cohort of incumbent healthcare workers to act like transfer students.

Administrators in all of the programs in the study explained that as they observed organically-forming cohorts take hold in learning communities, SI groups, emporiums, and other programs and practices, they began to rethink processes for selecting and developing faculty. At NSCC, that rethinking resulted in assigning a veteran faculty member to the

program as an instructional designer and holding weekly co-instructional meetings. I observed two of these meetings. In one gathering near the end of a quarter, 8 program staff sat together in a room—two faculty, two review session facilitators, one tutor, the program Navigator, an instructional designer, and a liaison with employers and funders. Faculty shared their grade books to support detailed discussion about student performances, about students "we are worried about." The Navigator and tutor carefully shared context for these situations to deepen interpretations of "roadblocks" and to fashion promising interventions that could be tried in the next classes. The Instructional Lead asked again and again, "Do students know that?" The group worked its way to "adjustments" to instruction and curriculum and potentially to program policy that both protected the high standards of the program and also made it possible for students to hear content and requirements again, differently. The meeting drew to a close when this diverse group of "teachers" agreed, "We have a plan."

As I read my observation notes from this meeting against the transcripts in the database, I see an alternate view of college faculty. A NSCC staff member expressed the role this way: "I mean everyone in any sort of position of influence in these students' lives outside their parents is in this room saying, 'How's Student A today? What's going on with her?' I've never seen anything like it." The CDKC administrator who coined the phrase "organically-forming cohort" elaborated "what is going on here." Faculty who can engage these groupings are recognizable not by credential or institutional role but by their everyday practices.

They're the ones that are down beside the student right there, having the conversation and engaging one-on-one. They obviously have the math skills. . . . They automatically know what [students] are missing that they should've learned. . . . Somebody that has an awareness of that whole curriculum is . . . or somebody that can figure that out. . . . It's somebody . . . you have to see them in action, how they interact with the

student, so it's as much the interpersonal skills of that person and the cultural awareness, all the sensitivities that go into making that instructor. That's a component that can't be overlooked. We can put all the methods in place and all the right tools but that's the part of the recipe that is absolutely essential.

I find in this description of a teacher of organically-forming cohorts to be a character that keeps appearing in the MSI Models of Success database. This character "teaches" but is almost as likely to be a staff member, a peer mentor, or a more experienced student as a faculty member. She sits beside students in classrooms or online. She is "familiar" to students and, in the case of CDKC and EPCC Early College High Schools, the communities from which students come. She has skills—what one CDKC administrator called "tricks up their sleeve" and another the ability to "explain the same concept 10 different ways"—that enable her to show students both the way to derive a formula and favorite short cuts and also to explain "why" both procedures lead to the same result. The content she knows best is the "whole curriculum": she knows where her students have been in her subject and where they are going. Viewing her disciplines as content to be taught, this teacher understands the "difficult work" of teaching developmental students as part of her subject, and she is prepared to work with rubrics and criterion-based assessments designed and recognized by others when these tools enable her students to progress. And always, she has "cultural awareness, all the sensitivities that go into making that instructor [able to interact with those students]." She can "explain in a very mathematical way why [each question] was such an excellent question." She wants to know "How do you feel you did on the test? Do you understand everything? What would you like to do at this point? I'll give you my advice, and you're going to tell me what it is that you want to do." She believes that "the last word is the student's." To use the words of a of a SDCC student, the presence of this kind of teacher in a classroom "changes everything" for New Majority students.

Practice rooms.

The interests and needs of New Majority students seem to create pressure to rearrange the relationships, tools, and technologies that are available to these students as well as the content that they need to learn to be successful in college. At the colleges in the study, participants were aware of both the ongoing rearrangement of college and of specific arrangements of educational spaces that are particularly powerful. As a CDKC administrator talked about what instructional practices make a difference in the success of students in remedial math classes, she emphasized that it was difficult to talk about the contributions of an individual teacher in a classroom. She thought more in terms of "face-to-face time, lab time" than "credit load": "I've just kind of in my mind have these little band practice rooms kind of a concept." Across the college, three learning spaces—emporiums, SI programs, and counseling/advising offices—seem to realize the concept "practice room" and, in this section I describe the contours of these spaces and outline the educational activities that take place within them.

"Hybridized emporiums."

Perhaps the most conspicuous "practice rooms" at the colleges in the study are the formal emporiums at CDKC and EPCC. Sited in suites of rooms (and borrowing additional space adjacent to the emporium itself), these emporiums invite students to move in and out of rooms finishing up high school classes, learning remedial math, and preparing to take placement tests. These emporiums are "hybridized"; they are repurposed classrooms or offices that look like computer labs. Chairs have wheels and the walls are lined with whiteboards—in some cases a few additional whiteboards are scattered in the room on easels; when there is space, there is a table around which students can gather with emporium staff. While these emporiums are rooms where scheduled activities happen, staff at EPCC and CDKC emphasized that space and time boundaries are porous. In the College Readiness Program, students schedule meetings with PREP counselors in order to gain access to labs where they can prepare for placement tests or work to improve their scores

on placement tests; math classes at both institutions happen at specific times. Students, staff emphasized again and again, "don't do optional" though once they are in an emporium, many come early and stay after if there is space. In emporium settings, students move in and out of groups, listening to "mini-lectures" or working with a group of peers who are learning the "same concept" or working on their own with software that presents content and assesses mastery of that content. Content and interactions are arranged, an EPCC faculty member explained, so that "[students] have time really to build on what they already know, build on prior knowledge." Often in the center of the space is "the computer." A CDKC administrator explained the role of the computer this way:

[The emporium] introduces a third party that can't be swayed with opinion, can't be empathetic, can't be sympathetic, can't listen to all your past math anxieties and say I'm going to give you an 80 on that and hope I don't see you in here again. . . . That student is going against a machine that's going to require that they develop the skill with 80% mastery, and [the teacher] now, it changes your role from pontificating in the front of the room and all information flows from you Now the student is really in some ways a co-learner with you. We've changed from a teacher-centered model. Now we're working against the computer. We can both equally despise that because we can't get on the Internet or Facebook or whatever.

A diverse emporium staff partners with students, and staff members get to everyone—to "students who know they need help and are willing to ask for it" as well as to "students who simply are stuck and are not willing to pout their hand up and say, 'Over here next'"—because staff-to-student ratios are low and flexible. If more students show up, the emporium either "adds another tutor" or expands the time the emporium is staffed. Tutors, an EPCC math faculty member explained, are trained not to guess when they are unsure about how to handle a student question or a concept. Instead, they bring in a faculty when they are unable to answer a question. And not just any faculty will do, administrators

told us. At EPCC, faculty members are asked to undergo training and apprentice to an experience emporium instructor. At CDKC, the Dean who hires math faculty is hiring faculty who have the experience, skills, and awareness that prepares them to be able to shift between lecture, tutoring, and group facilitation. Both programs use computer-based learning systems as quasi-faculty.

SI.

Formal and informal SI—especially at SDCC and NSCC—rearrange educational space in similar ways: students learn the content on offer in traditional credit-bearing classes in several different rooms, and they learn from faculty of record, other faculty who happen to be in a learning center, tutors, and one another. While all of the campuses support first-year classes with tutors, SDCC has formalized an SI program most completely. SI at SDCC emerged from a conversation among student support center directors and other administrators who began asking questions about ways to deepen support for first-year students. Staff adapted the model developed at the University of Missouri Kansas City so that City could "do [SI] our way" to support "basic skills development" in the City FYE Program, this despite being told "this program will not work with basic skills or it has not worked yet with basic skills students." A center director who played an important roll in developing SI at SDCC explained the purpose of this educational space:

Part of it, though, is that SI is built around very little faculty involvement. The idea is that faculty have enough to do, and the last thing they want is a tutor they have to mentor and lead around. And so we took [the SI] model, and we said we want a baseline of what SI is so that faculty don't have to be bothered necessarily. They just have to allow the tutor some space at the minimum. But what we found is an incredible relationship between faculty and tutors and that's the joy of City. . . . The faculty who get an SI tutor in their class are overjoyed; they're working together; I'm working with them. [The SI tutors] have things they have to do. They're trained through me in

my center and then kept accountable by me. But, they're working with the instructor as kind of a colleague.

Many of the classes that SDCC FYE students take have an SI tutor who facilitates a new space in which students can work course content, "talk about what happened in the class" and ask as well as answer their questions. The NSCC Pre-Nursing Cohort program "built in" similar kinds of support, leveraging tutors from existing campus learning centers and hiring faculty to conduct Saturday Review Sessions. An EPCC administrator observed in passing that the Pretesting Retesting Educational Program was as successful as it was in part because PREP labs were staffed and sometimes sited within existing computer labs and support centers. CDKC students observed in passing that their course software had a "tutor" built in. In each of these cases, students find themselves—either voluntarily or because a teacher or program made participation in SI mandatory—in educational spaces that "scaffold discussions that may not have occurred without [SI tutors]," as a SDCC program administrator put it. These sessions—even the NSCC Saturday Review Sessions—do not aim at "re-teaching the material." From the point of view of one SDCC math faculty member, these spaces attract students to "show up" for class and even to become comfortable being "called out." In this space, she noted, an experienced peer who students "know by name" "sits next to them" and helps them get their first-year academic work done while their professor marches on through the syllabus. Students described SI as a space in which their questions were answered "another way," a space in which homework "got done."

"The office."

At all four colleges participants talked about "offices" that served as rooms where they meet up with staff who connect them with tools that enable them to learn about programs, register for classes, and fund the enterprise. At SDCC, the "office" is the formal frontend of the first-year services on campus. At NSCC, pre-nursing students enter the program by interviewing with the program Navigator and then find their way to her office for a required meeting each week. At EPCC, students often return to the office of a College

Readiness counselor again and again as they work through a six-step protocol to schedule next steps, interpret the results of assessments, and find the confidence to move into college programs. At CDKC, the "office" is the math emporium itself, a room full of computers that is open when the college is open and always has a math instructor nearby.

Each office is a "safe environment where [students] can come and feel safe and talk about issues"—though it is clear that each of these "offices" manages orientations and workshops and credit-bearing classes that take place across the campus and in the case of EPCC in local high schools as well. I offer a SDCC administrator description of her office as a representation of the basic arrangement of the space. The SDCC First-Year Services (FYS) Office is a place "for all new students. We want them all to go there" to learn "the steps" and "options" and "support services." That office marks the beginning of students' careers at SDCC by sending out welcome letters inviting them onto campus and then manages a process by which they take their initial placement assessments, attend a one-half-day or multi-day orientation, apply for financial aid, and register for classes. The significance of integrating these steps notwithstanding, what seems to matter most is establishing a workable "route" into college. When they begin, a peer mentor told us, SDCC students "don't know the lingo" and even if they get themselves to the "right place," they often "can't really express [what they need]." The FYS Office connects students with staff who are prepared to "walk with them" to the support service that they need, and the office is the place to which counselor or a mentor or a teacher described "walking with" students "to connect to "the right help."

Arpeggios.

Administrators at all four institutions admitted that they were still working on institutionalizing these practice rooms in part because, as a SDCC staff member observed, many campus stakeholders are confused about what goes on in these rooms. More importantly, because these rooms are not credit-bearing classrooms, they are challenging to staff and to fund. These difficulties notwithstanding, a CDKC administrator felt that these

kinds of spaces "speed as many students along as possible" while "never holding anyone back either." There is, of course, a growing research literature on emporiums, supplemental support, and case-management approaches to student advising. As I reviewed transcripts and other documents, I became more interested in the ways in which participants in the study understand these rooms and the activity that they scaffold. They seem to use these practices rooms for two purposes: representing their own practice for themselves and others and trying out new practices.

Practice rooms are full of mirrors. In these spaces, students engage computer-based learning systems or check in with SI tutors or Office staff or make sequences of attempts at a placement test. They also sit next to staff who learn with them. In the process, students get regular reminders of how quickly they are moving through content and requirements. These reminders seem to function in two ways. First, in large measure because these educational spaces allow students to proceed at a pace that is "reasonable" for them through processes and protocols that are explicit and supported, reminders about students' pace seem to speed them up. At CDKC, for instance, students register for one-credit of remedial math but quickly feel the expectation and, students told us, the possibility to "complete two credits or more." In mini-lectures and conversations with peers, one faculty member told us that students are constantly reminded of "here's where you need to be, here's what you need to be doing, and kind of pushing on that end." Students there and in the EPCC College Readiness Program agreed that feedback about their pace encouraged them to "push it" and "not to waste time."

Second, reminders about expectations within practice rooms seem to guide students and programs to pursue more strategic behaviors. Students described coming to recognize what is involved in taking their next step and what failing to complete the step will cost. In the EPCC Gateway program, for instance, students were clear that they were getting a "second chance" to complete a high school diploma and become college ready. As a result, many students who blew off high school, a staff member noted, decide "I can't screw up."

Similarly, a student who was accelerating through remedial coursework through the EPCC PREP program explained that learning how remedial placements are made at EPCC focused her preparation for placement tests. At other campuses a number of practice room policies that had similar effects: standards for progress in computer-based curriculum; requirements to meet with mentors and counselors to talk about their progress and plans; and requirements concerning attendance in classes, workshops, appointments, campus tours, and other events. This feedback on progress, they agreed, provided students with valuable advice and advocacy and often with referrals to resources or an adjustment in the way the practice room functioned. One NSCC student told us that talking openly and often about her about progress "relieved" anxiety: she could vent, ask her questions, and keep moving forward in her education. Several administrators saw the rich student progress data that came out of practice rooms was helping them "figure out who these students are" and "come together and refocus our efforts."

Practice rooms help students and programs make sense of progress retrospectively, and they also seem to encourage students and programs to engage new content and try out new practices. These spaces are littered with new tools and new ways of being in school, from computer-based learning systems and blended learning to service learning, dual-credit and reverse transfer, and the use of adaptive and normed assessments. Faculty and students have better odds in learning to use these new tools, one CDKC administrator calculated, because they could experiment with them in settings "where we're kinder, gentler, can be more encouraging, more mentoring, more nurturing, and more aware of how students are actually progressing through." Staff at NSCC and SDCC added that practice rooms give students opportunities to approach content multiple times and to experiment with different approaches to that content. Again and again, faculty told us that students who were afraid to "speak up" in conventional classrooms were able to ask questions and present the sense they were making of classroom content in practice rooms. These spaces also made available to students tools and opportunities and resources that

enabled them to "catch up." An EPCC staff who managed an EPCC Gateway program emporium explained that "the reason we have [the computer-based learning system] is so they can catch up, to be able to graduate on time, and to catch up on their requirements."

Staff in other programs pointed to optional and required extracurricular workshops and tutoring as well as resources that provide assistance with paying for rent, food, and child care had a similar impact. The chance to accelerate their education, staff and administrators told us again and again, kept many underprepared college students from getting "bored" or "frustrated" or "feeling defeated." Some underprepared students, they added, even began to improvise, learning why they struggle with math or English instead of focusing only on what they need to catch up on and how they are supposed to show mastery of that content. A NSCC student recounted observing that as he and his classmates began to trust the pre-nursing cohort and its net of support, they began to leave the comfort of fellow employees or students with similar experiences and "cross over" and talk with other groups of students or with support staff and even faculty to "validate" their work. A SDCC administrator saw this as a side-effect of SI. Students, support staff, and faculty are "never pitted against each other." Instead, they learn to "say I know it's really hard, but let's really look at what [the other person] is asking." Working in practice rooms, CDKC administrators and faculty confirmed, keeps students involved with content and turns faculty into their allies in meeting expectations. Faculty become more "alert" and begin to collaborate with staff and to understand how learners are experiencing instruction. Simply put, practice rooms enlarge and enrich cycles of feedback and, on the experience of a SDCC ESL faculty member, make "students feel more comfortable . . . , so they'll talk to [staff] and let them kind of know how they're doing. Even if they wouldn't tell us [traditional faculty] some things, they'll talk to them [supplemental instructors]."

Making Space(s)

Students in the study are remaking college. In collaboration with advocates, they are "figuring out" what is expected of them to succeed and where there is support and opportunity and then encouraging one another to make use of support and opportunity. Because they are finding success in emporiums and learning centers and the offices of counselors and mentors, their colleges are reallocating resources to expand these spaces. Consider this exchange in a focus group with pre-nursing students at NSCC. We asked what they felt that the WDC Cohort Program was contributing to their success. Four of them in quick succession explained that the program was "amazing." That assertion is a statement of fact. These students are working incumbent healthcare workers in a program that is achieving over 90 percent retention rates—something "amazing" or at the very least unusual is happening in this program. They elaborated in a rapid-fire exchange. One exclaimed, "I've not know of any kind of program like this." The program was a different sort of educational space, she explained, because it dealt with "actual work that you're familiar with . . . what I have been experiencing . . . and the support . . . is amazing." Her peers chimed in. The program mediates "problems at work" and helps "interested" and "passionate" students "go forward" and "takes care of all the background stuff . . ." The program, they agreed, "works for you" in no small measure because the program invites their feedback and makes use of their feedback. This, one of them explained, is "crucial to our success." When I asked why, his answer was immediate:

Because if we were not able to give our input to these courses . . . I've had classes where the instructor was not open to feedback. I dropped the class.

If it's not working for me, I can't put up with it.

Others agreed. Three of the four had previously tried to pick up a nursing degree. They stopped out because of "background stuff," because the demands of their lives made meeting the demands of college programs that were designed for other people's children impossible.

In this chapter I have explored the arrangements of tools and relationships and rules of participation that the students have discovered to be supportive or have mashed up for themselves—in collaboration with advocates—in order to be successful. Participants made it clear that New Majority students can be enticed to meet high expectations for which they are often not prepared, often in languages or cultures that are foreign, sometimes hostile to them. On their report, these students find opportunity enticing though they need to be inspired to engage it by trustworthy, supportive, invested college insiders in spaces where it is safe to practice. The students in the study have made successful starts in college in no small measure because they have found points of access that extend both within and outside classrooms. These portals provide these students immediate and logged formative feedback on their present performance in college classes and programs and at the same time formal paths toward the careers and capacities that brought most of them to college. As engage advocates and scaffolded opportunities to learn in these portals, the students in the study find inspiration and motivation to confirm and pursue their own interests as college students, becoming confident and hopeful their educational futures. That is, they become college-ready.

The students in the study use portals to become designers of educational opportunities. They find or create spaces of interaction on campus that are familiar enough to be comprehensible and manageable. Yet, at the same time, they describe sometimes grudgingly the need to seek out and create less familiar spaces of interaction in which they will face "college-level" expectations and acquire the Discourses that they need to complete their schooling and contribute in careers and communities. They see their participation in these liminal spaces—educational opportunities that are situated socially and culturally between students' lifeworlds and the institution of higher education—to contribute to their educational progress because in these spaces partnerships are "okay" and practice is wired in. Even though most students approach their education strategically and even instrumentally, they appear to be ready to commit to partnerships and timely learning

communities. They have little time to spare, but they are ready to make use of practice rooms if they work for them. Their colleges have begun to restructure the first-year in response to their success, establishing emporiums, Supplemental Instruction programs, and structured first-year experiences.

Chapter 8

Making Do: Activity Aimed at Doing the Work of College

The participants in the MSI Models Study are quick to admit that college is an ongoing experiment for many of the students at the colleges in the study. Moreover, this experiment often must include trying out alternative and emergent college-going practices that often do not work out. In these experiments, I read students discovering and inventing tools and establishing relationships with peers, staff, and faculty who are prepared to collaborate with them in doing the work of college, and in so doing, they are hatching practices that appear to be bending the institution into one in which they can produce a college education that meets their needs.

In this chapter I offer an analysis of incidents that represent students' willingness to participate in college spaces, passively, actively, and critically. Across interviews, students described learning about the routines, actions, tools, knowledge, skills, and others that are part of their college contexts, but more often they described their participation in processes of trial and error with the practices that they believe to be necessary to pass as successful beginning college students. As I combed through their explanations of passing as college students, I began to make notes of the ways in which they become able to produce "meanings" in college situations, their classes and meetings with counselors and interactions with other students. Making do as a college student, at least for these students, involves showing others that they know what college students know and know how to do what college students do, and it also means making competent use of the artifacts and relationships that they encounter, forging new artifacts and relationships, and unlearning/relearning in order to achieve their educational goals. For these students, making do as college students often has a critical edge. They often elaborated on the ways in which their participation in college is reshaping them and their educational goals and also

the ways in which they can reshape their participation in college so as to get to their educational goals.

I organize this chapter around two distinct kinds of activity emerge in students' explanations of making do as beginning college students. First, I take up patterns of activity that make students recognizable as college students, sequences of action that students must take up just to be in the game. Then I turn to what the students in the study do to repurpose technologies, knowledge, skills, and relationships to achieve their educational goals.

Getting Recognized

Students "show up," as a Chief Dull Knife College (CDKC) faculty member put it, with a range of academic experiences, "abilities," and aspirations. While study participants often describe students' diversity in terms of what they know, they also explained what different students do as students. For some of the students in the study, matriculation and completing their initial classes was doing more of what they did in high school. For others, this same activity felt novel and overwhelming, "more than they can manage," as this CDKC faculty put it. All of the students described making themselves into students with certain traits and accomplishments. Some described doing what they needed to do to pass; others, doing what they needed to do to be recognized as that student who always had work done and could be depended on by teachers and classmates; others, doing what they needed to be able to ask their questions; still others, doing what they need to do to be able try out claims or offer up experiences or work problems so that others could consider their ideas and approaches. Most volunteered connections between the activities they pursued as college students and their past experiences in school and their goals for school. Many described building more active student positions because they were discovering that passive stances failed to move them toward their goals. While many students talked about needing to be recognized as students who passed, most were engaged in becoming recognized as

students on a particular trajectory—toward a career or a transfer college or a new sense of self.

Across interviews, these students connected being ready to start college with showing others that they can manage the activities—sequences of actions—required by college programs. While each student is working toward a relatively unique pathway that is grounded in her own experiences and interests, students shared a set of practices that made them recognizable to others and to themselves as serious students who are ready to do college-level work.

College-readiness.

Our sample of successful first-year students has broadly acquired the "grounds" and tools that first-year college students at their campuses are "supposed to have learned." What they have acquired is manifest in what I have come to think of as the identities of college-ready students.¹ Students and staff at all four colleges distinguished between those who walk on to a college campus as a part of a family or community entitlement and those for whom, in the words of CDKC administrator, getting to college is requires an "extra, complicated step" and a willingness to accrue signals of readiness. For nearly all the students in our sample, matriculation was an "extra" step and not a forgone conclusion even though many felt that college was a "natural next step." That is, they needed to adopt a new way of being in the world in order to start college.

This new way of being in the world does not appear to constitute a common path or membership in a generic college community. Again and again staff and faculty emphasized—and students confirmed—that the students in the programs in the study are a

¹ Identity has many meanings. I use this term more or less as does Gee (2011b)—who builds on a substantial body of work on socially situated identities reaching back over 50 years (see for instance Fleck, 1979, first published in 1935)—as ways of "being in the world at different times and places for different purposes" (Gee, 2011b, p. 207). Three other qualifications may be of use. First, I do not intend identity to refer to a core sense of self; concomitantly, I will assume that no one has only one "identity." Second, while identities are partially in students' heads (that is, they are in part cognitive), my interest is in what students do, with whom they interact, where they find themselves, what tools they use, and what they say that they believe. Third, I understand identities in terms of what an individual can be in a time and place and also what they are recognized as or wish to be recognized as.

"mixed bag"; they are as likely to remake the path through college as passively adopt an existing pathway. The college-ready identities of these students are rooted their lives away from campus. Asked why they came to college and what challenges they face, students almost always recounted stories about "making something" of the person they were before they matriculated. I offer below at some length four of these narratives—the eighteen-year-old El Paso Community College (EPCC) graduate included here is reflecting on his decision in eighth grade to attend an early college high school.

EPCC Student. [The early college high school] provides a gateway to college. That's what I like most about the program. I've always known that I needed to go to college. My parents weren't born here. They were born, both born in Mexico. And, they arrived here . . . they would have to work their whole life. And, I saw them struggling to get their GED. And, I saw my dad struggling to work two jobs. He worked at a meat factory during the day. And, at the night he worked, the night, the graveyard shift at a factory here in town. And, so I always saw them struggle. . . . Right now he has kind of a stable job at a factory during the day. But. . . but, yeah . . . I saw them struggle. And, I always knew I wanted to go to college and I needed to go to college, just to get away from that. And, just to provide for myself. And, I knew that. I didn't want to be working two jobs and struggling like they did. And, what I . . . when I first . . . what first attracted me to the program was not, I wasn't too worried about missing the high school experience, or missing all that. I knew that I needed to go to college. And, as soon as I heard that this program would help me do that easier, help me do that faster, and it would provide support I was . . . it made sense to me. And, it didn't make sense to me to waste that opportunity on what I thought would be high school stuff.

San Diego City College (SDCC) Student. . . . I graduated back [5 years

ago]. I was a good student in my freshman and sophomore year, but toward my junior and senior year I kind of fell off a little bit. I graduated, thank goodness, but I didn't go to my full potential due to circumstances . . . friends, just environment, also family drama was going on in the household, financial issues, so all of those come into play. I wasn't in the right mindset. I don't really regret it right now, but it would have been good if I had had that mindset, what I'm thinking now if I had it back then, but that's in the past. . . . I of course had a choice to go to college or just go working, but not being motivated and not being very persistent myself, I chose, basically, working. I didn't really have the mindset to work and go to school at the same time because I was lazy basically, just lazy.

Coming forward now, my cousin he is a very inspirational person. He is the person that really got me inspired to go back to school. . . . My cousin went to community college. He really encouraged me to go back to, take classes with him. He was a guardian angel for me. He was trying to show me the way, but I wasn't really listening. I was very hard headed. He put in a lot of work. He basically got accepted to [four-year colleges]. At that time I was working for a grocery store, Whole Foods. . . .It's not really a bad job. It really gave me a lot more responsibility you could say. . . . I'm still with the company right now. I have three jobs right now. . . .

The thought of school still was in my head just because my cousin's vision of school. He was getting his bachelor's in kinesiology. He was getting a scholarship. He got financial aid also. His rent was paid basically, but it was my rent that was needed. . . . I was working, working, working. It came to the point . . . it was one of those birthday nights one of my friends had. I fractured my ulna. . . . I felt like the whole world just stabbed me in the back basically. At the same time too, I felt like my whole life was just passing by.

My cousin actually he said go back to school. I remember one day too I was just watching the basketball game and he was just like, you know what you should do? You should go back to school. When he said that, it was just like a sign that I have to change for me to move forward with myself, to get out of this hump I'm in right now. . . . One day I just got up at 8:00 a.m., came here, talked to some of the counselors, I talked to the admissions, and they suggested me to First-Year Experience Program. I walked into the FYE office with a broken arm. . . . They cared for me from the very beginning. . . . They also helped me up, and they also gave me the chance for me to shine. I took the opportunity, again.

North Seattle Community College (NSCC) Student. How did I end up [at NSCC]? Well, really, . . . I've always lived in this area. I went to high school just down the street, and I wasn't sure what I wanted to do. My uncle actually, he was having some health problems, and he doesn't . . . he's not literate, and he doesn't speak English. And so my father and my mother were busy caring, tending to my younger siblings, and working, and so I was the one that kind of had more free time to go with him. I would go with him regularly to his doctor's appointments and have to advocate for him and really try to understand, and even the majority of the time. . . . I was 18, 19 . . . And it was also very fun. I was super interested, and I would spend a lot of time asking the doctors questions so that I could understand, and then I could try and translate to my uncle so that he could understand in simpler terms, and just making sure he, with his best interests in mind, making sure that everything that was supposed to be done was being done, and trying to help. So, after that, I took a few classes here at North and was unsuccessful. I just felt like I wasn't going anywhere because it was taking English 101 and Math,

and by myself, and . . . I didn't finish the quarter, right.

It was difficult. So I was working at the time at my uncle's restaurant. So I had been working since I was young, like 14. And so now that I had graduated high school, I was working more, trying to take those classes but not really. I started like fall quarter, and then I started winter quarter, and just didn't work out. So after that, I decided . . . I saw this commercial when I was being lazy at home for medical assisting, and they made it sound so appealing. . . . I went through my medical assisting school, which was really, really, fun, super exciting, just amazing. I think that's really been the life-changing event, the first one. I was able to do an externship at a clinic. . . . Then I went a few months without working. And they were hiring, and they kind of, . . . they called me and tried to find me when they were hiring. . . . I started working as on call, and then I was eventually hired. I was pregnant. . . . So I gave birth and I came back, and then I was pregnant again.

So, . . . then when I returned again . . . and kind of was feeling very, I don't even know what the word is, just kind of I guess unmotivated. I felt really like I was just getting sucked into the routine of everything, and every day . . . every day I would wake up in the morning thinking, "I need to go back to school, I need to go back to school . . . I really want to go back to school." And then just out of the blue, soon after that, we got an email about this program being offered, and . . . I was thinking that [the program] would be really great but how am I going to do it if I'm going to go to school, and then I have my kids, and going to be working. And so this nurse there really encouraged me. She really made me see that I'm not going to lose anything to try. So I went. I didn't tell anybody. I didn't want anybody to know if it didn't work out. So, I went to the orientation. I got accepted. I had my

interview. The doctor I worked with wrote me a letter of recommendation, amazing, and I think that's really what influenced the decision to be accepted into the program, and it's just been a blessing ever since. That's how I got here.

CDKC Student. I don't know. I saw the outcome of it, and I saw my family members struggling, monthly, monthly, it was a habit. I can't be doing that. I don't want to live off the government, and I decided to go back to school. I wanted to go to [a regional four-year college], but then it was too far, and I had to stay close because I didn't have enough money to go anywhere. . . .

Interviewer. But now you're going to?

CDKC Student. Yes.

Interviewer. Where does that come from, your passion for putting aside one choice of lifestyle and choosing another?

CDKC Student. It was mostly my fiancé. He explained to me . . . he said, "You need to change because . . ." I was a ninny-girl, a ninny-girl . . . a mama's girl. I had a different life than other people. I didn't have a hard life. Everything was given to me. . . . Once I moved out of my mom's, and my grandma showed me things, you're going to have to survive. Go to school, get a job, make something of yourself.

Some of the faculty members and many of the staff members who we interviewed offered similar narratives of the ways in which they began college. The students in these narratives offer frank assessments of both gaps in educational preparation and also educational successes and concrete and detailed educational goals. They are, as one EPCC student summed up, adopting as a "normal routine" meeting high standards, accomplishing specific goals, and balancing personal, social, and cultural identities. I want to emphasize three characteristics that emerge from these narratives: they are stories of activity (1)

taken up by "serious" agents (2) who aim at attaining signals of college readiness for themselves (3) through an ongoing experiment.

Serious aspirations.

What the students in the study do makes them recognizable not only as prepared to participate in college but also as serious about participating in college. The adjective "serious"—an adjective used to describe the participation of successful students in all of the programs in the study—above all seems to mean resilience in the face of systemic barriers and the expectation of changing as a learner and a student. Beyond a trait, seriousness names for these students a way of acting in the world.

In reflecting on the students he invited to participate in the study, a CDKC faculty member offered the following:

The students . . . are probably not truly representative of the normal students that come through for two reasons. Number one, it's the end of the semester. At the end of the semester the majority of the students have left. The ones that are left are essentially the dedicated ones. So they're already not perfect representation of our ordinary students. Secondly, I had to choose students that I could ask to be here at a particular time and have some reasonable assurance that they would try to be here and that sets them apart as well. Other than that, other than those two factors, . . . these are students who did what was asked of them.

Successful students, participants emphasized frequently, are serious in part because they do not leave. They are marked, this instructor's colleagues told us, as people who "deal with problems" in and out of college, managing to be "where they are supposed to be" in spite of "challenges" and "set backs."

From the point of view of faculty and staff, these students seem to be ready to test, to use an EPCC staff member's phrase, "reasons why this is possible" and to engage in an iterative process. Reflecting on students at her tribal college, a CDKC administrator noted

that these students make "several attempts as their life circumstances change and allow them maybe to continue the process" (CDKC). An EPCC math faculty marked students who come to a math emporium "everyday" and engage faculty and support staff in Spanish and English in order to make sense of the language of math. These students are eager to make use of "second chances," even in the face of resentment about second chances from faculty and other students. At the same time, they are serious because they engage in critical reflection on college going. One faculty described it as knowing the difference between different educational environments and expectations; an administrator saw it as acting in ways that are "intrinsically" valuable; NSCC faculty described it as making choices consistent with what's at stake—a profession that is "so critical to their particular life" and that will enable them to carry the "weight of my whole family."

Students across the study understood that they needed to be recognized as students who do not leave. They seem to share a view that a college student is not simply a student who takes college classes. One CDKC remedial math student described being in school in ways that caused others to "believe in" and "recommend" her. Another CDKC student explained that not leaving meant selecting classes that fit into his life and then "getting with faculty" when he was able to be at school. NSCC students explained sticking around in terms of finding "time" and "resources" and "working harder" than others, even if that means stopping out of college in order to gather skills and resources that enable them to come back. Collectively, these students described showing themselves and others that, to use the phrase of a CDKC student, they are "good at it," at working math problems or meeting deadlines or whatever actions are required to participate in college. Showing that they are good at it means being able to describe their capability and current status as students, completing program components effectively and efficiently, interacting with faculty and other students with confidence, reacting positively to being pushed and challenged, and conducting inquiry. Student who try to be here, a NSCC student explained and other students confirmed, are prepared to represent the ways in which they learn and

progress and then to "work" as students in ways that align with their learning styles. They are, another NSCC student mused, excited about the "possibility" to participate in college albeit nervous about not finishing.

Students who are serious do more than not leave. They expect to change as students and learners. This quality is encouraged by the programs in the study in large measure because program staff believe that the quality is related to student progress. For example, in reflecting on what leads his students to become "scholars," a SDCC math faculty paused and reflected on the ways that students respond to being in his classrooms:

I do want to add that I'm not everybody's cup of tea, and I do forewarn my students because some students are not ready for that. They're not ready to be challenged, and I'm a very challenging person because that's how I learned. I challenge. I learned to challenge myself, so I want them to learn to challenge themselves too. And so it's not for everybody. They might not be ready for that yet. But eventually most of them come back and say, "You know what, now that I see what you were doing I'm back. I'm here in your Math 86 class, I'm here in your Math 116 class, and now I'm ready. I think I understand what you were trying to do. Thank you for your time."

The other programs in the study also provide students with opportunities to show that they are open to being "challenged" and "ready" to work in response to challenges. Often, these opportunities take the shape of interacting with faculty who, like a CDKC STEM faculty member, openly expect students not simply to accumulate credits but to "leave my classroom with more than what you came in with," learning what "[you] didn't know" and where necessary "catching up." Staff at EPCC and SDCC described successful students as those who are willing to engage counselors and advisors who expect students to assess their current college readiness and their aspirations without "judgment" concerning what they should have learned elsewhere. Successful students, they told us, are prepared to learn about careers and related educational requirements so that "you know this on your

own" early. As an Early College High School Principal put it, successful students are open to sharing a "vision" for their education, a college ready philosophy.

Such a philosophy, I came to understand, acknowledges the cost of serious aspirations. The phrase "time management" came up in interview after interview. At NSCC and SDCC, students developed time "budgets" and reviewed them with mentors and counselors. Students and staff at NSCC were particularly aware that being serious about college created stress at home and work and required careful financial planning and often mediation with families and employers. Students talked frequently about staying "caught up" and keeping their peers "caught up." A NSCC pre-nursing student noted, "you have to turn it loose and let it go because there's no baby-sitting here."

The students in the study—a sample of students who had successfully completed all or part of the first year of a highly supportive program—consistently told us that were prepared to manage these costs. As one SDCC explained her view of college going as taking up new expectations and "doing the work." In so doing, "we can" meet the expectations. Successful CDKC students, we discovered, tell each other that faculty members "won't listen to anything [excuses] you have to say; you're just going to have to do the work." And in their case, "doing the work" was code for "not just expecting to skate through." Thinking about how her students do the work of college, an EPCC faculty member thought for a moment and then described a process of entering into "good relationship" with faculty and peers, "making mistakes," "laughing," and "asking questions" in class in English. Other faculty and staff talked about the expectation to work problems and answer questions as well as find and question information, use tools, and satisfy program requirements. NSCC and SDCC staff emphasized that the student in the study are open to meeting with experts, recognizing "how it's going" with family, at work, in school, and identifying barriers and resources (experts, scheduling tools, financial resources) for overcoming those barriers. In describing her entry into the NSCC nursing cohort, one student recalled "brushing up" her math skills "before we even got to that point" so as to get past "hurdles" such as placement

tests and program requirements. She and her peers added to that proactive approach a willingness to provide feedback to program staff that can change situations that "are not working."

Signals of readiness.

Serious students, our participants agreed, share a set of characteristics. The most basic are a set of foundational skills that make college-going possible. Students described building informal portfolios of homework assignments and notes, test scores, recommendations, course credits, and GPAs. These measures of their effort prove that they have acquired literacy in English and college-level skills in math and time-management. They show themselves to be able, one EPCC counselor offered, to ask questions about content and programs, to gain access to appropriate courses and programs (including dual credit programs that grant college credit to high school students), and to present themselves and their growing academic abilities to the faculty and staff members who support their progress. Several NSCC faculty suggested that "some college background" seems to be the central predictor of persistence. Students and faculty at CDKC told us that mastering basic STEM skills put students in line for paid summer research positions and opportunities to travel.

Beyond certifying adequate academic "grounds," students identified several other college-ready identity "traits." College-ready students make appropriate use of financial aid and scholarships. Participants spoke frankly about the importance of funding for students, and both EPCC and NSCC staff described pursuing scholarship money and guiding students to learn about and apply for funding as central components of academic support program. Faculty and staff at both CDKC and SDCC worried about students "burning Pell semesters" either by moving too slowly through developmental courses in math and English or by wandering from program to program. Students at these and other colleges spoke in detailed ways about what was financially "realistic" as well as "difficult" for them and their families. Staff members at all four institutions in the study noted that some students use financial aid

as a way of paying living expenses. As an EPCC staff member put it, they "just want to go to college and . . . just want access to the money, but they're really not sure what it is they want to do." From the point of view of these staff members, "college-ready" students are prepared to use referrals to Career Services to develop educational plans: the programs at SDCC and NSCC make career and educational plans—and to lesser extent financial literacy workshops—required elements of participation. One EPCC ECHS counselor described engaging students in a kind of "competition" to see how high they could push their SAT scores and how many funding sources they could tap.

At the same time that the college students in the study described establishing an appropriate academic background, they also described acquiring a set of signals that documented their potential as college students. The most obvious and perhaps most important signals are institutional markers of future academic performance. Two EPCC students described preparing for and retaking the college placement exam so as to improve their "rank" in a pool of students in line to begin a program with more student interest than available spaces. An EPCC early college high school faculty member said that as her high school students begin enrolling in dual-credit and college courses and accruing the credits they need for an associates degree that will transfer, they become "interested in their GPA; they're asking about their grades." Many staff and students elaborated the energy students invested in garnering the test scores and GPAs and completed credits that made them eligible for new educational opportunities. For several SDCC students, engaged participation in the FYE led to an opportunities to work as peer mentors, a job that allowed them to spend more time on campus and develop more connections to staff and faculty members and become more likely to finish their own program and continue their education. For a CDKC student, consistent and accelerated engagement in developmental math classes led to her being "believed in" and "recommended for things" by her math instructor and, in turn, believing in her own capability.

Another signal of college-readiness for the students in the study is a willingness to

use support services. This trait too is a product of participation in programs that integrates support services into college going. These programs are taming what one EPCC staff described as a "two-headed monster": they understand that students are moving between two school environments often with limited information. Students who become college ready, this staff member argued, need to be prepared to make use of "any service or anything that they need." The willingness to access support appears to be of critical importance as students matriculate. The students who get started most quickly, an EPCC College Readiness counselor told us, engage her and learn how placement procedures work including "what they need to go back and . . . kind of fill in the blanks, " and in what ways leveraging her program can enable them to "fulfill requirements"—from high school graduation requirements to the requirements for scholarships. Faculty and staff members—as well as students—emphasized that the students in the programs in the study gain the knowledge and the skills through systematic interaction with staff and programs early on. As a SDCC staff member put it, "the earlier they get informed and start utilizing available services and supports . . . well, the more they get out of the college, the more they will be prepared to actually begin their classes because the preparation, getting ready for college starts way before they actually start attending classes.

Students' reflections on the traits of students that contribute to their success confirm this staff members perspective. Many of the students in the programs in the study, a NSCC student reminded us, start college with little understanding of "what the academic part involves." The students in our sample described as "normal" regular contact with formal and informal counselors and advisors through an explicit or implicit system of case management. One EPCC early college high school student saw his first year of college as leaving behind "high school stuff" for a set of "experiences"—SAT preparation and advisement concerning course selection, financial aid, and transfer—that made college going "easier" and "faster." One of his peers told us about having to drop a college class because of changes in her home life. She approached this challenge in the company of advocates (a counselor in

particular) with whom she came to understand how the bureaucratic process of dropping a class works, what the implications are, and when the strategy is appropriate. In similar ways, students in the other programs saw engaging advisors and counselors—either NSCC navigators, SDCC FYE mentors and counselors, or CKDC faculty—as a routine part of being what one SDCC student labeled a "capable" first-year students. Participating in college, a NSCC student observed, requires the use of support services, services that gave her "respect for what it takes to be a student."

Experimentation.

In addition to acquiring characteristics and signals of college readiness, serious students actively experiment with those traits, mashing them up in ways that enable them to make peace with progressing in a social institution that labels them as non-traditional. With the support of their programs, the students in the study are prepared to test ways of being college students to see which ones will lead them to their goals. An administrator at CDKC impressed on us the critical role played by experimenting with ways of being in school. "They have to have success," she explained. For many, the experience of school up to this point has been defined by "anxiety, confusion, and frustration" and more generally a lack of "engagement." Unlike faculty and students who have experienced school as opportunity to learn and continued in school because "they loved learning," many of the students who matriculate at CDKC and start in remedial math have "never experienced that . . . the joy of it":

They're either like, "Yeah I know I need to do this, I don't know why, and it's gonna be a pain." They've either never experienced the joy so they've just got this numb . . . Or, they've actually been so frustrated or embarrassed . . . We can't discount that [shame]. Here you have adults who are afraid of [school] . . . have experienced bad things, but they're also ashamed of . . . embarrassed by the fact that they have to . . . cannot even jump right into college level class.

If these students are to progress in college, this administrator mused, they have to be ready to test new ways of being in school.

In interview after interview, students described reassembling traditional pathways. For example, a student described being told "you're not going to graduate," by a high school counselor and then seizing the EPCC Gateway Program—part of the College Readiness Initiative—to complete high school and successfully transition into college. On discovering "there was this program that was going to help me graduate," she "did everything":

I filled out the applications. There were tests for this program. I did them.

Essays, everything, and now I'm here. You know, you've got to work hard. It not like you can't not miss a day because you need to be on top of your things. And like me, a lot of people did it. We had 20-something graduates this year, and it was very nice.

For her, school became a computer-based curriculum, a computer lab, and a network of staff and tutors and peers. Rather than sitting in classes, she moved through series of assignments. "It was easy," she told us as she looked back. Looking forward to her matriculation at EPCC, this "high school drop out" thought aloud about her new approach to school: "I feel like I'm not going to fail. Everybody is scared of going to college or university, because you don't know if you're going to fail. I know a lot of people that really don't want to go. I remember I used to be scared of going, not knowing what to do and ending up failing and not getting to where I want to be, but now it's . . . You have to try . . . You work your way through it."

With a similar sense of confidence, students told us about working their way into college through the NSCC pre-nursing cohort or the FYE program at SDCC. Most of the NSCC students that we interviewed and many FYE students spoke about failed approaches to being high school and college students and then reflected on trying out new approaches, often at the recommendation or requirement of a college program. In a SDCC focus group, one student described becoming adept at noticing what other students were doing to

progress and learn and then thinking to herself, "you could be doing the same thing." Another recounted experimenting in the SDCC FYE with ways of being college students and coming to "know the process and know what to do." And a NSCC student said that she had become "more forgiving of myself" as a student. By experimenting with alternate ways of being college students, the students in the study shared the habit of acknowledge "shame" and finding new pathways.

Staff and faculty members in all of the colleges in the study confirmed the openness of students in the study to experimenting with new approaches to college-going. SDCC faculty members, for example, observed that students who "make a choice to come here" manage to be "here" by testing in various school performances the "basic skills" that they have and have not quite acquired—from retaking a placement to talking to a teacher during office hours. They described watching students use these school performances to discern both whether they are able to be "here" successfully and what skills are still lacking. From the perspective of two EPCC faculty members and a handful of staff members, such performances often include the opportunity or obligation to "speak" in academic contexts in academic English, the language of instruction. One teacher described watching Early College High School students use "[a] classroom that allows that . . . that provides them that opportunity to speak and ask questions" to work out a college going identity. Describing an orientation workshop, an EPCC counselor said that the education of many of her students starts when they are able to ask her in English, "Do you think I'm going to be able to finish, do you think that I can do it?" She offered story after story of wannabe college students testing out a claim about their own potential with someone who knows what college involves and can help them design an approach that works. She added that she herself had engaged in exactly this kind of experimentation as a student: "I was afraid when I started college. I didn't speak English at all, nothing at all."

This experimentation appears to focus on two dynamics. The first is pace. Students in the study often talked about coming to understand their "learning style" and prior

experience and then adapting the speed with which they move through content and programs in response to their sense of themselves as students. For many, the pace they could sustain determined what program they chose, how they studied to how many courses they took each term, and how many hours they worked. A CDKC student, for instance, observed without judgment that one of her peers was a "slow starter" while she herself "whipped through [the developmental math curriculum]." Her peer got "a lot out of [the experience]" while she "refreshed a lot of stuff I didn't remember." She and her peer know, she added, "what they're good at" and they use that knowledge to determine how to move through college programs. One NSCC student noted, "I always caught onto things slower." She went on to explain customized strategies for doing homework, managing group assignments, and preparing for tests; one of her peers explained adopting a purely instrumental approach to her education that enabled her to move as quickly through material as she was able. Still another NSCC student recalled once stopping out of college and explained approaching this experience differently, using her peers to slow down her studying. For her, a set of cohort members became an informal study group "to keep each other in check and study and make sure . . . quizzing each other on things we aren't required to, talking about the material in a way that really applies to each one of us." A SDCC student explained minimizing "bullshit"; she was actively bracketing activities—FYE requirements and course assignments—that she could not link explicitly to her educational goals. Feeling already "well-rounded," she tested what elements of the traditional college experience could be left behind.

Faculty and staff described successful first-year students' experiments with pace as relearning or "refreshing." These first-year college students, we were told again and again, have been students and have already seen much of the content that is covered in the first-year of college. Those students making strong progress, an EPCC administrator told us, were prepared to "refresh" skills and knowledge without embarrassment. Rather than waiting for content to be delivered to them, NSCC staff observed, students were opening

online exercises early, moving through them quickly, and then reaching out to an expert when they got stuck. One faculty member observed that students in the nursing cohort felt a kind of entitlement, expecting faculty input at points of impasse so that they could stay up with the required pace of their program. A SDCC staff member summed up the pace of successful students as a rate that takes into account "their workload and their life, so they don't take on more than they can handle, so they can learn and develop their time management skills gradually with our support, with our guidance, until they are ready for more. And once they learn to manage this, they can . . . Then they're ready to go. Then they are ready to go. Then they just fly away."

In addition to experimenting with pace, students frequently described experimenting with approaches to interacting with faculty and staff members. The default approach for many of the students in the study is insufficient, we learned. Reflecting on the students who began college in the SDCC FYE, a faculty member said that "their schema does not include go see professor in office hours because that means a lot of other things that could be bad for them" Faculty and staff members at others campuses also observed a kind of default resistance to asking questions of school staff. They described cultural resistance to questioning experts, reticence to speaking in school in accented English, a habit pretending to understand, a tendency to self-advise, and other school-going practices.

Many of the students in the study acknowledged hesitance in engaging faculty and, at the same time, described cultivating new "schema," often with substantial support from the focal programs in the study. They were becoming, to use the words of a SDCC counselor, "relentless in getting answers for their questions." Students called it variously "getting with faculty" or "asking your questions" or "getting your questions answered." One SDCC student described her process this way:

Even though [faculty] are not your peers, you're learning how to communicate with them. . . . It's really successful when you can ask questions, and you're not afraid to sit in the front of the class, and you're not

afraid to say that you made a mistake but [you learn] how you are going to get the best out of the situation or out of the class.

Other participants offered versions of this narrative. A CDKC faculty recalled a student telling her what kinds of group activities made her "comfortable participating and helping out." A SDCC faculty member described an animated discussion of the difference between embracing an assignment and approaching it "like, 'Ugh, I've got to do homework right now.'" A NSCC student said simply, "I ask more questions."

These and many other students in the study talked about a willingness to forge a communicative relationship with their teachers, and these teachers—particularly math faculty members—confirmed that willingness. Math faculty members at all four campuses described routines for "talking" to students about taking (pre)college math. A SDCC instructor, for example, recalled learning that many students "don't really understand you. . . . They're just mimicking." He went on to explain an approach to teaching math that included designated class time for discussion of students' experiences with and goals for math learning. This talk, he emphasized, happened before the class began racing through content. His stories of student success seemed to revolve around students' willingness to talk with him instead of disappearing. Other math teachers also underlined the significance of staging opportunities for "everybody to come to talk to me" before and after class and in learning centers and offices. Across campuses, participants connected this kind of talk to reflections on the part of faculty and students concerning what and how students were using math. Such talk led one SDCC faculty member to routinely reassess students' familiarity with math so that she could "adjust" her curriculum; two of her colleagues used talk to reposition themselves as "coaches" who could "challenge" students. A NSCC tutor described watching a math faculty member to say to fearful students, "'Do it again. Here's how you do it. Do it again.'" But they kept going to him even though . . . it was, 'He hates me, he hates me.' But they go, and they ask."

College-level work.

Across the colleges in the study, faculty and staff observed that New Majority students, their students, are a "mixed bag" when it comes to having learned "what you were supposed to learn" in order to be ready for college. Confirming research on the academic preparedness of community college students (Bailey, 2009; Deil-Amen, 2011a), an EPCC administrator, for example, acknowledged that her college serves many students who appear not to know "all of this basic high school level content." At the same time, she resisted—and explicitly rejected—a "deficit view" of students. She resisted the view of a student as a head to fill up or fix "so that that student will be able to do the work." Rather, she—and other participants in the study—recognized college students as students who have "lots of reasons" for being unprepared to use content that they have already "seen." Successful students, in her view, are those who are willing to examine the reasons that they are unprepared and establish "approaches" to becoming prepared. Across the programs in the study, these approaches included two interrelated kinds of activity: "prepared" students must show that they know what college students know and at the same time how to go to college.

Competency.

Across campuses, students in the study were actively involved in proving to others and themselves that they have "seen" core content and that they have a "background" that enables them to use college-level content to their respective ends. In reflecting on the challenges that she and her peers face in starting college, a CDKC remedial math student emphasized the importance of having "grounds to learn beyond high school." Students who have "never seen [basic math content] before" stand little chance of progressing, she said. She was able to race through nine credits of remedial math in a single year by "reviewing" a sequence of complex math concepts that she had already seen and showing that she could use the concepts to work problems. In other programs, students described using diverse tools—from placement tests, to computerized learning systems, to weekly quizzes to

attendance at study sessions—to prove they had proficiencies in reading, writing, and math that made it possible to learn "the science" or the "basic skills" at the center of their academic programs. At CDKC and NSCC where students were in STEM programs, participants were especially clear about what content students need to have seen. They had to know "beginning algebra" cold and then begin to read content and terminology in "transfer" science classes, classes in which science is not "dumbed down" so that they could begin to interact with a nurse in a clinical setting or a biologist running a research project.

At every campus, students also talked about needing to prove that they had seen the kinds of tools that college students use. For SDCC and NSCC faculty, successful students are those who acquire textbooks, PowerPoint slides, lecture notes, calculators, and the like before assignments require their use, even if acquiring these tools means borrowing them from an instructor. EPCC staff described successful students as those students who were prepared to learn how to take placement tests before they were placed by those tests. Students and staff at every campus observed that successful students use the tools of "time management," from spiral-bound calendars to digital schedules for workshops to course management systems to calendaring systems on smart phones.

"Knowing why."

Simply having a background and access to tools, participants emphasized, is insufficient. For these students, being recognized as college students is related to connecting background knowledge and tools to their educational purposes. Students across the four campuses described valuable academic backgrounds as those focused on goals. "Grounds" and tools become useful, one NSCC student argued, when they are accompanied by "the ability to focus and to see the objective and to figure out a timeline in your own mind on how you're going to accomplish that objective given everything else that you have going on." These objectives, a CDKC leader suggested, are more specific than "improve my life." Many of the students in the study—even those who had transitioned to college directly from high school—described starting college as "going back to school" or coming "back

again" to education. Many of the students in the study had, to use the words of a NSCC student, "to prove why I need to be here" to themselves and their families before she could draw on the resources she needed to pass her classes. One of her peers explained her "proof for why I need to be here" this way:

I had been wanting to do nursing school for a long time. . . . You know, for me it's kind of a blend of feeling like I have an affinity for helping professions and being just fascinated by medical stuff, by anatomy and physiology. . . . I thought I was going to do it a long time ago but life gets in the way.

She went on to tell us about drawing on her understanding of her educational purpose to develop her NSCC application and in her admission interview; she connected her clarity about her purpose to her employer's support for her admission to the program. An EPCC counselor elaborated the role of purpose further. "Proving why I need to be here" is important, she explained, because "you need to want to go to school. You need to want to study and [to know] the best time [to go] so that yes, you can pass the test or that yes you can pass an English class if you don't know English or your math class if you haven't taken math in many years."

This tendency of students in the study to emphasize the need to have mastered background knowledge and the use of a set of tools is in some ways scripted in the programs in which the students are enrolled. Faculty and staff members in the study spoke at length about connections between students' access to background knowledge and tools and their progress in college. In different ways at each of the four colleges, faculty members described redesigning curriculum and instruction to make students' "grounds" a routine part of courses. At SDCC faculty described building time to "learn about the students" into math courses and implementing additional placement assessments and other assignments that enable them and their students to "get to know who the students are." The faculty and staff involved in the NSCC nursing cohort meet weekly to review assessments of students academic performance and to adjust curriculum so that students can put all of their

resources into play.

In some instances, the declared intent to master college-level competencies seems to be enough to prove that a student is prepared to be a college student. SDCC students and staff observed that the offer of priority registration led many FYE students willing to meet with counselors, participate in workshops, and ultimately to file an educational plan and take and pass the courses in a degree program. For non-traditional students at EPCC and NSCC, the desire is more precise. They seek to move quickly to a specific credential. This objective leads them to studying "on my own" and "brushing up before" a placement exam or the beginning of a course in order to get to the right "depth" of understanding so that they can learn enough or learn more quickly. One NSCC student said that working toward becoming a nurse in a cohort of pre-nursing students who were already working in healthcare made the study of statistics and chemistry "fascinating." Whatever their objectives, most students spoke fluently about their competences and even made jokes about the extent to which they thought about what they were and were not doing as students and where their education might take them.

Practicing and Using Tools

Beyond working to master identities and skills that make them recognizable as college students, the students in the study practice as beginning college students. That is, they rehearse with technologies, knowledge, and skills in processes of trial-and-error until they can pass as college students. Matriculating to New Majority institutions, these students come to college "whether they [are] college ready or not," an EPCC administrator explained to us. As an EPCC Early College High School student told us, this process of "being dropped into the college environment" can be "terrifying":

Although there is a lot of support, a lot of support here, initially you're terrified. And, when you first get in to your first speech class, and your first whatever-it-is class, it's you, maybe three, four other people, three or four

other students from the early college high school. But, the rest of the students are 20-year-olds. They're college students that have already graduated [from high school] years ago. And, the teacher, he may or may not know that you're from [an early college high school], but he treats everybody the same. And, so at the end of the day you understand that "I'm not going to be given special treatment. I'm going to be here to learn. And, I'm going to do this." And, so I think that is one of the things that triggered that. It's kind of you're placed in a situation where you have to work.

While this student was responding to beginning to take college courses as a tenth grader, his observations align with those of other students. Those students perceived the first year of college alternately as a "competition," a performance in which other's might "make fun" of accents or lack of knowledge or skill, a series of obstacles in respect to learning content and skills required for graduation. Succeeding in college takes "work," as this EPCC student observed. And then he added, "it's not really work [a job]. It's more of a personal [thing]." Across participants in the study, education is framed as the attainment of traditional outcomes from degrees to employment to grades by way becoming able to satisfy demands imposed by others and students themselves. From the point of view of faculty and staff, students need academically to "transfer learning" to new situations or "up [their] level of maturity" or become "prepared" for college or "alleviate some of the anxieties" that come with being in college. Yet, this "work" is not simply or even primarily academic. Many students and their teachers described engaging in a sort of identity work aimed at finding "hope" or "something that makes you happy." Their activity also had a public dimension: many described working to become the "graduates" that some community needs or to "prove that [they] can be here" for themselves and their families or simply to "go somewhere from here."

Looking back at her trying first year, one NSCC pre-nursing student reflected on what she had accomplished:

I made it through, somehow. I just kept trying and trying, and struggling. I felt like I was drowning, but I did it. So, I don't know, I just did it. I can do it. It's something that I've learned, going through this; it's already been more than a year. No matter what the obstacle is, I know that I can do it if I just keep trying and don't give up, and realize that I'm not going to be the only one that has struggles, and it's not going to be easy, I can still finish.

None of the students in the study—a sample of New Majority students who successfully completed the first year of college—claimed that they entered college knowing how to "do it" or even what precisely they were going to do. Even students who considered themselves academically well-prepared or who had already completed other degrees described approaching college with fear, anxiety, and uncertainty. They believed that they got a successful start by relentlessly engaging in what this NSCC student thought of as "doing it," what I have come to understand as rehearsing or practicing. This fundamental activity goes by various names. For a CDKC math instructor, it is "dealing with it"; an EPCC faculty member talked about "getting on with their program"; a NSCC review session leader described students "spending a lot of time." Across campuses, four routines for rehearsing ways of being first-year students emerged.

"Asking your questions."

The students in this study agreed that the practice of asking and responding to questions is a marker of an "experienced" student. As one CDKC student put it, beyond doing their work successful students are prepared "to stand up and talk about it": they are ready to present what they have learned and ask about what they are learning. To be sure, many students described standing up and talking as "scary" and foreign. While some described themselves as students who were always willing to ask questions, many described learning in college to become comfortable with the practice or at least willing to try out the practice. Many students believed that asking questions "made the difference" in their academic progress.

Non-student participants shared the idea that the practice of standing and talking distinguishes the students in the study. Asked what academic behaviors contribute to the progress of their students, two faculty who work with the NSCC nursing cohort offered and then elaborated a single answer: "If they're confused, they ask."

Staff 1. They ask right away. "I don't get it. Can you clarify it?" And then they're doing the right thing instead of just blindly trying to not look ignorant and get caught.

Staff 2. Yes, because sometimes students will just like drift and they won't come and ask, and I won't know that they have a question because they're not asking, and I'm like well . . .

Staff 1. Yes.

Staff 2. Or they'll turn something in and I'm like, "This is terrible. . . . Why didn't you ask me if you didn't know how to do it?" And they're like, "I don't know." That's my job; ask me questions, that's what I'm here for. . . . And these students get that.

These students "get that," I came to understand, because they observe classroom "dynamics" and locate themselves in spaces—the front of a classroom, a faculty office, a tutoring center, a study group, a smart phone—where questions can be asked. Inhabiting such spaces seems to be critical. Spaces of interaction, one NSCC pre-nursing student told us, can promote routines that lead to questions. He recalled being prone to drop classes in which his questions went unanswered because "they don't work for me." In interviews at every campus, faculty observed, often in passing, that students who were making steady academic progress showed up for class on time and sat near the front of the classroom. A NSCC instructor noted that "those front seats would go quite quickly to the students who knew that being up front . . . being right there meant being able to interact very quickly with the instructor." Likewise, these students made use of "supplemental" opportunities to learn about academic content and college-going even if, participants at all four institutions

told us, they did not need extra help. As a matter of habit, they showed up for NSCC study sessions or SDCC supplemental instruction (SI) groups or in SDCC and EPCC labs. As one SDCC student put it, being there meant that she had access to the time and tools that she needed to do her school work.

Showing up in spaces where questions can be asked, participants broadly agreed, was important and insufficient. The ways in which students in the study inhabited spaces also seemed to matter. Successful students, a SDCC math instructor reflected, arrive at office hours or SI-tutor-led study groups with course materials and specific questions. A NSCC tutor recalled saying aloud to a student, "Aw geez, you've got to watch my math," and then went on to note that her students who were developing their math skills were questioning their tutors' work rather than waiting for tutors to do the math. NSCC students talked about taking notes and building their own models and interpretations before they go to class or study sessions so that could contrast their understanding of content to representations of content offered by teachers and peers and ask their questions. One NSCC student reflected on becoming "comfortable like stopping the teacher in class or shouting out questions or different things like that." He described learning "classroom dynamics" and feeling like "I can almost anticipate what other people are . . . other people would have." Math students at CDKC and SDCC described a process of working problems that included checks for whether a given approach had played itself out so that they knew when they needed to ask their questions. Across groups, students described using grades and feedback as triggers for standing and talking rather than passively accepting them.

Unlearn.

For the students in the study, asking questions is grounded in the expectation that they will make mistakes and unlearn. Thinking about one of her dual-credit classes, an EPCC Early College High School instructor described a set of actions that led students to "respect" the making of mistakes and "trust" the "learning process." Her students, she explained, take at face value teachers' offers to be stopped and challenged in class and at

the same time take up the role of teacher through jigsaw exercises and class presentations. She added, almost in passing, that questioning prior learning is part of coming to her class.

For their part, students appear to rethink and reassess what they believe about how they go to school and how they learn. Asked what interactions with faculty matter for her, an EPCC student who completed her high school education through the College Readiness Initiative Gateway program offered this reflection on school-going:

Me, personally . . . , I'd rather have a face-to-face. That's just me. That's how I learn better. I'm taking an online class now, . . . and I thought I was not going to like it, but I am learning. If you take your notes and you read your book, you do learn. You do. I took my first test, and I didn't think I was going to pass, but I did. I'm starting to . . . now that I am taking it, I'm okay with an online class. I can still learn.

In the midst of an interview with four researchers, she rethought her own sense of what it means for her to ask questions. She was ready to be wrong about how she learned, ready to unlearn habits. She exhibited what a NSCC tutor thought of as a willingness to say "Hey, I didn't get it. Hey, wait a second, when you said that, you know, is that the right number there." Many NSCC students, this tutor added, "sit there in class, almost stunned. I mean it's the . . . if the teacher doesn't move around and say, 'Yes, hey, . . . when I said this, how would you phrase it, could you . . . did I make sense to you.'" Despite caring for families, working, and living on "only had three hours of sleep," these students practice challenging representations of content, their own as well as those offered by others.

Reflect on what you want to learn.

A second kind of interaction that students connected to asking questions was reflecting on what they want to learn. I was struck by the fluency with which students in the study talked about their learning styles and strengths as well as strategies for finding representations of content that "work for me." At every college, students detailed processes for supplementing textbooks and lectures, which frequently included making use of their

peers. Through formal SI, informal study groups, and serendipitous interactions with classmates, students described collaboratively working through what new knowledge meant to them or what uses they might make of tools or how they wished to complete and submit assignments. These interactions helped them decide when to satisfice and when to learn more, at times creating conflict with traditional assessments of isolated and decontextualized knowledge. Several faculty members said that when students were satisficing, they often worked together to prepare for out-of-class tests and used course management systems or smart tutors cooperatively to get work done as quickly as possible. When they were digging in more deeply, they often struggled to be ready for assessments since they were going beyond what was required for the assessments.

These habits of reflection seem to scaffold the asking of questions. As an EPCC Early College High School principal put it, her students were "mature" enough to ask questions to a great extent because they had developed their own interpretations of school-going: "They can counsel, advise a traditional student in ways that a traditional student never even dreamed. They can navigate the systems that take them through." One ECHS faculty member recalled her students telling her "what they wanted" from her class. An EPCC student observed that she and her peers were thinking and talking about whether they preferred learning various topics by asking questions of a smart tutor or by "sitting in the classroom listening to a teacher and taking notes." SDCC and EPCC students, counselors and mentors told us, routinely asked to visit more transfer schools and, especially at EPCC, for opportunities to improve the test scores that affected their options. NSCC nursing students recalled successfully requesting less group work and more opportunities to ask questions of STEM experts, use of lab materials, and discuss assessments. Across campuses, these students used advocates—navigators, SI tutors, mentors, counselors, trusted staff and faculty—to be heard and, one NSCC navigator insisted, to hear themselves about what they wanted from their education.

Deal with fear.

Many of the students in the study connected their willingness to ask questions to a set of practices that enabled them to deal with fear. Across the programs in the study, participants emphasized again and again that for New Majority students, college is "not an easy or comfortable process," and it is not uncomfortable simply because the demands are new as well as rigorous. Consider the case of remedial math students at CDKC. Because most CDKC students are Northern Cheyenne, they are negotiating very different and frequently conflicting mainstream models, settings, and practices for learning and being. When it comes to math, many CDKC students arrive at the college unprepared and afraid to be a student, much less to ask their questions. A one-credit math class, one instructor observed, "has most students just trembling." In a group interview, a student captured the experience of many students in the study:

I don't know about you guys when you started your math . . . I was afraid of math. I did not like math. And a lot of that was a combination of past instructors and the way that I've always learned math. . . . You know, if you weren't right, you got a crack with the stick. . . . It wasn't a real stick, but you had this teacher saying, "You're wrong. Sit down."

This fear—what several faculty called "math shame"—is complicated at CDKC by Cheyenne educational traditions. Within Northern Cheyenne traditions, two faculty explained, learners do not ask questions (see also Montana State Department of Public Instruction, 1980). They have been socialized to learn new practices by watching experts and then practicing on their own until they are ready to perform the practice as a member of the community. "It kind of goes against their cultural background to question an authority," one faculty member observed. Another elaborated as follows:

They're not supposed to ask questions and say, "Do that again, or how did you do that." They're supposed to watch and let it sink in. But [remedial] math is something where if all you do is watch and let it sink in . . . we don't have time because we're trying to cram so much in, so they don't have time

to just sit and let it sink in. They have to ask a question if they're stuck; otherwise, they're going to be stuck in that same spot for a long time.

To progress in remedial math classes, these students have actively to remake college as a safe place to ask questions. At CDKC, they take advantage of rooms that gather together computers, "the software" that supports the common computer-based curriculum, one-on-one faculty support, occasional peer support, and access to a nearby learning center. By resisting traditional curricula and becoming engaged in a math emporium, they have established access to spaces in which to learn math, spaces that are available whenever they are able to "come over here and get on a computer" or talk to a math instructor or tutor. These basic actions—stopping out of classes that leave them stuck and using various digital tools (from smart tutors and course management systems to the Kahn Academy) as well as trusted peers and instructors—were shared across the sites in the study. These students find tools and people who are able, as one CDKC student put it, "to explain it without making you feel stupid."

Framing Problems.

Students across the four sites routinely practice using what they know to set up problems in ways that lead to "easier" solutions. To be sure, these students are prone to seeing learning as a zero-sum game. They have spent much of their education, one CDKC faculty offered, in settings that "are more focused on skill-building than they are on problem-solving," and they seek, another CDKC instructor told us, a "formulaic approach" that works every time. Yet, across campuses, students told us that they distinguish between settings where they need to memorize and others where they must solve problems. They appear to come by this distinction at least in part because it is one made over and over by program staff. As a CDKC instructor explained, they are frequently asked "to say, 'Right, now this is the problem. What can you do to that? Okay, just do that. Now.' . . . I get them to break it into those chunks that they can deal with individually and never to think of it as an overall lengthy problem that they have to know all those things to do." The emphasis, he

added and teachers across the study confirmed, is on "fundamental properties" rather than "formulas." The aim is to see what the problem is, break it down into components, and then build it back up "in an easier pattern"—a pattern whose properties the student understands. At CDKC, this basic approach was emphasized by math faculty as well as language faculty members. SDCC faculty from both disciplines identified similar strategies.

Students seem at once to practice framing problems and to resist the activity. A CDKC student observed that her teacher "keeps telling me, don't take your time on that [looking through the textbook for the right formula]. Just go into it and see if you can understand it." She went on to describe her growing comfort with using "shortcuts and different ways to come up with the equations" rather than formulas. Moreover, she felt that the approach to math is "kind of cool" and "passionate"; it was problem-solving rather than memorization. One of her peers described it as "get in and start working right away" and another as "coming to some kind of mental stumbling block and just being able to see it. It's like a light that goes on in your head."

Framing problems, a majority of students in the study agreed, is a passionate approach to college-going. But it is not simply intuiting solutions. Instead, it is a habit of seeking out new problems and using what you know to assemble an outcome that serves—a defensible "claim," your "ideas," a level of work—by going back to properties and tools, fitting pieces together, and then making the process pay.

Going back to properties and tools.

Asked what she saw in the prose of developmental writers that told her the students were becoming ready for college, a SDCC English faculty thought for a moment and then said:

When I look back at those early drafts and see that there is very little sense of what or how an essay should be organized and that there are many sentence structure errors to the point in some cases . . . You're not really sure what they're trying to say. And then to later drafts and a final draft

where I see a student who understands what an academic essay is and has made use of examples and explained them and integrated their own personal experience into it in an appropriate way. It doesn't mean that it's absolutely error free and that more couldn't be done. But I see well-developed paragraphs and a sense of argument in the end. . . . I see a student who has demonstrated understanding of a challenging reading and has been able to use sources and explain them, a student who can in a timed environment write a coherent essay that has a clear point and then support it. I see evidence of growth and hard work.

As this faculty member reflected on the practices of successful first-year writers, she described their work in terms of fundamental rhetorical properties, genre ("academic essays" and "timed essays" and "argumentative essays"), basic rules ("appropriate" grammar and syntax), and a process for making sense of a challenging reading. Her reflections echo those of a CDKC math teacher who observed students who could approach complex math problems by way of "fundamental properties of arithmetic, the commutative property and the associative property and the distributive property and so on." These two faculty members observed that students who become ready to progress in college do not simply memorize procedures. Rather, in the words of the CDKC math instructor, they "understand . . . a clearer picture of what's going on overall." One SDCC student confirmed this point as she explained that she had to understand fundamentals: "Some people can like . . . I don't know the formula for it, but I guess there's a formula, and they can just know how to use the words in order to answer the questions. That's not me. I have to know the information in order to answer [the questions]." She has to "study . . . literally to go sit down and talk to [my instructor], and I go like, 'Okay, this is what I'm thinking you mean,' and like, 'What are you talking about here?'"

To use the words of a SDCC English faculty, the students that we interviewed "call what the session will be." Rather than "passively trying to take it in by osmosis," a NSCC

faculty member explained, successful students are "paying attention to detail . . . and stopping and saying 'this is important and I need to remember it.'" Students at all four colleges confirmed that understanding the "overall" for them requires working ahead and knowing what teachers will talk about before class began. Students described two basic tools that they use in order to be ready to call the session. The first, and for students and staff, the most important are "time management" tools. The second are tools that enable students to decipher texts.

Time-management tools.

While the students in the study believed that different students were "good at" different activities or with different bodies of content, they rarely attributed academic progress to native ability or intelligence. Progress, one NSCC student emphatically declared, was really about finding time: "You have to have the time to put the tools in place; otherwise, you're not . . . If you don't have the support system. . . I wouldn't have the time to do it." Again and again, when asked what tools and practices contribute most to getting first-year students started in college, participants said "the big thing" or "a lot of it" or "the most important thing" is "time management." For one NSCC student, "time management" and "studying" were more or less the same process. It is, a SDCC leader told us, a "skill" that students can learn. A SDCC student and peer-mentor, for example, explained that students who he sees "make it" were those who come to see their mentor "already wrapping their heads around their schedules, and they're working out their time management. They know what they can and cannot do." "Schedule conflict" is a reality, a SDCC staff member and her supervisor observed in separate interviews. Successful students, they agreed, recognize and work through "schedule conflict," often with others who provide information about "how much time it takes" and what students are "committing to" when they sign up for a class. Some, the administrator added, "opt out" of opportunities like summer school once they realize what the "schedule conflict" involves: "Oh no, I have to feed my family. . . . I'll come back in the regular semester."

"Time management" was often realized through artifacts. "Everything that I have from work, from school, from my personal life, my kids, everything is on my master calendar," a NSCC student told us. Artifacts like calendars and meetings and course syllabi enabled students to fit school into already full lives off campus. At every institution, many students offered detailed plans for inserting college into their calendars. At NSCC, for example, the working students in a focus group offered explanations like this one:

As for work, I do 12 and a half hour shifts. So if we have class three or four days a week, the off-days are my work days and exclusively work and then school days are exclusively school. So I get up in the morning, get online, do the online class, reading, homework, whatever you have to do, and then I drive in. It takes about 45 minutes to get here, and I just show up right before class. Go to lecture. There's a few of us who go exercise together after class and then go home and that's my day. The 9-5ers, I think, have it a little differently.

The "9-5ers" in our sample do, and they described their approach in similar detail.

Participants frequently wedded together the use of artifacts that enable them to allocate time to a set of habits. At a very basic level, making use of "time management" tools results in "attendance"—a concept used by faculty, staff, and students at every site. Students, NSCC faculty and staff observed with a certain amazement, are "there" every day having navigated "the parking and coming in and getting to class on time" despite lives that work against them. Beyond "being there," one online instructor at NSCC added, these students tend to "be on it right away . . . They've realized that they need to pace themselves." Based on the log in his course management system, he believed that many of his most successful students share the habit of looking at assignments and course materials and trying out assessments early.

Students in the study are also practiced in "juggling a lot" or "budgeting" or "organizing" so as to deal with multiple assignments that are each composed of multiple

elements. Students described making choices to "live" in learning centers, bring homework to picnics, drill flashcards in line at the grocery store, meet up with peers or teachers before and after class, and, with some regret, break off ties with friends, family, and even spouses who were unable to support their educational goals. "College success," one NSCC student observed in a focus group, "has very little to do with what you're doing at college." "It's what you're doing in those off-hours," his peer added. She agreed, "It's how you live your life and do you know how to make the decision of whether to go out tonight or to spend the time working." A SDCC student pushed this idea further. For her, learning time management in a Personal Growth class (an FYE requirement) was learning something "that I never knew before, and I know that I'm going to take it with me my whole life because I'm going to know what I want to do and all that. . . . I've been wanting to see [my teacher] every day, so she can clarify the assignments."

Reading tools.

Having made time for their education, these students are, one SDCC math teacher argued, discovering how faculty and students in college-level courses use math or rhetoric or chemistry to name things and organize them in order to make meaning. Most of his students do not learn math, he emphasized, simply by hearing a teacher say, "Do it this way." Thinking about his own experience, he said:

I understood [math] because someone said, "Do it this way." "Okay. This is the way it works." Most of us understand it that way, but they do not.

Rather than treating "everything in math as a number," most of his students must learn "who they are" in math class and how "that class is going to work" given "where you're at." To succeed, he suggested, his students need to learn "math as a language."

Faculty in other disciplines and the other institutions in the study offered similar observations about their community college students. A chemistry faculty member at NSCC provided this analogy:

Well, that's what I tell students, this is like a house of cards, if they don't

build a strong Chemistry base, then they can't build, those are the letters and we need the words, and the words for the sentence, the sentence for the paragraph, and then they're going to start moving around in space and time.

One of his peers who ran chemistry review sessions described what some students did with this approach:

I think a lot of the students who were developing their skills they were going through the process of doing just that, trying to figure out what was going to work best for them. It's something that I addressed in the review sessions in the beginning was finding your own individual study style and what was going to work best for you. So I saw a lot of wasted time in the beginning. I think towards the second A&P class that I was with them I saw a lot more people really kind of honing in on how they best learned, whether that was visual aids. Some people made flash cards. Some people had to come in and handle the models in the lab.

Asked what practices they employ to study, students frequently talked about what I came to label as domain specific strategies for reading texts. These students are, by their admission and the observations of faculty and staff, often overwhelmed by the volume of texts that come at them in college. Reflecting on her own first year in college as well of those of other FYE students, a SDCC peer mentor described the process of doing a new "type of reading" that students "are going to learn" in their first semester. They have to keep track of what texts they need to make use of and, as importantly, how to decipher them. Since they cannot, according to faculty at SDCC and NSCC, read "every word" that is assigned, successful students develop methods for making use of texts. A NSCC student described "getting faster, learning more, getting better, and really adjusting to what to takes to be successful . . . learning the way that you can be successful." She and students across the study talked about various methods, creating flash cards to drill A & P vocabulary, drawing their own reproductions of biological systems, establishing routines for navigating

texts and quizzes in computer-based learning systems, scheduling with their peers what appear to be recitation sessions, studying at an SI table in case they get "stuck," making use of lab materials.

These students also described reading their own approaches to college-going. They frequently described using the results from what a SDCC student called "personality tests and stuff like that" to design efficient approaches to studying and being in class. They engaged in a similar process with what they gleaned from classes, workshops, and counseling sessions aimed at scaffolding career development. Both as academic program learners and as college students, students in the study develop strategies for making sense of a flood of complex texts, determining what is significant and what can be ignored.

Playing new games.

In becoming problem-solvers, these students are learning a new "game." They are, one NSCC faculty member observed, taking responsibility for "figuring [college] out," and this practice requires both that they approach problems so as to allow new ideas to emerge and also that they remained focused on a particular sort of problem. Reflecting on his first year in college, a SDCC FYE student explained why this stance is important: "There's so much confusion when you come here or to any school of what you need to do. I feel like some people didn't know what they wanted to do. I did know what I wanted to do. I just didn't know how to get there." Students, he posited, actively use support, "realizing kind of how you are . . . learning" to "create" your own education. This work is "successful," he added, "when you can ask questions, and you're not afraid to sit in the front of the class, and you're not afraid to say that you made a mistake, but you are ready to say how you are going to get the best out of the situation or out of the class." NSCC staff and faculty labeled this basic stance "modeling," and they have students taking it up as they learn academic knowledge and skills as well as college-going. In a focus group, three faculty members collaboratively described pre-nursing students engaged in a process of building, sharing, and retooling "models." They first want "to see something modeled out very clearly"; then,

they ask questions "as the model is being presented"; finally, they "try it"—often getting formative feedback from peers and trusted faculty and staff—until they have a model they fits their lives. Students at all four campuses described using versions of such a process to prepare for their classes.

The practice of framing problems so as to remain open to ideas appears to be a standard operating procedure in the programs in the study. A SDCC leader, for example, acknowledged that programs at the college develop "organically." From his perspective, the college needs to be and is focused on a set of strategic priorities and goals, but programs like FYE are successful in realizing SDCC goals—in his estimation and in the estimation of faculty and staff—because college staff "range freely" in councils and committees and working groups that allow ideas to emerge. Staff involved in other programs at the other colleges in the study confirmed this finding. Their programs are designed to be responsive to student behaviors and outcomes; they are prepared reallocate resources and redesign curriculum and instruction in response to their students' success.

This commitment to remaining open to new solutions notwithstanding, the practice of framing problems that emerges in the MSI Models data is situated in New Majority institutions. All of our participants observed that the students in the study have to know what their grades are and what grades are passing; they cannot afford to frame problems in ways that do not lead to passing grades. The game that they are playing is part of schooling. The problems they are willing to take up "depend on the class," one NSCC student reflected. "There are some [classes] that were really just about memorizing stuff, and so there are ways that I figure out what stuff to memorize, and I just sit down and do that. . . . I have learned how to play the game. "

I have learned how to play the game. I have learned how to assess quickly what is going to be needed in a class which I think is actually a pretty important skill. . . . There is so much support in this program, but some people might need a navigator for those first couple of weeks . . . "Okay, so

this class has this thing you have to do every week, and this is due every other week, and this is the focus of the teacher, and these are materials."

For some people I think it takes a little time to get into the swing of things every quarter, and it's 10 weeks long. It's a few weeks in before you get the hang of it.

This kind of thinking, she added, was not something that she had embraced when she completed a bachelor's degree years earlier. That program was about "thinking critically and confidence." This program is about "vocation." She and other students explained again and again their sense that their education has to be intentional, and that this demand is, as a SDCC student put it, both "intimidating" and "blurry":

It's just really intimidating for a lot of students. And it gets a little blurry like, you know, your first year. You're kind of like, "Oh! Do I really want to do this for the rest of my life?" You're thinking about it financially. You're trying to help out your family. Like, from a lot of people, I hear, "I want to do this, but I don't know if it's going to help me out financially in my future."

For him, successful students in the FYE attend workshops and counseling sessions as well as complete a variety of inventories that help them predict in what ways "your major going to help you be successful in your next ten years? They develop a "clear vision" of the game that they are playing, a vision that includes the consideration of "the reality of what's going on." For most of the students in the study, "this time" in college has to pay off in a labor market whether it involves "critical thinking and confidence" or "what I really want to do for the rest of my life."

The staff who manage the programs in the study frequently voiced a desire to "adjust" institutional practices to make the college game less "intimidating" and "blurry" for New Majority students. They are, as a NSCC administrator put it, experimenting with "contextualized learning":

And I'm trying not to just use buzz words, right . . . We know that [nursing]

pre-reqs are often a barrier to our students here at this college because it's too easy for them not to see why getting through these is a fundamental beginning to what they're going to learn later. So when you're in the nursing classes, in the nursing program, you immediately see how everything connects to being a nurse. . . . Anatomy and Physiology makes sense. What they don't always see is when you're learning theoretical biology, or chemistry, how does that connect. And so one of the things that this project has done that I just get super excited about is having the faculty talk to each other. . . . We've started talking about having the pre-req faculty actually shadow some of the employers and ask, "What are the three biggest fundamental chemistry points that you use in your job?" and then have those faculty use that as professional development for teaching this cohort.

This program administrator envisions a pre-nursing faculty member who can say with confidence "I know I want them to learn this" and then wonder, "How can I contextualize [disciplinary knowledge] so that they're thinking about it in terms of . . . prescribing things, or medicine, or procedures, or whatever." In other words, how can the program keep students engaged as problem-solvers.

Building procedural fluency.

The actions related to asking questions and framing problems define the approach students took to getting started in college. These two activities frequently led to a third, practice or rehearsal of skills students discovered that they needed in order to progress in through the first year of college. Reflecting on the ways in which problem-solving contributed a CDKC education, one remedial math instructor thought for a moment and then observed that her "inquiry lessons" led to practice, first in class and then independently and, further, that this practice seemed to be "the way they sort of build procedural fluency with the algorithms and stuff." This instructor positioned her students as active, question-asking problem-solvers and in turn, they "work through things." As one of

her students put it, "you just take your time on it . . . you take your time and figure it out." She went on to recall a STEM class during which her teacher "teased me" in class: "you don't have to finish that [entire review packet], but I know [she] will." Reflecting on her habit of "always getting my work done," this student thought of practice as "good" and "helpful" because it had made her able "to stand up and talk about" what she was studying. It leads, one of her peers exclaimed with surprise, to "my ability to learn stuff. I didn't think I would be able to get it."

Other participants elaborated on the role of rehearsal aimed at fluency as a process. As they explained why completing homework and quizzes in a computer-based learning system helped them to progress in college, CDKC math students spoke of sustained action—"practice until you get it right," one student said—that leads first to "familiarity" and then to "certification" of mastery and finally to "confidence" in the domain. An EPCC student described preparing for the placement exam in the Pre-Testing Re-Testing Educational program as "going over" a "subject" in the lab "with a guy [who] would help me with my math" until I took "the test" and could say, "Okay, you made it." Another EPCC student distilled building fluency down this way: "you try and you get there . . . to be what you want to be, college or beyond that." As an EPCC administrator described effective participation in PREP as "fast" and "targeted": it begins with each student's personal goal, leads to sustained practice in spaces with support, and ends with a "score" that indicates the student is ready to move to new material. This kind of activity, she thought, is not so much learning "new knowledge" as it is identifying a goal for the use of knowledge and skills that have been encountered within a domain, working with tools to engage that body of knowledge and skill, and then certifying mastery.

The incidents that I coded building procedural fluency appear to share a set of common characteristics. The practice is thought to begin with recognizing a student's potential to progress through the first-year of college. The students in the study viewed themselves as able to come to—or come back to—school even though they understood

themselves to be unlikely college students. They self-identified as coming from families that know little about school or having tried college before or having been out of school for years or speaking limited English or having to support a family. An EPCC counselor described guiding a student through the matriculation process this way:

She had never been in school [in El Paso], and her husband started working at Lowe's, and he was being offered more hours. . . . I helped her prepare to take the placement test. I could tell her, "You know you've got the potential." She said, "But I've been out of school for such a long time." [I said,] "Well, yes, but that's doesn't mean . . . See the thing is the information is there. It's just a matter of going back and retrieving it, dusting it off, and you'll be in a good place.

Verb mood is important here. This counselor "could tell" this student that she has "the potential" because, as is clear in her interview, she understands—based on her values and also her experience at EPCC—that every student has the potential. She and staff at every one of our campuses observed that students have already been in math and English classes—"the information is there." Staff and faculty as well as students in the study explained again and again that students have been exposed to "the information" even if they did not "learn it" or, to use the phrase of a CDKC student, "see it" themselves. "Realizing that [students] have developmental needs," an EPCC administrator explained, does not need to mark them as "failures." She then added, "It should be appreciated that we all need refreshers."

This asset-based view of students seems to allow and even encourage students, staff, and faculty to say, in this administrator's words, "Oh, wow. You messed up that test didn't you. . . . We all need refreshers. Not a big deal." Indeed, recognizing "if you mess up," a NSCC student explained, appears to be part of building fluency. She described what for her was a "brilliant plan" for learning statistics. Her instructor recognized, she explained, that she and her peers often "freak out about tests and do poorly and then move onto the next

thing . . . with the same knowledge or lack of knowledge": they "mess up." His approach seemed brilliant to her because "if" she messed up on his quizzes and tests, she could retake them "after learning the steps you missed. . . . You could still come back and learn that piece." Many of the students in the study described seeking out this kind of assessment. They actively sought out resources—and the programs in the study actively developed and provided resources—that showed them what they had messed up in preparing for class or writing papers or taking tests or working out transfer plans. Students explained that by meeting with Supplemental Instructors and tutors in learning centers, using faculty office hours, and, albeit somewhat less frequently, arranging study groups with their peers, they were able to have the relevant "information" re-presented, often by a person other than themselves or their teacher and sometimes through new tools. To be sure, some worried about passing and others about getting a "4.0," but they shared a sense that their goals could be achieved only by learning what they didn't know as well as what they knew.

Participants also shared a sense that assessment is iterative. Many of the students in the study described cycling through feedback until they had a "4.0" or "all your 10 points" on a quiz. They did not, the NSCC student who explained her statistics instruction, view assessment like "professors" who seemed to be "more focused on, 'Oh, you got this wrong. Okay, so this is what you get.'" Rather, she described seeking out routine and reoccurring opportunities for feedback so that "you can build off what you now know rather than all of these chunks that are missing. That's success!" Other study participants connected a similar kind of activity to building fluency. An EPCC student who had completed her high school education through the EPCC College Readiness Gateway program called this process "rereading your tutorials." A CDKC math instructor used the label "beating the computer." A NSCC STEM faculty member named it "the study cycle of observe, practice, reflect."

Across these settings, this activity consists of students choosing to simulate an academic performance—passing a statistics quiz or a reading comprehension quiz as well as making a speech or identifying bone structures or following a microbiology "lecture"—

through a process that provides feedback. In some cases, simulations were designed by faculty or were part of computer-based learning systems—CDKC hires math faculty who can explain the same concept "ten different ways." As frequently, students described creating their own simulations. More than half of the NSCC students who we interviewed, for instance, described drawing visual models of biological and chemical process and then comparing their models to those in textbooks or on websites. At SDCC and NSCC, students described making flashcards and other impromptu drills, sometimes with the help of a smart phone. One faculty member at NSCC observed students using a review session on physiological processes "to hear it and see it at the same time and draw it out themselves." Students at other campuses put journals and smart tutorials to similar uses.

These simulations were rarely one-off activities. Students chose to repeat them until the feedback "certifies"—this is the phrase used by the math learning system used at CDKC—that they have achieved their goal. The NSCC statistics instructor mentioned above observed, and other faculty and students confirmed, that engaging in simulations often results in students getting "competitive with themselves." Often, they keep at it until they have achieved a level of performance that earns a better grade or results in a higher placement or a better rank for admission to a competitive program or personal satisfaction. Faculty and students at SDCC and NSCC observed that through this process, students begin to rethink their approach to studying and start to build new tools or adopt new strategies. Students emphasized that often cycles of simulating academic performances help them to become better able to explain material to themselves or a classmate.

Often, students connected getting useful feedback with inhabiting spaces where they were likely to encounter multiple representations of the same information. For one SDCC student, for example, this activity meant sometimes "living in the Tutoring Center" so that she could check her current understanding against that of a peer or a tutor in real-time. She was also aware that if she "liked the way my professor explained it more," then she had to use faculty office hours. Her SDCC peers described arranging to attend Supplemental

Instruction sessions where they recalled explaining how to solve problems as well as having problems explained; they also grudgingly admitted that required workshops and counseling sessions helped them develop confidence that they knew whether their current academic performance was helping them move toward their educational goals. Students at NSCC, EPCC, and CDKC all called attention to the role of open lab hours—whether the lab was a math emporium or a PREP lab or an anatomy and physiology lab. Across campuses, students talked about arranging to meet with groups trusted peers and accessing supplemental materials online (from Kahn Academy explanations of math procedures to textbook animations of biological process) or designing their own.

These are all spaces in which they can "do everything again." One NSCC student explained her practice this way:

I just don't . . . for some reason when I am in class I don't . . . Sometimes I'll have some "A ha" moments, but I am usually the one that's it's not really clicking as fast and then so basically when I study I try to go over the tools that they have given us, like whether it be the outline or a PowerPoint, and then I also reference the text and make sure that I read the text, and then also I'll add the other layer of the Internet. So then I'll go on the Internet, and I'll either click on YouTube or whatever. I'll just try to get visuals because I'm a very visual learner. When I was in A & P I would have to take whatever processes it was . . . I would have to completely redo like a diagram that I did, and so I just have to redo everything, so I can see it.

While this student assumed she was a slow learner, her practice was nearly universal. The students in the study practiced in spaces and with tools that matched their learning habits until feedback convinced them that they "could see it."

"Pushing forward" at a "reasonable" pace.

Participants' descriptions of the rehearsal that leads to fluency often veered into discussions of pace. To use the phrase of a CDKC math instructor, faculty and staff seemed

almost obsessed with "fine-tuning" the pace of learning and teaching "to make sure that students are pushing forward to complete what they need to do in a reasonable amount of time." The challenge, one of his faculty colleagues explained, is communicating "a high expectation" to every student in a setting where students begin at "all levels." Absent a relevant challenge, students are at risk of becoming "bored" or "lost," and from his view, neither of these states leads to pushing forward. For their part, students, as one SDCC student explained, are "trying to see what happens next . . . like kind of, 'Ok, I'll just do this next,' and try to get on to the next step." Taking these steps, a NSCC student explained and students across the programs agreed, rarely happens "at the pace of everybody else." For her, academic progress depends on having access to "the material" and then when she needs to, "go through it, go over it again, go over it again, go over it again. . . . It's really about time management."

While actions related to "managing" pace are nearly always connected to and often subordinated to practice that leads to fluency, the critical role that pace plays for these students warrants a separate mention. Many of the students in the study—especially the many who start college underprepared or who work to support a family while they go to school—struggle to complete a college education defined by Carnegie units. Three-credit courses, a CDKC math instructor explained, require students to "get through a certain amount of material": If they're coming in and needing what amounts to elementary school level remedial work . . . , we're asking them to complete eight years of mathematics in less than two years," three credits at a time. This request struck him as "ludicrous" for two reasons. Foremost, students who come to college to complete an academic program spend much of their time studying math that may be tangential to their academic program. Yet perhaps more important, the lives of many of the students in the study, as faculty and staff in each program confirmed, work against attending the same event several times each week for three or four months. When their lives force them to step out of a three-credit course, the course keeps going and they "do not make it through." The many who step back in must

do so at the beginning of the course, even if they have already mastered that material. Students in this cycle, faculty and staff explained, too often become "discouraged," "frustrated," or "bored" when they fail to complete three-credits of work in a single term or are forced to complete three credits of academic work to learn a single credit's worth of new material. "Eventually," the CDKC math instructor observed, "they get discouraged and go away."

The need that the students in the study have for customized learning opportunities notwithstanding, faculty and staff were skeptical of the value of purely self-paced experiences for their students. Given the high opportunity cost of college for her students, an EPCC leader explained, "students don't do optional. Stop to think of it, none of us do optional . . . So sometimes, unless they're faced with understanding the impact of what a low placement test score would be, most won't necessarily want to do additional work." Recalling CDKC experiments with a completely self-paced approach to remedial math, one instructor described students proceeding at "their slowest pace" and stalling, especially when they encountered knowledge or skills that were "conceptual in nature," material that required "having to learn why." Without systematic support from peers and experts, he added, they "were blocked": "Well, that's my roadblock; I can't get past that, so I can't graduate, so I'm gone." They need, a CDKC administrator observed, "intervention strategies there to keep them moving and then to [make support] available."

Across discussions of managing pace, two shared characteristics emerged. One, a reasonable pace is one that is based on educational goals rather than on institutional structures. Two, such a pace allows for the frequent repetition of completed actions.

Working toward educational goals.

Students spoke frequently about adjusting the time they invested in their education and the speed with which they moved through their education. While the demands of classes mattered, for these students adjustments were more directly related to managing new knowledge and skills. They move forward when "you can understand it" or "you know

how to do it" or "you get it right" or "you made it [to a test score]" or "you get there [to mastering knowledge and skill]." The right pace is measured, a CDKC faculty member emphasized, by "accomplishments" rather than "time." In a group interview, an EPCC student fleshed out this notion. For her, the right pace was one that enables her to complete "a different amount of work, and better quality." This involved shifting her focus from "a grade" to studying "like, the right way, the outline and everything." That is, in comparison her prior approaches to being a student, she slowed her progress down so that she felt she was successfully mastering her courses: "What success means to me? You try, and you get there. So it is both of those things. It isn't just trying and not getting somewhere but trying, and where do you get?" One of her peers answered her rhetorical question, "To be what you want to be, college or beyond that."

What these students "want to be" is to be capable of acting in their worlds. This student, for example, told us of plans to complete a medical education that would provide an income and also enable her to "give back to the community." At SDCC, students spoke of wanting to be able to "take advantage" what teachers were teaching and what counselors were advising. A SDCC leader described a successful pace in the same terms. It involves engagement that allows students "to take ownership of their education and take advantage of resources. . . . They know that if their grades are taking a left instead of a right that they go see a tutor." They know, another SDCC staff member said, how to negotiate a complex organization, what kind of clothes to wear, what to say in an interview; they become "really efficient in what they are doing" as college students. In short, students move as quickly as possible while acquiring the literacies that they need.

Pushing forward at a reasonable pace is connected to meeting educational goals that are related to mastering knowledge and skills, but none of the programs in the study leaves it up to students to decide how they will approach new content—staff and faculty in the study appear to share the belief that "none of us do optional." A reasonable pace for these students—in light of their educational goals—is also a product of participation in a new

community of practice. To be sure, individual students talked about making choices about how quickly they would move through college. One NSCC student observed that she modified her pace based on the needs of family and friends. Another NSCC student recalled realizing that "you have to say no" to some of the demands of family and friends in order "to focus on what you want to achieve": "I am obligated to sit myself down and to study and to make it happen because if I don't, who will?" Yet for both of these students, accepting membership in the pre-nursing cohort significantly influenced their pace in college. The former recalled thinking of a college education as "unreachable": "But you can do it if you have the . . . I use the word 'environment.'" She went on to explain that as a student who tried college right after high school, she stopped out multiple times, unable to finish a semester. As a member of the pre-nursing cohort, she was moving through school at the pace that her communities at work and school both required and supported. The latter needed less motivation from the cohort but explained that her participation in the cohort structured her college education—from class schedules to an adjusted work schedule to financial support—in a way that made her progress reasonable.

Other students also described their participation in college communities of practice to play a significant role in dictating their pace. At all four campuses, students volunteered strategies for rearranging work and life to meet the requirements of their program. All of these students also noted the ways in which assignment sequences—often mediated by computer-based course management systems—and required events and activities determined the how they allocated time to their education. These requirements, staff thought and students confirmed, were ultimately perceived as positive by students. For example, NSCC students who by their admission did not need tutoring found "mandatory" review sessions to keep them moving forward at a manageable pace. Many EPCC students described as liberating the opportunity to create and manage a schedule of benchmarks events that ensured entry into their academic program. Participants in a SDCC focus group described pacing off one another, noticing a peer who was meeting a requirement and

matching their pace. These students are members of a "team" of students, staff, and faculty that "helps them along the way," a SDCC staff member told us. "The students who are doing well," she added, "are doing what they are supposed to do." They are on pace to finish their first year because "they're connected with us."

Looping.

Mastering new content and participating in communities of practice are not, on our participants' experiences, neat predictable, linear processes. Students, a NSCC staff member reminded us, are taking "these very complex steps" that few will complete without taking most of these steps "multiple" times. Students described seeking out tools and processes that broke classes and programs into "steps" and then determining what to "take your time on." CDKC and EPCC students described the roles that domain-specific computer-based learning systems played for them; at all four sites, students spoke of relying on course management systems and staff to help them keep moving. From their perspective, a reasonable pace is repetitive. For one CDKC student, a mix of individual work at a computer and whole-class interaction with an instructor enabled her to keep working "the same kind of problem" until, as one of her peers put it, "you get familiar with it and then you move on to certification." An EPCC student explained using a computer program and staff at a learning center to "come at [basic math and English content] any time, any place, or whenever you can."

Faculty described this pace not simply as repetitive but as recursive: students who are progressing are, to use the phrase of two NSCC STEM instructors, "looping." Looping starts with "slowing down." Students are, one instructor explained,

getting that piece, that small piece down before you step farther out on the ice, and then making sure you're solid on that piece before you step on the next piece of ice. . . . I typically see in this class, sort of a period of everyone's lost, and then lights start to come on, . . . and then you're waiting for the last couple of people, the lights to come on, and then they've looped

back enough or they've gotten enough help, or some, there's been some catalyst to make it happen, and then it's happening, or there's been some intervention.

The aim, these faculty observed and their students confirmed, is an approach to new content and processes that scaffolds making connections between concepts. His colleague described "constantly trying to refer to other chapters, and any chapter I'm on, . . . just back, forth, back, forth, loop, loop, loop, loop." She went on to explain a radical practice for interrupting the linear flow of information from a textbook: "What I tell them to do is get an index card and just put the term on it, don't put the definition, shuffle them, and see if you can connect any of them. So, connect, just connect them. And I can do it with any one in the textbook. "'Just try me,' I challenge them. It's kind of fun."

Math and English faculty at SDCC, a history instructor in an EPCC Early College High School, and math and science instructors at CDKC described parallel strategies for what I came to think of as reflection on action. In a faculty focus group at NSCC, three faculty thought about the ways in which students approached assignments made available online. "Some procrastinate," they agreed, and "some follow the schedule." "Some can complete [an entire online course] fast" with a high grade. Reflecting on the interaction, one observed, "they [students] may have a system." Students and staff suggested that "they" do. They know how to "navigate the system," EPCC Early College High School staff told us, and their students explained moving through different subject matter—math vs. poetry, requirements vs. content "you love"—using different strategies at different paces. These students described regularly noticing the pace in class slow down when peers "were not understanding it" and "kind of helping them," as a CDKC student put it. They spoke of forming their own study groups and support networks as well as deciding to study on their own because of a learning style or time constraints or the nature of the new content.

Making Do

In this chapter I interpret representations of students' passive, active, and critical participation in college spaces. The students in the sample are "making do" in their first year of college. More specifically, they are learning to act in ways that make them recognizable as college students and practicing as college students with the technologies, knowledge, skills, and relationships that they find on campus. Participants' descriptions and interpretations of making do seem to share a pair of purposes: the students in the study pursue enough mastery of an academic domain to pass, and they pursue enough meta-knowledge about the academic domain to make it useful in college and beyond. Faculty and students alike told us that the students in the study are not mastering academic domains so as to become "math majors." Instead, they are acquiring and learning just enough capability to participate so as to make do. In refreshing, students reject, at times explicitly, the notion that opportunities to learn are controlled by others. The object of the action appears to be claiming school as a "second home" for a time in order to gain approval for next steps.

For most of the students in the study, passing for college students comes with tension. A CDKC student who came to the college "loving" math began her college career in remedial math classes and depended on a tiny tribal college for opportunities to define what she could do with math. She had to square loving math with her desire to learn Cheyenne language and culture and to maintain some connection, however strained, to a family on the reservation. A Latina medial assistant who joined a pre-nursing program because of her employer's recommendation began her college career for the third time and still barely managed to meet the grade requirements and midway through the program lost her family's support for her education endeavors. Despite starting college in highly supportive program, these students recounted struggling test after test, from quizzes to course grades to degree requirements to transfer requirements. Both affirmed that children and families are "more important" than passing classes or even careers. They qualified their success in college as participation in a process that is reshaping them and their educational goals but

also as a process through which they are coming to understand how college works and what they can do attain their educational goals without losing themselves.

To be sure, students who get a strong start in college are "doing what they're supposed to do" in order to earn degrees and credentials that might pay off in local labor markets and at transfer institutions. And the students in the study do what they are supposed to do. Many are, as one SDCC student self-identified, "teacher's pets." But all of these students understand that passing classes—what they are supposed to do—requires and allows them to pass for college students. And so, they are actively acquiring the advanced literacies that college-educated folks use in college and beyond, and they are also using a "vocational track" to explore their senses of self, their home cultures, or their worlds. In short, many students are becoming reflective practitioners as college students.

On arriving at college, they look around what is for all intents and purposes a new world. They are serious about engaging it but do so by experimenting with technologies, knowledge, tools, and relationships. They work with "foundations" and basics in order to understand why the space is arranged the way that it is and how things work. After probing the college environment a bit, they begin asking their own questions and articulating informed guesses about what their progress will involve to family, peers, staff and faculty members—anyone who can give them feedback on their hypothesis concerning their own success. Questions for these students are tightly linked to action. They watch for direct and indirect responses that help them determine whether they are making progress and what they might do differently in order to make progress. Many seem to glean from responses to their questions a suite of tools—chief among them the core concepts that experts emphasize, tools for managing their time, and tools for making sense of college-level content.

They then put these tools to use in building enough proficiency to pass and move forward toward their goals, reworking as they proceed their hypotheses concerning what college will demand from them and what it offers. Thus, their design experiments appear to help them discover the "easiest" way to pass as well as the uses to which college can be put.

In the process, they rework what their options are and at the same time find peers, staff, and faculty who are prepared to collaborate with them in doing the work of college. In many cases, these students are picking up practices that appear to be bending their college into an institution in which they can produce a college education without first being integrated into existing academic and social communities.

Chapter 9

Discussion and Implications: Beyond Pipelines

Whether it be a question of metaphors or of plot, to explain more is to understand better.
Paul Ricoeur. *Time and Narrative, Volume 1*. (1984)

In this phenomenological study, I have explored the progress of a purposeful sample of students during their first year at four community colleges. My method and temperament led me quickly away from elaborating or testing propositions that underlie the dominant models of student departure. To be sure, studies of the interaction between students' background characteristics, their college-going behavior, and institutional conditions have provided important findings about interrelationship among background characteristics and behaviors and institutional conditions and student outcomes. But as a college English teacher in New Majority institutions, my interest has long been elsewhere. My questions are about why students come to college and what they do as they interact with staff and faculty members to attain their goals. The stories, policy statements, and program descriptions that make up the Minority-Serving Models of Success database have proven a rich source of information to explore my questions.

My findings begin to outline the practice of a sample of first-year community college students who made it through their first year. These students recognize that they are in an educational pipeline, and they are acting in many ways to make use of that pipeline to realize their educational ends. They know about the American tradition of higher education—what Williams called a "selective tradition" or "an intentionally selective version of a shaping past and a pre-shaping future"—and make do within it. That said, they fit uncomfortably in the pipeline. The participants in this study told us stories about people who are persisting and working toward degrees and careers and new opportunities in spite of the fact that many of them start college underprepared for college and persist without the

desire or the ability simply to flow where the existing institution would take them. In a variety of ways and with the willing aid of institutional insiders, many of these students sabotage the pipeline, forcing it to enroll students who are not college-ready and to adjust time-honored programs and practices; they challenge faculty and at the same time earn the respect of faculty. They are constantly at risk of leaking out of the pipeline, and many are on their second or third trip through. They speed up or slow down as they need to in order to get where they are going.

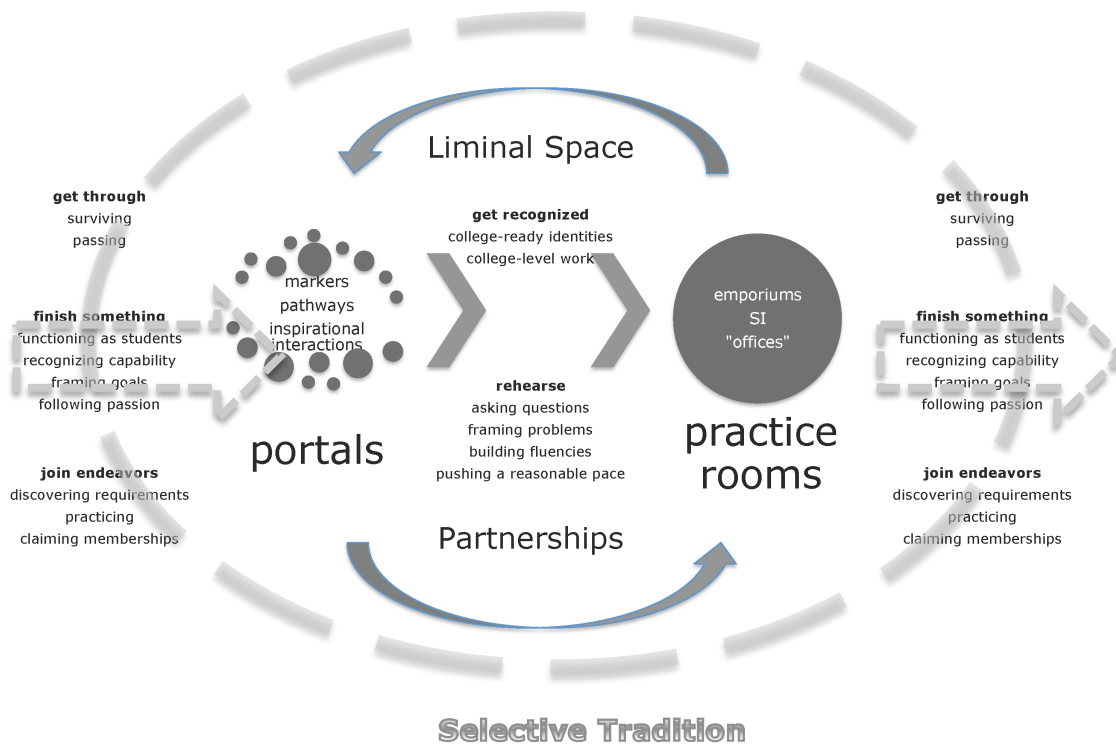
The metaphors of narrative or a pathway seem more useful for making sense of the progress of these students. They are engaged in the activity of college going in ways that are necessarily active and critical. Few of the students in the study have social entitlements that permit them to be passive college students who go with the flow. While many of these first-year students aspire and even expect to attain a bachelor's, few are prepared to be socialized into the traditional academic and social communities in place in most colleges and universities. Indeed, many see no particular reason to become "well-rounded" students who will be Tinto's competent members or Kuh's engaged students; they feel already well-rounded members of communities that are of importance to them. In view of the background characteristics of successful college students reviewed by Kuh and Associates (2007), these students are doubly outsiders. Most began college underprepared and so must acquire few of the behaviors that matter; all are enrolled in New Majority institutions and so experience institutional conditions that are statistically related to limited success.

Their stories have not led me to assemble a new production function or revise existing ones—the importance of such models notwithstanding. Instead, I want to stop with a representation and interpretation of the experiences of a purposeful sample of successful New Majority students who are enrolled in programs that are designed to support them. I limit my conclusions to a provisional map of these students' interpretations of their progress along with the interpretations of staff and faculty who support their progress, institutional documents that describe what is involved in supporting their progress, and the

interpretations of a group of researchers—myself included—who are interested in their progress. The findings in this study map a space of interaction (see Figure 9.1). That space is bounded by an educational tradition—one of John Meyer's institutions. At its center are a set of activities that establish the portals and practice rooms in which students make do.

Figure 9.1

The Educational Practices of Beginning New Majority Students



The students in the study find their way into college through opportunities that provide them feedback on their status and trajectory as college students and inspire them to pass as college students; once in, they take up a range of practices that lead them to become college ready and show others that they are college ready. As they move back and forth between portals and practice rooms, these students define, refine, and redefine the educational goals that brought them to college and at the same time learn how to complete assignments, pass classes, and position themselves for what comes next in their education.

The college-going activity of these students—always with advocates inside and outside the institution—produces a college education within a "selective tradition" that has been designed to exclude them. Their progress appears as creative participation. To be sure, their progress is inconsistent and often at risk. To illustrate, NSCC staff members wondered aloud how pre-nursing students who were at risk of not meeting the GPA set by the program bounced back quarter after quarter. Thinking about their students' lives, one after another told us with conviction, "I could not do this." Significantly, their progress is often keyed to instrumental, counter-hegemonic goals. While many of the students in the study expressed a desire to be "educated," they seemed unprepared to adopt the norms and values of the college-educated. Doing so, a CDKC administrator reminded us, could be costly. There are limited options for "educated" people on the Northern Cheyenne Indian Reservation, he said. Others described the personal costs of beginning to "think in English" or becoming too committed to succeeding in school. They spoke of losing cultural heritage and in some cases of damaging relationships with families or ending relationships with spouses.

The educational space mapped by this study is, then, inhospitable to these successful students. To progress in college as safely as they can, they start by working instrumentally toward a passionate goal that requires, they and their advocates believe, some college. Surviving in college means finding—and often in the process of finding also creating—liminal spaces. They search out and create educational partnerships between the formal institutional spaces that they need to manage and the places that they come from and the groups they hope to join after they have enough college. As they get started, they move on from these spaces only as far into the institution as their realized ends require. Many become deeply engaged with the institution, and a few become integrated into the academic and social communities on their campus. Some participate only enough to feel hopeful about their ability to join some local endeavor and leave well before they have earned a degree or certificate. Their progress depends on opportunities to practice at a reasonable pace doing what college-educated people do with the tools that college-educated people use.

These opportunities to practice are as much a product of their resistance of traditional educational spaces as they are of intentional design by their college.

In this final chapter, I first link my findings to existing studies of student success, then I outline an alternate model of student progress, and finally turn to suggest implications my work has for research and practice.

(Discussion): Fleshing out the Pipeline

This study in many ways confirms the consensus findings concerning what student activity contributes to success in college. Progress for the students in the study is a complex interaction between their "background characteristics," the activities they engage in as students, and the institutional contexts in which they find themselves. In representing and interpreting what these students do in order to start their college education, this study adds detail to existing representations of the progress of New Majority students through the pipeline. It does so not only in respect to the ways in which their expectations and aspirations, choices about enrollment, transition to college, and initial school-going behaviors are related to their progress in academic programs, but also in respect to the ways that institutional conditions contribute to and militate against their progress. Rather than rehashing the research literature again, I position my findings against the 2007 ASHE Higher Education Research Report, *Piecing Together the Student Success Puzzle: Research, Propositions, and Recommendations*. In this report, Kuh, Kinzie, Buckley, Bridges, and Hayek synthesized for the National Postsecondary Education Cooperative the relevant literature and emerging findings related to student success broadly defined. Following their lead, I focus on student behaviors and institutional conditions. The report also takes up student background characteristics separately. I integrate my comments about background characteristics since my limited, purposeful sample makes a systematic analysis of background characteristics inappropriate and my conceptual framework subordinates

background characteristics to affinity group endeavors and activities. Many of my findings are anticipated by the research on New Majority students that is reviewed in Chapter 3.

Student behaviors.

Like students in general, the students in the study arrive at college with particular expectations and aspirations with respect to what students do in college and how much college they expect and wish to complete. Their aspirations led the students in the study to enroll and to join the programs that we studied. Their goals for their education affected the ways in which they managed their time and effort and to some extent their achievements. More often than not, their expectations were somewhat plastic. As they interacted with others with similar or different aspirations, their own goals—and in turn their behaviors—changed and in many cases became more explicit and self-conscious. Most of the students in the study had to have two sets of goals, one related to surviving college and another related to getting somewhere from their current situation. The programs we studied fed students information about what they might use college for and also created multiple opportunities for students to reflect on their goals and articulate these goals in short- and long-term educational and career plans. Even the first-generation students in the study who began college most tentatively described a process through which their goals became more explicit, informed, and updated frequently through feedback.

The role of aspirations and expectations that emerged in this study aligns with prior research, but the study also adds to that work by expanding what counts as a goal for a college education. While the students in the study talked about their expectations to earn degrees and learn, they often explained other goals that animated their education. Participants in the study linked students' progress to activity aimed at "surviving" in academic environments, being recognized as college students by others inside and outside the institution, deriving educational goals that made sense locally, and joining groups that use the knowledge and skills that are taught in college to do work in the real world. This study suggests that in addition to meeting high expectations set by others and receiving

"prompt, frequent feedback" on the ways in which they are meeting those expectations, the students in the study are actively involved in meeting expectations and fulfilling aspirations set by their communities, their families, and their own interests. In some instances, students and others described success as achieving these local expectations in lieu of meeting institutional expectations.

Similarly, the study at once confirms and extends the picture of the role played by the processes by which students choose to enroll. Three qualifications stand out. First, participants confirm that New Majority students have limited choices when it comes to postsecondary education. Their educational paths are filled with delays and interruptions and with few exceptions, their prior educational experiences and their families dictate that they find institutions near where they live that enroll underprepared students. For most of these students, their educational choices fit within the constraints of their lives as family members or workers, and not the other way around as with many traditional students. Second, many students in the study explained choosing institutions based on the presence of students who came from a similar racial, ethnic, or class background; in several instances, these students indicated that they chose a campus based on the diversity of the student body. Third, the students in the study suggest that for New Majority students the process of choosing an institution may last through the first year of college. Participants frequently acknowledged that students in the study began college with a vague notion of what they were getting into and refined that picture during their first year. Moreover, in that process some students began to base their choice not on access to specific degrees but on opportunities to participate in communities of practice inside and outside of school. In some instances, nearly all participants agreed that for some students, the choice to stop out of college was a successful educational choice.

In respect to students' transition to and persistence in college, this study confirms the central role played by the ways in which students navigate becoming prepared for college-level courses, financing their education, and balancing being students with meeting

off-campus commitments. Administrators at the four programs in the study agreed that the programs are successful because they share two underlying goals. One, these programs "make remediation work" in ways that accelerate student progress into and through college-level courses. Two, the programs provide students a network of people and resources that work with them to develop an educational plan that makes sense financially and matches the aspirations that bring each student to college, even if those aspirations do not include earning a bachelor's degree. The study suggests that these programs meet these goals and promote a successful transition using many of the strategies that have been shown by research to be effective—family involvement, financial support linked to progress, cohorts of educationally or culturally similar students, dual enrollment that provides validating experiences, "supplemental" education (Kuh et al., 2007, p. 113).

The study adds to this research by suggesting that these strategies work for New Majority students because they provide opportunities for these students to cultivate the identities of college-ready students and to practice asking questions, framing problems, and building literacies in the Discourses that matter in college. In so doing, the study suggests that in addition to theorizing the successful transition of students in terms of "status attainment, social reproduction, and habitus" (Kuh et al., 2007, pp. 111–112), research might consider what New Majority students do in order to make do in college without becoming full-fledged members of social or academic communities there.

Given the nature of my sample, the study speaks most directly to the persistence of students who begin college with limited choices and make progress despite starting college with limited academic preparation and fitting college-going into lives structured primarily by commitments to family and work. The picture of student persistence that emerges is largely consistent with the existing literature. These students enter college in programs that provide them with opportunities to align their expectations about the demands of college. The inconsistent progress made by many New Majority students may be explained by their need simultaneously to align their expectations with the demands of remedial and college-

level courses at their institution; the demands of a transfer school or career; the demands to participate in families and communities for which college going is a foreign practice; and the demands of temporary communities of practice that expect students to manage teachers' styles, academic Englishes, and disciplinary frameworks—all in way that are congruent with the expectations at their college and, in many cases, at transfer schools or in professional life.

The students in the study described being engaged in "educationally purposeful activities" (Kuh et al., 2007, p. 45), especially in finding spaces in the college where they felt safe and supported and where they were able to "get with" faculty and staff members as well as with their peers. At the same time, study participants expand conventional notions of educationally purposeful activities in two ways. First, they emphasized and began to explain the significance of activities that take place in spaces around the edges of conventional classrooms in emporiums, Supplemental Instruction (SI) sessions, and meetings with counselors and mentors. These "practice rooms" provide them opportunities to practice as newbie college students who are uninterested in becoming a traditional college student and unable to match the pace of progress that is inscribed in that roll. Rather than aiming at full-time status as it is defined by their college, these students move at their own pace. Second, these students are often uninterested in the cocurriculum and conventional learning communities and even conventional approaches to collaborative learning. They engage, instead, in a series of affinity groups that arise "organically" to support groups of learners who are dealing with the same concept. They often remain in these groups—or in college—only as long as "it works for me."

Institutional conditions.

By design, the programs in the study share three overlapping qualities. They are housed at institutions that enroll diverse student bodies; they are focused unapologetically on the education of first-year New Majority students; they have been shown to improve the progress of students compared to similar students outside the programs or students at the

same institution prior to the institution of the programs. In turn, the findings from the study are suggestive of institutional conditions that contribute to the educational progress of first-year New Majority students.

At one level, these findings are not surprising. Based on this study, New Majority students benefit from many of the coherent and explicit systems of student support and learning and teaching that benefit all students. All of the programs in the study require that students attend an orientation; three of the four have implemented a case-management style of advising that students reported using throughout their first-year. Students talked frequently about the importance of opportunities to learn about college going, and staff described an elaborate network of workshops, online resources, and student-staff relationships designed to introduce students to expectations and structures of the first-year of college and also to guide students in interpreting feedback that they received concerning their progress.

Faculty in the study asserted—and students confirmed—that students started college in classrooms that more often than not showed "regard for students' unique interests and talents" while maintaining high expectations for students' performances and systematically validating students' efforts to start their education. These programs often adopted tools and approaches that allowed for a customized education in an emporium or through a computer-based learning system or an SI tutor. Students spoke frequently about the ways in which they and their teachers redesigned course materials or made spaces in classes so that they could approach college-level content in ways that aligned with their learning style or their calendar. The participants described a range of opportunities to learn—inquiry problems in remedial math classes, opportunities for undergraduate research and service learning, and first-year classes customized for students on specific career tracks—that gave students challenging academic tasks. Moreover, participants frequently pointed to the ways that these tasks included intelligent learning systems or SI groups or one-on-one meetings with faculty or staff or peer mentors: in addition to engaging students in problem-solving, these

programs provide students with a steady flow of feedback on what they have done, what else they might try, and why they might consider alternative approaches. Frequently, students explained, they had opportunities to try the same task more than once, sometimes again and again until they "got it right."

The programs in the study are case studies of the institutionalization of "educationally purposeful activities" out of necessity. The institutions in the study serve New Majority students "by mission and by inclination," and many of the students in the study actively resist traditional education settings—and they vote with their feet. As initiatives developed to retain New Majority students, the four programs foster institutional sub-cultures that inspire beginning New Majority students and obligate those students to share responsibility for progressing in their education.

While the findings here confirm existing research on effective educational programs and practices, in two ways this study extends this body of research. First, the participants call into questions conventional notions of high expectations. Participants at each institution—especially faculty members—emphasized that their New Majority students needed to meet the academic expectations in force at traditional institutions. Faculty members frequently called out examples of students transitioning to regional four-year schools and in at least one case to Stanford. They also pointed to examples of students succeeding in jobs and research. This commitment to "high expectations" notwithstanding, participants were reworking expectations. They frequently talked about the need to adjust the content that students encountered so as to make it more relevant to their educational pathways. These adjustments clearly worried some faculty who spoke at length about how adjustments were made so as to protect disciplinary or professional standards. In addition, students described making strategic decisions about meeting expectations. They regularly chose to underperform, and they saw this choice not as compromising standards but as making college possible, and they made this choice with help from faculty and staff members. Because the programs in the study emphasized making expectations explicit,

students described choosing simply to pass or to do only as well as they could given their commitments off campus. To be sure, we heard stories of calculations gone awry that led a student who aimed just barely to pass to having to retake a course because he just barely failed. Nonetheless, the participants in the study indicated frequently that students are making decisions about how to meet expectations rather than simply adopting the norms offered in the academic and social communities on campus.

Second, this study calls into question the value of formal cohorts and conventional learning communities for New Majority students. Students who make inconsistent progress in college, several administrators and faculty members told us, have a difficult time being members of a cohort. It is not that the students in the study are unwilling to contribute to the learning and educational progress of others. They do. Participants told us frequently that the students in the study know why their peers miss class and that they are prepared to "catch up" their peers. At the same time, these students had no patience for free riders or students who didn't have a plan. Because they fit schooling into full lives off-campus, they are unwilling to wait for others who are not serious. Moreover, these students explained that they expect to work with people who are "good at" the endeavor at hand. Being "good at it," I realized, did not mean knowing the answers. Instead, students who were "good at it" had adopted time-management practices that ensured they had gotten through the content relevant to an endeavor and reading strategies that ensured they had begun to decipher that content.

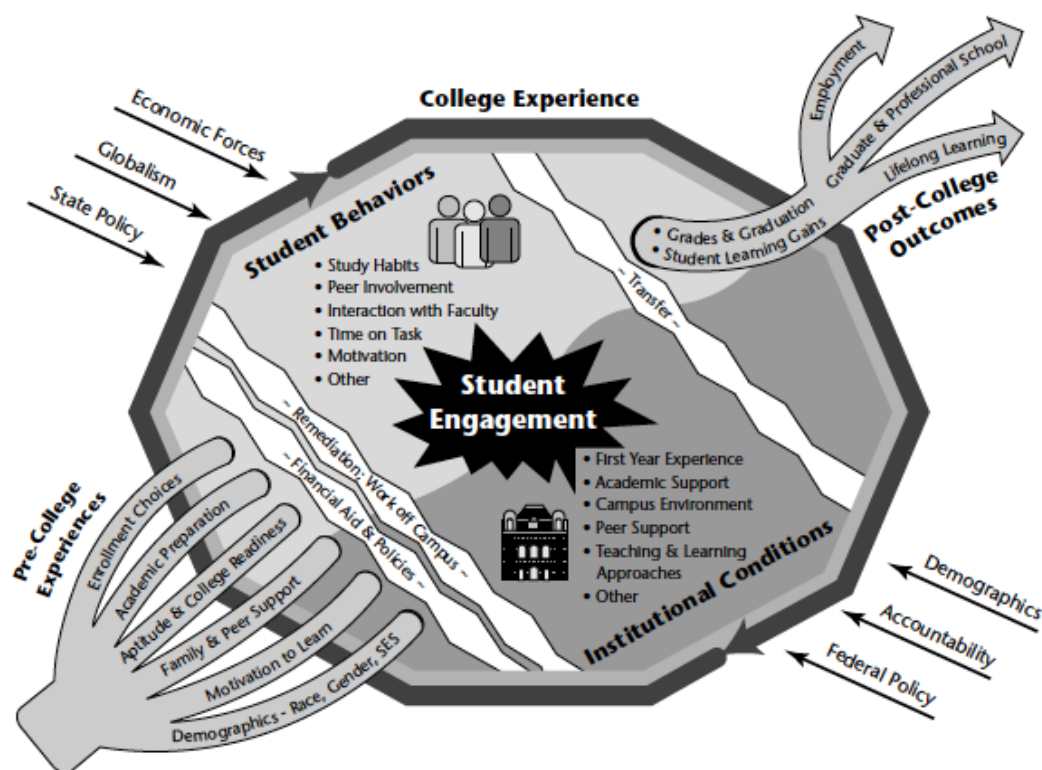
(Discussion): A Provisional First-Year Pathway of New Majority Students

The consensus view of what matters for student success is of significant value for institutions and to a lesser extent students and their families, especially those at the four-year institutions with which Kuh and his associates are primarily concerned. The model at the center of the 2007 ASHE Higher Education Report (see figure 9.2) potentially isolates for institutional researchers and prospective students alike what sorts of behaviors to cultivate

and institutional conditions to look for or create. The model offers institutions guidance in determining in what ways they are and might be engaging their students and whether resources are being allocated so as to support student engagement. The model also potentially serves as a framework for assessing whether opportunities for engagement are accessible for all students and which students have what experiences and what outcomes.

Figure 9.2

Model of "What Matters to Student Success" from the ASHE 2007 Higher Education Report



Note. Adapted from *Piecing Together the Student Success Puzzle: Research, Propositions, and Recommendations*, by G. D. Kuh, J. Kinzie, J. A. Buckley, B. K. Bridges, and J. C. Hayek, 2007, p. 11. Copyright 1978 by ASHE.

The value of this consensus model notwithstanding, it may be less relevant for first-year New Majority students than for institutions or students at four-year colleges. It is worth noting that in Figure 9.1, I suggest that these students enter a "selective tradition" rather than an "institution." In describing "institutional conditions" that matter, Kuh and associates

discuss organizational features that contribute to student progress toward degrees and learning. The college experience—the experience in an organization—is the interaction of behaviors and organizational conditions: "at the intersection of student behaviors and organizational conditions is student engagement" (p. 11). Engagement in the consensus model is visually represented as unfolding within an experience that while affected by its environment is self-contained. My interpretation of student activity positions that activity in three cities and an Indian Reservation. To be sure, there are college campuses in Lame Deer, El Paso, San Diego, and Seattle, but my participants are clear that successful students live on campus only in a metaphorical sense. Few of the students in my sample will enter one college one time; for many, the first-year program through which I meet them was not their first experience in college.

Rather than beginning a college experience, these students appear to be choosing what aspects of an institution and an organization to engage and how to engage them based on lives off-campus. They do not aim at a single stream of outcomes but seek a range of outcomes that are cumulative and iterative. In short, they are not so much in an educational pipeline as on an educational pathway that is perhaps best envisioned as running adjacent to rather than through a campus. In outlining the activity of a sample of first-year New Majority students who have made effective progress along their pathways, this study begins to outline what kinds of (inter)actions matter to the success of these students. Let me point to three benchmarks to which we might start attending.

The pathway begins in guided inquiry into a life project. These students are actively engaged in defining and pursuing educational goals that are by definition incomplete. They start with vague and tentative goals that are necessarily instrumental and then for various reasons narrow in on goals that they "love." Their first-year programs are supportive in no small measure because these programs (a) make explicit institutional scripts—successful students must complete required classes, develop an educational plan, gain entry into programs, learn strategies for managing time and mastering content—and (b) inspire

students to practice those scripts until students recognize themselves as participants in new communities of practice and, in so doing, become able to assess whether that participation is for them. While many of the students in the sample are well on their way to completing associate's degrees, that educational goal is by definition incomplete since at best it qualifies them for more education at "a big school" or for a job that will require them "eager to stay and ready to go." The goals of some first-year New Majority students may indicate paths that lead them away from a "college experience," to part-time status or to stopping out for a semester or a decade. Progress for these students cannot mean attaining the right "pre-college experiences" and avoiding remediation or the need to work off-campus. Instead, it means engaging in activity within communities of practice that empower them to practice with scripts of college-going until they can scrape by and show themselves and others that they are ready for some more college.

This inquiry is sustained in communities of practice that expect and need New Majority students to become able contributors. The students in the study have made progress because they have been able to customize their educational experience. The portals through which they found access to practice rooms were designed for them and staffed by college-stakeholders who were prepared to "hold their hands" for a time. To be sure, these students do college-level work and spend time on task. But they take up such activities in spaces where they can ask their questions and, in turn, where others are prepared to offer feedback that inspires them, that values their effort honestly and hopefully. These spaces often take the form of the "institutional conditions" outlined by Kuh and associates, yet the form appears to be less important than the opportunity for scaffolded rehearsal with and for others in school, at work, in home communities.

These communities of practice launch first-year New Majority students in no small measure because they invite and obligate these newbies to engage in what I now understand to be identity work. This work should not be confused with the maturation or socialization of an adolescent: many New Majority students are well past adolescence; many

of the traditional-aged students in my sample explained lives that had required them to become "well-rounded" before they got to college. The identity work that appears to matter involves practicing with technologies, knowledge, skills, and relationships in groups who are doing things—getting degrees, doing science, providing healthcare, running businesses, caring for children—that matter to these students. The programs in the study are set up so as to label as college students these students who are not yet ready for college and then draw them into participating (initially peripherally) in networks of people who do what they want to do. That these students can complete classes and learn is taken for granted—that some will not is also taken for granted. I return here to the reflections of an administrator at San Diego City College to sum up the outcome that matters: "that they see [their participation] as valuable and self-ennobling, . . . something that is attractive to them, and something that for many of our students is very different from what their lives have been up until now."

The programs in my sample invite students to wonder what it might mean for them to be college-ready and college-educated. They design customizable spaces that invite these newbies to discover what they love to do and to practice as full-fledged peripheral participants in college-educated communities of practice that do that sort of work. Along the path, these programs demand that newbies do serious inquiry about where they are going and what college contributes to their progress. These programs are liminal spaces from which students get a view of the college pipeline and have an opportunity to decide how and whether to enter pipeline that takes them where they are going and, as importantly, to be ready to suffer an institution designed to exclude them.

Implications: Toward New Traditions in Research and Practice

The growing presence of New Majority students and the growing need for citizens who have completed some college together present a compelling demand for new traditions in educating students and researching student progress. For practitioners, the programs

might serve as case studies. Administrators at all four colleges described hosting other practitioners who were interested in the programs we studied as well as visiting similar programs at other colleges. These practitioners are building new traditions. I can do little more than suggest what a more distanced view might add to their work.

Recommendations for research are, for me, more thorny still. I wonder at the value of such recommendations. More than a decade ago, Rendón, Jalomo, and Nora (2000) suggested that interactionalist models need to be taken to a "higher level of theoretical development" if they are to contribute to the understanding the persistence of minority students. They invited researchers to consider social engagement models that take into account gender and other important social identities that develop and change in complex and multicultural societies in which a member of one group can participate in another group without having to be assimilated. Such models, they argued, would allow students to adapt educational spaces in terms of their prior experience rather than simply engaging those situations as they are. Many of the studies that have since applied the interactionalist model to the progress of New Majority students refer to their work—along with that of Attinasi and Tierney among others—and then apply the interactionalist model, again. Its power remains almost overwhelming. New traditions in the study of the progress of New Majority students threaten to undermine valued and valuable models, instruments, units of analysis, and longitudinal datasets. Instead of continuing to rely on variables such as credits earned, degrees attained, and GPAs, researchers will have to build models around dependent variables that are instrumental and interested, variables that represent the use of an education rather than educational attainment. In addition, new traditions will have to confront the stratification of opportunity—not simply the stratification of outcomes—for different racial, ethnic, and class groups as well as other groups. In short, a new tradition of research on student progress will have to take into account the many kinds of heterogeneity that are part of adult education rather than explaining them away as nuisance variance. As a long-time practitioner by "mission and inclination," I wonder whether the field of higher

education is up to the challenge. These hesitations notwithstanding, I offer three implications for research and practice.

Learn about and support the endeavors of first-year students.

The availability of transcript data in large datasets has enabled researchers to model student enrollment behaviors with increasing precision. The findings above suggest that in addition to knowing what courses students passed or failed, we might begin to understand why they progress the ways that they do and what kinds of activity is related to different ends. These studies might take as a point of departure a rich body of research that addresses students' involvement or engagement in the behaviors and structures in which they are supposed to be involved or the behaviors and structures that have been shown to be related with persistence and attainment. Representations of student activity in MSI Models of Success database suggest that often students are not engaged or involved in precisely what they are supposed to be engaged or involved in. Rather, they are simply surviving in college as they finish something of importance to them. Participants distinguished between passing classes and joining affinity groups as well as taking a break, having to stop out, and quitting. Each of these aims called for different kinds of activity and different levels of investment.

This study outlines broad patterns of activity that students believe are related to passing classes and joining groups but offers little information about taking breaks, stopping out, and quitting. More work, perhaps work informed by activity theory, is needed to understand whether there are sequences of actions that are common to passing classes and joining groups across students and settings. More pressing is the need for work on why students stop out and what distinguishes a stop out from a drop out from a time out, and what actions, if any, are related to each. Absent this kind of research, practitioners might learn from the programs in this study various strategies for sequencing student activities through computer-based learning systems and case-management approaches to student

advising as well as instruction. The students in the study were engaged in realizing ends for their education to great extent because college success courses, intrusive advising, and educational and career plans made that reflection mandatory. All four programs included faculty development programs that guided faculty in adjusting curriculum and instruction to make it relevant to the students in their programs.

Beyond understanding why student progress along the pathways that they take, research might take up the group memberships that students recognize. Rather than working with the assumption that students should be engaged, involved, or integrated in existing groups and communities, this work might begin to tease out the organically forming cohorts that students do join and the factors that draw them into these groupings and encourage them to move on.

Learn about and resource spaces between college and students' futures.

While empirical work is beginning to look at the characteristics and experiences of New Majority students rather than simply comparing their outcomes to traditional students and particularly at their preparation, much of that work continues to take the form that Bahr has called input-output analyses: some outcome is measured after students have been enrolled for some period of time and is analyzed as a function of some student characteristic measured before or shortly after matriculation to college, controlling for various distal characteristics. What students do in between—their college-going activity—is represented by a set of variables drawn from surveys of representative samples or convenience samples of students and faculty and more rarely from transcript data. These analyses assume that student behavior is linear and uniform. If we want to understand why students progress or fail to progress or progress in particular ways, we need to break student activity out of its black box. Transcript analysis is a promising start, but as this study shows, students complete or fail to complete courses based on particular actions that roll up in to systems of object-oriented activity. The progress of the students in the study emerges as they make use of points of entry into college and then find spaces where they can adopt and adapt

practices that enable them to pass as college students on their way to a future. Research that aims at getting at *why* students begin to pass courses will need to understand *what pathways* they intend to follow—and this study suggests that the students in the study subordinate passing classes and getting degrees to traveling pathways "somewhere"—and *what feedback and interactions* contribute to their ability to progress as well as to their decisions about whether and how to progress.

In addition to representing students' entry onto pathways through college to somewhere else, future research might identify and analyze educational spaces through which New Majority students move efficiently. The students in this study move at their own pace, and they seem to move more quickly through educational spaces that they are able to link to their futures. Quantitative analyses of transcripts may serve as a promising start but a limited one. In most cases, transcript analyses assume that student progress is linear and uniform across sections of a course. The participants in this study suggest that student progress through college happens at the level of individual assignment and interpersonal interaction—unclear expectations and deficit views of students are deadly. These factors disappear when the unit of analysis is a course taught at multiple institutions by multiple faculty, potentially masking causal mechanisms.

Without waiting for a more complete view of the uses New Majority students make of college, practitioners might begin to enrich existing points of access—placement processes, advising, remedial education courses, and general education courses—with feedback cycles that help students keep track of where they start and what progress they have made. The lesson of CDKC and EPCC is that this feedback needs to be low stakes, frequent, and longitudinal; students need guidance in interpreting information. In addition to helping students see what progress they are making, practitioners might also consider what it means to customize the first-year experience. The programs in the study have used emporiums, SI, and centralized first-year programs to customize education typically by supplementing traditional courses. The CDKC experiment in breaking up three-credit

courses and making pace flexible—though not self-paced, staff there asserted—may serve as a more radical option.

Finally, if practitioners hope to build programs that empower New Majority students to move more effectively toward their educational goals, these programs will have to develop faculty and staff members who are prepared to embrace students' goals without expecting students to want to become "math majors" or even to make school their top priority. The faculty and staff members in the study frequently described their New Majority students with amazement. These students were bending an institution designed for others to their purposes. Rather than viewing this as a threat to academic standards, these educators became students' advocates in meeting the standards that they needed to meet in order to make progress towards their goals.

Distribute responsibility for adult education.

Kuh and Associates (2007, p. 77) summarize a robust body of literature that has shown "shared responsibility" for student success—operationalized in institutional missions and teaching and learning practices—to be related with student success measured various ways. In so doing, they open the door to moving beyond trait-centered studies of leadership to, among others, studies of distributed leadership like those that have been developed to understand the work of effective school principals. The ASHE research report also hints at the need for a richer understanding of the activity that leads to persistence—research that will include ethnographies and other qualitatively-oriented, deconstructive work. That is, Kuh and associates point to the need for studies like this one.

The findings in this study suggest that just as research needs to broaden the representation of what activity by what people are intertwined with student success, practitioners might work to share responsibility among students, faculty, and staff by investing in processes for determining students' college readiness—placement systems, remedial education programs, and gateway college-level courses. The students in the study described in some detail the work they did to become recognizable as college-ready

students. In most instances, that work depended on opportunities to learn expectations and then practice meeting those expectations. Administrators, faculty, and staff explained that such opportunities are underpinned by getting placement "right"—often by using more than one placement instrument and providing students an orientation to the process and opportunities to retake placement tests. Accurate placement, they often added, had to be matched by aligned curricula and support for transitions between levels. For a significant number of students, they argued, inappropriate placement, opaque placement processes, and unsupported or misaligned transitions lead to fear, frustration, boredom, and departure from college.

Afterword: Toward "Adult Education"

"I begin with a desire to speak with the dead." This line opens Stephen Greenblatt's *Shakespearean Negotiations*. He goes on to acknowledge that this desire is a familiar motive in literary studies. It is certainly a desire that defined my early career as a college English faculty person. I spent my professional energy channeling voices from texts, staging simulations of the social energy that was somehow squeezed into words and images and trying to guide my students to engage that energy for themselves. As I moved on to teach and learn at New Majority institutions, I taught less literature and more composition, more basic writing. I continued to be haunted but less and less by the dead. I still reveled in the social energy wired into Hamlet and the poems of Seamus Heaney, but I began increasingly to be shadowed and tasked by the energy of my students and by their texts—texts that had uncertain status in the institutions in which I taught. In 2009, I began a longish "sabbatical" at the University of Wisconsin-Madison where as a graduate student again, I studied New Majority institutions, and I am now pursued as well by the voices of the students and staff that I have encountered through the MSI Models of Success project. In this study I have tried to carry on a conversation with them, but I have learned the lesson that Greenblatt learned in his attempt at conversations with Shakespeare:

I had dreamed of speaking with the dead, and even now I do not abandon this dream. But the mistake was to imagine that I would hear a single voice, the voice of the other. If I wanted to hear one, I had to hear the many voices of the dead. And if I wanted to hear the voice of the other, I had to hear my own voice. The speech of the dead, like my own speech, is not private property.

The students who gave some of their precious time on campus to the MSI Models of Success study helped me hear and confront my own voice. They have confronted me with my own notions of what it might mean to succeed in college. The students in the study are successful students by traditional measures. They chose to enroll, made a transition into college, and persisted. As I page through the transcripts that make up the heart of the MSI Models of Success database, I find that traditional measures of success quickly become inadequate. I listen to these students wonder aloud at their own unlikely success. I hear faculty wonder aloud at how these students manage to pass classes against odds that they themselves could not have beaten. I read the esteem that faculty and staff have for these students and their progress, however tentative, toward their educational goals. I read again a Native American woman say to full professors from research universities, "Thank you for coming to the college." A Latina in San Diego mention in passing, "Yeah, [I've been] homeless." A Latina in El Paso admit, "Yeah, Spanish," when we asked her what language she thought in when she did her homework. A working student in Seattle describe as amazing a college program that explicitly valued her work experience and her commitment." Faculty member after faculty member tell us, "I don't think I could have done what they are doing." One faculty at San Diego embracing each of the researchers who had interviewed him for an hour and then explaining the embrace:

Do you know why I give hugs? And it's my wife that taught me this. She says, "If you don't love them, how do you expect to get information to them?"

You've got to love them." You have to love your students, and that's very hard for us. It's hard.

It's hard because these college students are not college-ready, because to be successful they have to resist the institution while they make it through. And still, these students are successful students. They have gotten started on college degrees in American community colleges, realizing the ends of their education, making space, and making do. At the least, this study represents their voices.

It was my observation of their participation and resistance in the institution that initially drew me to using Williams's work to aid me in making sense of their activity. I turn again to his voice here. A public intellectual who came from a working class and went on to Oxford on scholarship to study literature, Williams began his career as an academic by teaching in adult education programs in Great Britain in the 1940s and '50s. In some ways he never left. In a lecture on adult education that he gave late in his life, he named the impulse that this study tries to explain.

The true position was, always essentially was, that the impulse to Adult Education was not only a matter of remedying deficit, making up for inadequate educational resources in the wider society, nor only a case of meeting new needs of the society, though those things contributed. The deepest impulse was the desire to make learning part of the process of social change itself. That was what was important about it. How to do it was always in question and always being changed, but if one forgets that underlying intention then it becomes just one of many other institutions with an essentially different kind of history. (Williams, 1989b)

Again and again, the students in this study, New Majority students, reminded me of this impulse. They came to college not simply to participate in the institution. For nearly all, college was on their way to social change. They saw enrollment, persistence, and attainment as social change for them and their communities. From where I sit, they are

engaged in learning that is part of a potentially much broader social change. They have demanded a place in college. They are showing that, at their own pace and within networks of support, they can meet the demands that college makes of them. In so doing, they potentially enrich and enlarge the role of the institution. Many of them are learning faster, I suspect, than we are.

Appendix A

Select Institution-Level Characteristics by Sector and Focal Institution

Distribution of Institutions and Student Enrollment by Sectors in the 50 States and District of Columbia in 2010¹

	All Institutions	Traditional Colleges and Universities	New Majority Institutions	Public 2-Year Colleges
Degree-Granting, Title IV Institutions Open to Students	4599	2221	2378	978
Fall 2010 Undergraduate Enrollment	18,082,427	9,105,247	8,977,180	7,218,063
12-Month Unduplicated Headcount: 2010-2011	24,547,381	10,803,102	13,744,279	10,923,705

Distribution of Students by Level in the 50 States and District of Columbia, 2007-2008 and 2011-2012²

	All Institutions	Traditional Colleges and Universities	New Majority Institutions	Public 2-Year Colleges
First-Year Undergraduates in 2007-2008 (in thousands)	8,738.4	2,157.2	6,581.2	4,921.0
Distribution of First-Year Undergraduates in 2011-2012 Academic Year by Percent	100	24.5	75.5	51.8

¹ All data are IPEDS unless otherwise noted. The universe of institutions is the 2011 "First Look Institutions": institutions that are (1) currently in the IPEDS universe, (2) open to the public, (3) a participant in federal financial aid programs. I define traditional colleges and universities as 4-year public and private not-for-profit institutions. In respect to data, I used final release data for the 2011 "First Look Institutions": institutions that are (1) currently in the IPEDS universe, (2) open to the public, (3) a participant in federal financial aid programs. The pool of 7479 institutions was limited to degree granting institutions (4878) and then to institutions in the 50 states and District of Columbia (4599). New Majority institutions are all institutions that are not traditional colleges and universities.

² For enrollment by level, I have turned to the National Postsecondary Student Aid Study (NPSAS:04 and NPSAS:08) (U.S. Department of Education, National Center for Education Statistics, 2012c). Figures for 2011-2012 were calculated using the NCES data tool Powerstats.

Frequency Distribution of Select Institution-Level Characteristics by Sector and Focal Institution (with number of institutions reporting)

2010-2011 Enrollment Patterns³

(%)

	All Colleges	Trad. Colleges	New Majority Colleges	Public 2-Year Colleges	SDCC	CDKC	EPCC	NSCC
Full-Time Undergraduates as Percent of All Undergraduates	72 (4313)	8 (1969)	66 (2344)	45 (977)	21	30	39	35
Full-Time First-Time Degree/Certificate-Seeking Undergraduates (GRS Cohort) as Percent of All Undergraduates	18 (4315)	18 (1970)	17 (2345)	13 (978)	5	8	11	2
Part-Time First-Time Degree-Seeking Undergraduates	16 (4196)	6 (1869)	24 (2327)	33 (976)	66	23	45	34
Continuing Degree/Certificate-Seeking Undergraduates as Percent of All Undergraduates	64 (4313)	66 (1969)	61 (2344)	54 (977)	55	35	71	14
Non-Degree-Seeking Undergraduates as Percent of All Undergraduates	7 (4313)	5 (1969)	8 (2344)	18 (977)	16	54	6	60
White Students as Percent of Undergraduate 12-Month Headcount	56 (4278)	62.4 (1961)	50.5 (2317)	59.6 (968)	28.3	11.5	9.4	48.1

2010 Use of Student Financial Aid⁴

(%)

	All Colleges	Trad. Colleges	New Majority Colleges	Public 2-Year Colleges	SDCC	CDKC	EPCC	NSCC
Full-Time First-Time Undergraduates Receiving Any Financial Aid	85 (4128)	88 (1853)	83 (2275)	74 (966)	77	91	81	48
Full-Time First-Time Undergraduates Receiving Pell Grants	52 (4128)	39 (1853)	63 (2275)	52 (966)	63	82	75	39
Full-Time First-Time Undergraduates Receiving Federal Student Loan Aid	58 (4128)	60 (1853)	56 (2275)	24 (966)	10	0	6	1

³ Enrollments are calculated from the corrected IPEDS 12-month unduplicated head count variable for 2010-2011.

⁴ Aid figures are calculated from IPEDS variables collected in the Student Financial Aid and Net Price surveys for 2010-2011.

2010-2011 Student Progress⁵**(%)**

	All Colleges	Trad. Colleges	New Majority Colleges	Public 2-Year Colleges	SDCC	CDKC	EPCC	NSCC
Full-Time Retention Rate, 2010	66 (3953)	73 (1809)	59 (2144)	58 (973)	62	61	70	50
Graduation Rate, Total Cohort	44 (3953)	51 (1809)	37 (2144)	23 (973)	15	57	11	25

2010-2011 Reporting of Selectivity Measures to IPEDS**(%)**

	All Colleges	Trad. Colleges	New Majority Colleges	Public 2-Year Colleges	SDCC	CDKC	EPCC	NSCC
Percent of Institutions Reporting SAT Scores to IPEDS	31	62	2	2	#	#	#	#
Percent of Institutions Reporting Percent of Undergraduates Admitted to IPEDS	45	71	20	3	#	#	#	#

2010 Fall Staff**(%)**

	All Colleges	Trad. Colleges	New Majority Colleges	Public 2-Year Colleges	SDCC	CDKC	EPCC	NSCC
Full-Time Employees as Percent of All Employees	61 (4412)	68 (2067)	55 (2345)	51 (957)	35	95	41	49
Employees Primarily Instruction as Percent of All Employees	50 (4412)	43 (2067)	56 (2345)	58 (957)	83	15	46	63
Institutional/Student- Support Employees as Percent of Total Employees	40 (4339)	45 (2108)	35 (2231)	37 (949)	15	71	51	31

⁵ These retention rates are derived by IPEDS. The full-time retention rate is the percent of the (fall full-time cohort from the prior year minus exclusions from the fall full-time cohort) that re-enrolled at the institution as either full- or part-time in the current year. Six-year graduation rate from Frequently derived variables/Graduation Rates/Graduate Rate Total Cohort. Both rates are problematic, especially for New Majority institutions.

2010-2011 Revenues and Expenses as Percent of Total (%)

	All Colleges	Trad. Colleges	New Majority Colleges	Public 2- Year Colleges	SDCC	CDKC	EPCC	NSCC
Tuition and fees as a percent of core revenues	55 (4579)	51 (2219)	59 (2360)	17 (978)	4	6	9	26
Local appropriations as a percent of core revenues (Public Institutions Only)		38 (647)		13 (976)	26	0	21	0
Revenues Other than Tuition, Appropriations, and Contracts (gifts, investment, and other) as a Percent of Core Revenues	18 (4579)	29 (2219)	7 (2360)	10 (44)	5	2	1	26
Instruction expenses as a percent of total core expenses	39 (4590)	42 (2219)	36 (2371)	44 (978)	40	32	36	58
Academic/Institutional Support and Student Services Expenses as a Percent of Total Core Expenses	48 (4591)	46 (2220)	50 (2371)	35 (978)	43	64	32	28

2010-2011 Revenues and Expenses per FTE

	All Colleges	Trad. Colleges	New Majority Colleges	Public 2- Year Colleges	SDCC	CDKC	EPCC	NSCC
Revenues from tuition and fees per FTE	\$9,600 (4538)	\$11,647 (2188)	\$7,695 (2350)	\$1,951 (976)	\$355	\$1,954	\$818	\$3,350
Other revenues (gifts, investment, and other)	\$7,214 (4538)	\$13,841 (2188)	\$1,044 (2350)	\$1,532 (976)	\$459	\$580	\$125	\$3,300
Instruction Expenses	\$7,266 (4544)	\$10,800 (2188)	\$3,985 (2356)	\$4,766 (976)	\$2,907	\$9,932	\$3,252	\$5,833
Academic/Institutional Support and Student Services	\$9,297 (4544)	\$11,726 (2188)	\$7,040 (2356)	\$3,937 (976)	\$3,176	\$20,030	2,925	\$2,770

Appendix B

Overview of Interview Participants and Public Documents

College	Total Interview Participants	Total Interviews	student		staff		faculty		admin.		Traditional Students as Percent of Total	Number of Public Documents
			female	male	female	male	female	male	female	male		
CDKC	15	11	8	1	0	0	1	3	1	1	0.56	30
EPCC	23	22	5	1	5	2	3	0	5	2	0.5	27
SDCC	30	29	10	6	5	0	2	3	3	1	0.5	24
NSCC	26	18	7	2	5	1	6	3	1	1	0	20
Totals	94	80	30	10	15	3	12	9	10	5	0.44	101

Appendix C

Phase-One and Phase-Two Interview Protocols

General Interview Protocol (for San Diego City College)

Title of the Study: Minority-Serving Institutions: Models of Success

Principal Investigator: Clifton F. Conrad, Ph.D.
 phone: 608-263-3411
 email: conrad@education.wisc.edu

Overview of Interviews. Participants will be interviewed in open-ended interviews—including both individual and group interviews—that will be conducted and recorded by the principle investigators. Individual interviews will last for 30 to 60 minutes. Researchers will ask open-ended questions in exploring, documenting, and giving expression to participants' stories of success. Interviews will take place primarily on campus in private settings and, as often as possible, at a location of the participants' choosing. (The principal investigators will use an action-research strategy that will rely mainly on interviews, interviews, and documents. Both principal investigators will spend a combined total of three days at each of the 12 MSIs selected to participate in the study. Throughout the study, the investigators will work in collaboration with the MSIs to ensure the validity of the findings.) Focus groups will take place in public spaces on campus and last 30 to 70 minutes. Focus groups interviews will mirror the questions used in individual interviews.

Protocol and Sample Questions (for faculty and staff at San Diego City College)

Greetings. I am most appreciative of your taking the time to speak with me about the success of the First Year Experience program at San Diego City College and related efforts to support students at the beginning of their college career. As you are likely aware, I am conducting a study of 12 "models of success" in Minority-Serving Institutions, and this initiative at SDCC was selected from among 60 college and universities as an exemplary model supporting student retention, learning, and degree attainment.

In brief, the MSI Models of Success project is collecting both qualitative and quantitative data about institutional success through interviews, observations of campus facilities, documents, and institutional data. The overarching goal of the project is to highlight what makes each program so successful. I will use your feedback to build a case study about this success story at SDCC. Ultimately, the feedback you provide will be used to describe and document an exemplary model of success.

Our discussion should take 30-45 minutes. Before we start, I just want to reassure you that your responses to my questions will be confidential, and in our reporting of findings, respondents will not be identified by name, position, or school in reports. Please read through the Research Information and Consent Form that I have provided. I would like to audio record our discussion in order to accurately capture everything you tell us. Do I have your permission to record this discussion? Please print and sign your name. If you are

willing to be quoted in future publications without the use of your name, initial the consent form as well.

Your agreement indicates that you consent to participating in the interview and being recorded. If you decide at any time that you do not want to answer any particular question, or would like to withdraw from the research study, you may do this without penalty. There are no direct benefits to you for participating in this interview, but I do anticipate that your school will benefit from highlighting this success story. If you have questions about the study after this interview, you may contact the principal investigator, Clifton Conrad (conrad@education.wisc.edu or 608-263-3411) or Esther Schwarzbauer at the University of Wisconsin-Madison Institutional Research Board Office (608-262-9710).

PLEASE NOTE: This research is solely aimed at finding the “positive attributes” of this and the other eight “models of success.”

Overarching Research Questions

1. What definition(s) of student success guides a) learning and teaching at SDCC and b) the “story of student success”—the First Year Experience (FYE).
2. What challenges led to the FYE program being launched? Following the establishment of the FYE program, what challenges emerged over time that needed to be addressed?
3. What is it about the FYE program (specific program/practices) that is significantly contributing to student success? In what ways does each attribute contribute to student success?
4. What change strategies were used that led to the successful initiation and the implementation of the FYE program that is enhancing educational opportunity for underrepresented students?

Sample Questions for Interview Participants

1. How have you been involved in this “story of success,” the First Year Experience, at San Diego City College?
2. What is the “story of success?” When, how, and why did the FYE program come into being and why has it been so successful?
3. As you reflect on students who have participated in the FYE program, what is their story? Why did they participate? What was it about the FYE program that contributed most to their success?
4. Tell me about several students who have successfully participated in your story of success. What capabilities have they acquired or strengthened? What about them strikes you as making them prepared for success at your institution and beyond?
5. If you had the opportunity to share your “story of success” with other MSIs that are addressing similar challenges, what have you learned that would be important to share with them?
6. What is it about your “story of success” that would likely be invisible to the untrained eye—and to people outside of your institution?
7. What strategies were most successful in bringing about the change and establishing your program—including overcoming barriers? Tell us a story.

Recruitment Strategies (for San Diego City College)

Title of the Study: Minority-Serving Institutions: Models of Success

Principal Investigator: Clifton F. Conrad, Ph.D.

phone: 608-263-3411

email: conrad@education.wisc.edu

Overview. The following material is drawn from the research protocol approved by the Institutional Review Board at the University of Wisconsin—Madison.

Inclusion Criteria. *Outline the inclusion criteria for participants, explaining the rationale for the involvement of any special groups, e.g., prisoners, pregnant women, participants with impaired decision-making capacity and non-English speaking participants.*

We have designed a competitive process for selecting the 12 MSIs that will participate in the Models of Success study. These Models of Success exemplify best practices in student access, achievement, and degree attainment. More specifically, MSIs have submitted proposals demonstrating why they exemplify a model of success. From these proposals, the two principal investigators—drawing on recommendations from our advisory board—will chose the 12 institutions to examine, profile and use as Models of Success.

Once institutions have been selected, the principal investigators will visit the respective colleges and universities and, in collaboration with institutional representatives, develop models that illuminate those features of MSIs that significantly contribute to college participation, degree attainment, and success. Using purposive sampling, investigators will identify diverse stakeholders associated with the respective models of success: administrators, faculty, staff, students, alumni and employers. Each of these groups may have different experiences in the program or practice being studied.

Researchers will consult with a contact person appointed by each of the campuses to identify individuals familiar with the respective model of success. In each case, participants will be representative of key stakeholders. Because these campuses are minority-serving institutions, we expect highly diverse participants ranging in age from age 18 to 80.

Follow-Up Interview Protocol (for COMMUNITY COLLEGE)

Title of the Study: Guiding Visions of Success: An Exploration of the College-Educated Identities Cultivated by New Majority Students and their Colleges

Investigator: Todd Lundberg, Ph.D.
phone: 608-556-9071
email: tclundberg@wisc.edu

Overview of Interviews. Participants will be interviewed in open-ended interviews—including both individual and group interviews—that will be conducted and recorded by the principle investigator. Individual interviews will last for 30 to 60 minutes. The researcher will ask open-ended questions in exploring, documenting, and giving expression to participants' ideas about college-educated identities being sought by successful students. Interviews will take place primarily on the participants' campus in private settings and, as often as possible, at a location of the participants' choosing. (The researcher will use an action-research strategy that will rely mainly on interviews, interviews, and documents. The researcher will spend a combined total of four days at each site in the study. Throughout the study, the research will work in collaboration with campus stakeholders to ensure the validity of the findings.) Group interviews will take place in private spaces on campus and last 30 to 70 minutes. Group interview questions will mirror the questions used in individual interviews.

Protocol and Sample Questions (for faculty and staff at Community College)

Overarching Study Questions. The overarching purpose of the study is to explore the practices taken up by first-year community college students to start a college education, and in what ways colleges are supporting these students in getting a college education started. More specifically, this exploration will address the following question: From the perspectives of students and other stakeholders, what do community college students do to get started on the path to a college education, and in what ways do their colleges support students to get started?

Introduction to the Interview Thanks for talking with me. I'm doing a study of what first-year students do in order to complete their classes and to get good at being college students and what colleges like NSCC and programs like the WDC Nursing Cohort do to help them get started on their college education. So I'm talking with and about students who have finished their first year and are seen by faculty and advisors and peers as successful college students. In the next 45 minutes or so, I want to pick your brain what successful WDC Nursing Cohort students do (especially in her English, Math, GE, and Personal Growth courses) and how NSCC helps them get going. I am really interested in student habits, surprises, and interactions with others that help them be successful and also the college activities in and outside of class that support them to do what successful students do. I want to talk a little about some particular activities that researchers find important, but we will start broadly.

Before we start, I just want to reassure you that your responses to my questions will be confidential, and in my reporting of findings, respondents will not be identified by name or position in reports. Please read through the Research Information and Consent Form that I have provided. I would like to audio record our discussion in order to accurately capture everything you tell us. Do I have your permission to record this discussion? Please print and sign your name. If you are willing to be quoted in future publications without the use of your name, initial the consent form as well.

Your agreement indicates that you consent to participating in the interview and being recorded. If you decide at any time that you do not want to answer any particular question, or would like to withdraw from the research study, you may do this without penalty. There are no direct benefits to you for participating in this interview, but I do anticipate that your school will benefit from highlighting this success story. If you have questions about the study after this interview, you may contact my or the principle investigator for the study (Clifton Conrad conrad@education.wisc.edu or 608-263-3411) or Esther Schwarzbauer at the University of Wisconsin-Madison Institutional Research Board Office (608-262-9710).

PLEASE NOTE: This research is solely aimed at finding the "positive attributes" of this and the other "models of success."

Questions about Background

1. Tell me, why do first-year students come to NSCC?
2. What habits does a first-year student really need to do well in classes and progress in the program?
3. What changes in her approach to school should a first-year student be ready to make in order to succeed in first-year classes and progress in the program?
4. What do others—WDC NURSING COHORT peers, staff, faculty, friends, family—do that really helps a first-year student get a strong start?
5. From your perspective, what happens in the NSCC WDC NURSING COHORT that really helps first-year students get a strong start? What activities really help get students started?

Student Practices

studying practices.

1. Tell me, why do successful first-year students study?
2. What study habits does a first-year student really need to do well in classes and progress in the program?
3. What do first-year students discover about studying habits that helps them succeed in first-year classes and progress in the program?
4. What do others—WDC NURSING COHORT peers, staff, faculty, friends, family—do that really helps a first-year student get a strong start?
5. From your perspective, what happens in the NSCC WDC NURSING COHORT that really helps first-year students study effectively?

practices for interacting with peers.

1. Tell me, why do peers matter for successful first-year students?
2. What does a first-year student really need to do with others in order do well in classes and progress in the program?
3. What surprises students about peer interactions that help them to succeed in first-year classes and progress in the program?

4. What do others—WDC NURSING COHORT peers, staff, faculty, friends, family—do that really helps a first-year student develop healthy peer interactions?
5. From your perspective, what happens in the NSCC WDC NURSING COHORT that really helps first-year students get involved with peers in ways that contribute to their success?

practices for interacting with faculty.

1. Tell me, why do relationships with teachers matter for successful first-year students.
2. What kind of interactions with teachers does a first-year student really need to have in order to do well in classes and progress in the program?
3. What surprises students about interactions with teachers that help them succeed?
4. What do others—WDC NURSING COHORT peers, staff, faculty, friends, family—do that really helps a first-year student get involved in healthy interactions with teachers?
5. From your perspective, what happens in the NSCC WDC NURSING COHORT that really helps first-year students interact with teachers in ways that contribute to their success?

Institutional Practices

academic support practices

1. Tell me, why NSCC support—let's say support is tools or programs or relationships with people, all outside classes—really helps first-year students get through their classes and get good at being college students.
2. What kinds of NSCC support really help first-year students do well in classes and progress in the program?
3. What surprises first-year students about the ways NSCC support helps them succeed?
4. What do others—WDC NURSING COHORT peers, staff, faculty, friends, family—do that really helps a first-year student make use of NSCC support?

learning and teaching practices

1. Tell me, why NSCC classes—the way they are taught and designed—really helps first-year students get through their classes and get good at being college students.
2. What regular classroom activities really help first-year students do well in class and progress in the program?
3. What surprises first-year students about the ways that NSCC classes help them succeed?
4. What do others—WDC NURSING COHORT peers, staff, faculty, friends, family—do that really helps a first-year student use NSCC classes to get started on their college education?

other practices valued by the institution: educational planning. In what ways does the WDC NURSING COHORT help students to make decisions about their goals in college? Why do those activities matter for students?

Appendix D

Informed Consent Form

UNIVERSITY OF WISCONSIN-MADISON

Research Participant Information and Consent Form

Title of the Study: Minority-Serving Institutions: Models of Success

Principal Investigator: Clifton F. Conrad, Ph.D.
 phone: 608-263-3411
 email: conrad@education.wisc.edu

DESCRIPTION OF THE RESEARCH

You are invited to participate in a research study about programs at Minority-Serving Institutions of Higher Education that significantly contribute to students' learning, retention, and degree attainment--especially for low-income students of color. You have been asked to participate because a program or initiative in which you are or have been involved was selected as an exemplary model supporting student retention, learning, and degree attainment.

The purpose of the research is to collect information about institutional success through interviews, observations, documents, and institutional data for purposes of highlighting what makes each program so successful. This study will include administrators, faculty, staff, students, alumni and employers who are involved with successful programs and the graduates of these programs. Interviews will take place primarily on campus in private settings and, as often as possible, at a location of the participants' choosing.

Audio recordings will be made of your participation. Only researchers involved with this project will listen to audio recordings. The recordings will be kept indefinitely in a password protected database housed at the University of Wisconsin-Madison.

WHAT WILL MY PARTICIPATION INVOLVE?

If you agree to participate in this research you will be asked to engage in an individual interview and/or a focus group in which you will respond to open-ended questions about program success and offer your stories with respect to the success of the program or initiative. Your participation in a single interview will last approximately 45 minutes. Your participation in a focus group with other program stakeholders will last approximately 60 minutes. Both individual interviews and focus groups will be conducted in private settings.

ARE THERE ANY RISKS TO ME?

This study exposes you to the minimal risk of accidental disclosure of data through a breach of confidentiality. In addition, confidentiality cannot be guaranteed in focus groups. We will minimize these risks by deleting portions of recorded sessions in which you reveal identifying information. We will also keep all data, such as audio recordings and researcher notes, in a locked cabinet and in a password-protected database housed at the University of Wisconsin-Madison.

IRB Approval Date: 11/20/2012
 Date IRB Approval Expires: 11/19/2013
 FWA00005399 ED IRB
 University of Wisconsin – Madison

ARE THERE ANY BENEFITS TO ME?

We do not expect any direct benefits to you from participation in this study.

HOW WILL MY CONFIDENTIALITY BE PROTECTED?

While there will be publications as a result of this study, your name will not be used. Only group characteristics will be published.

If you participate in this study, we would like to be able to quote you directly without using your name. If you agree to allow us to quote you in publications—again, without using your name—please initial the statement at the bottom of this form.

WHOM SHOULD I CONTACT IF I HAVE QUESTIONS?

You may ask any questions about the research at any time. If you have questions about the research after you leave today you should contact the Principal Investigator Clifton F. Conrad at 608-263-3411.

If you are not satisfied with response of the Principal Investigator, have more questions, or want to talk with someone about your rights as a research participant, you should contact the Education Research and Social & Behavioral Science IRB Office at the University of Wisconsin-Madison. The telephone number is 608-263-2320.

Your participation is completely voluntary. If you decide not to participate or to withdraw from the study it will have no effect on any services or treatment you are currently receiving.

Your signature indicates that you have read this consent form, had an opportunity to ask any questions about your participation in this research and voluntarily consent to participate. You will receive a copy of this form for your records.

Name of Participant (please print): _____

Signature

Date

_____ I give my permission to be quoted directly in publications
without using my name.

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U.S. Department of Education, National Center for Education Statistics. (2012a).

Table 230. Total fall enrollment in degree-granting institutions, by level and control of institution and race/ethnicity of student: Selected years, 1976 through 2011. Retrieved from

http://nces.ed.gov/programs/digest/d12/tables/dt12_230.asp

U.S. Department of Education, National Center for Education Statistics. (2012b).

Table 256. Total 12-month enrollment in degree-granting institutions, by control and level of institution and state or jurisdiction: 2009-10 and 2010-11. Retrieved from

http://nces.ed.gov/programs/digest/d12/tables/dt12_256.asp

U.S. Department of Education, National Center for Education Statistics. (2012c).

Table 269: Number and percentage distribution of students enrolled in postsecondary institutions, by level, disability status, and selected student characteristics: 2003-04 and 2007-08. Retrieved from

http://nces.ed.gov/programs/digest/d12/tables/dt12_269.asp

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Table 303.50. Total fall enrollment in degree-granting postsecondary institutions, by level of enrollment, control and level of institution, attendance status, and age of student: 2011. Retrieved from

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