

THE PELL INSTITUTE
for the Study of Opportunity in Higher Education



Opportunity MATTERS

*A Journal of Research
Informing Educational
Opportunity Practice & Programs*

Vol. 1 2008

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From The Editor

Welcome to the inaugural issue of *Opportunity Matters: A Journal of Research Informing Educational Opportunity Practice and Programs*. This is the first issue of a new peer-reviewed research journal published annually by the Pell Institute for the Study of Opportunity in Higher Education.

In *Opportunity Matters*, we will publish research-based articles, quantitative or qualitative in nature, that examine issues relevant to educational opportunity programs, such as:

- the demographic profile of students served by educational opportunity programs with attention to the needs of special populations or subgroups (i.e. immigrant students, out-of-school youth, males of color, rural students).
- the factors (i.e. academic, social, economic) that affect college access and success for low-income, minority, and first-generation college students as well as students with disabilities.
- the programs and practices that improve college attendance and completion rates for underrepresented populations (i.e. curricula, pedagogies including the use of technology, counseling practices).
- the methods used to evaluate the effectiveness of educational opportunity programs and/or the outcomes of program evaluation studies.
- the larger policy contexts in which educational opportunity programs operate and the impact of policy and legislation on the delivery of services to target populations.

Our primary aim in establishing this journal is to provide a scholarly forum for the discussion and dissemination of research related to educational opportunity programs and the populations they serve, primarily low-income, first-generation, and minority college students, as well as students

with disabilities. We offer this journal at a critical juncture in the development of our knowledge base about educational opportunity practice and programs. While there has been much attention in the research community to the challenges faced by underrepresented students in terms of access to and success in college, there is a paucity of research about what works to help these students overcome barriers to their participation in higher education. After decades of experience working with underrepresented populations, there is much to learn from educational opportunity practitioners about how to solve these seemingly intractable problems. With the introduction of this journal to the field, we aim to encourage more researchers to rigorously study educational opportunity programs, practices, and outcomes.

It is also our goal in publishing this journal to help make research more accessible and useful to practitioners in the educational opportunity field. We want to encourage and enable these professionals to use research to inform program practice as well as to conduct research themselves. As the field has evolved from a small core of dedicated pioneers to a large and growing community of opportunity professionals, there is a wealth of information that practitioners can and should contribute to expand the body of knowledge about educational opportunity practice and programs. In this era of data-driven decision-making, it is also vitally important that practitioners bring their professional knowledge to bear on conversations

about the appropriate role of research in program evaluation, accountability, and improvement.

With that in mind, the inaugural issue of *Opportunity Matters* features five articles from noted educational researchers and experienced practitioners alike. Several articles are actually the product of collaboration between researchers and practitioners, including the articles by Williams and Perrine and Raymond and Black. Together, the contributors to this issue exemplify our goals to develop the research base on educational opportunity programs and to foster a community of practice among scholars and practitioners dedicated to better understanding the issues related to college access and success for underrepresented populations.

The first three articles share a common focus on the impact of learning communities on improving retention among low-income, minority, and first-generation students, particularly during the initial transition to college. The first article, *Learning Better Together: The Impact of Learning Communities on the Persistence of Low-Income Students*, features research by Cathy McHugh Engstrom and Vincent Tinto from Syracuse University. Tinto, a Senior Scholar with the Pell Institute, has been widely regarded as the leading expert on college student retention for decades following the publication of his landmark book, *Leaving College: Rethinking the Causes and Cures of Student Attrition*. In their article, Engstrom and Tinto present the results of a large-scale, longitudinal study of the impact of learning communities on the success of academically underprepared, low-income students in community colleges across the country. Using both quantitative and qualitative methods, their findings strongly support adapting the learning community model to basic skills instruction to improve learning and persistence for this population. Their research shows not only that learning communities do work, but how they work by identifying critical strategies that faculty and staff must employ to create safe, supportive, and engaging learning environments for low-income students.

Rashné Jehangir, an Assistant Professor at the University of Minnesota, offers further evidence for the effective use of learning communities with underrepresented populations. In her article, *In Their Own Words: Voices of First-Generation College Students in a Multicultural Learning Community*,

Jehangir proposes a model that fuses learning community pedagogy and multicultural curriculum to address the isolation and marginalization that first-generation college students often experience during the critical first year of college. Drawing on students' experiences in a Multicultural Learning Community (MLC) offered by a TRIO Student Support Services (SSS) program, Jehangir demonstrates how a challenging academic curriculum that connects with students' diverse backgrounds and fosters interaction between diverse students in the classroom can help first-generation college build bridges of social and academic integration on campus that ease their transition to and persistence in college.

In their article *Can Leadership Development Through Civic Engagement Activities Improve Retention For Disadvantaged College Students?*, Kate Williams and Rose Perrine, from Eastern Kentucky University, expand the scope of the learning community model beyond the classroom and the campus to include civic engagement activities, such as community service and political advocacy. Based on students' outcomes in a leadership development course offered as part of the first-year experience by an SSS program, Williams and Perrine argue that involving low-income and first-generation students in the larger community through civic engagement activities can actually increase their engagement in the campus community, thereby improving their persistence in college. According to Williams and Perrine, the use of such courses can help colleges and universities meet their responsibility to develop responsible citizens while also fulfilling their commitment to retain and graduate their students.

The article by Kim Raymond and Karen Black from the University of Northern Colorado shifts our focus to another crucial point in the access pipeline for under-represented students—the transition from undergraduate to graduate studies. Raymond and Black, the former director of the Ronald E. McNair Postbaccalaureate Achievement Program at UNC, developed and administered a tool to assess the graduate school readiness and preparation needs of low-income, first-generation, and minority students on campus. The results of their study demonstrate support for the use of their assessment tool to understand the service needs of McNair-eligible participants. Furthermore, they make important recommendations for

improvement at both the program and institutional level relative to the graduate school preparation of low-income, first-generation and minority students on their campus that will likely resonate on other campuses as well.

Finally, the article by Heather Eggins and Diana Tlupova offers an international perspective on the access problem for underrepresented populations—and possible solutions. In *The Drive to Attract More Students into Higher Education: Access Initiatives from the United Kingdom*, Eggins and Tlupova highlight two major government initiatives recently implemented to widen access to higher education in the U.K, the Aimhigher program and the Education Maintenance Allowance program. In discussing the details of the implementation and evaluation of these two initiatives, Eggins and Tlupova note parallels with U.S. programs, particularly the Federal TRIO and GEAR UP programs, as well as policy implications that may be informative in the U.S. context. This article reminds us that the U.S. is not the only country trying to find viable programmatic and policy solutions to the access problem. It also helps us understand how other countries have learned from and adapted the U.S. experience, and how the U.S. can now learn from a new generation of educational opportunity policies and programs.

☞ ☞ ☞

In their 2004 article, *Doing Research that Makes a Difference*, Estella Mara Bensimon and her colleagues argue that “the results of research reported in journal articles are generally read by other researchers. Most of these articles have no influence whatsoever on the actions of practitioners. Consequently, the knowledge obtained through research tends to remain unnoticed and unused by those for whom it is intended.” In offering this journal, The Pell Institute aims to do its part to close the chasm between research and practice, publishing articles that place research methodologies and results within the context of educational opportunity programs as well as draw on the expertise of practitioners who know *opportunity matters*.



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Learning Better Together:

The Impact of Learning Communities on the Persistence of Low-Income Students

Cathy McHugh Engstrom, Ph.D. *and*
Vincent Tinto, Ph.D. Syracuse University¹

Abstract

This article describes the major findings from a longitudinal study of the impact of learning communities on the success of academically under-prepared, low-income students in 13 community colleges across the country. In this study, we employed both quantitative longitudinal survey and qualitative case study and interview methods. We utilized the former in order to ascertain to what degree participation in a learning community enhanced student success and the latter to understand why and how it is that such communities do so. The findings strongly support adapting the learning community model to basic skills instruction to improve learning and persistence for this population.

Introduction

On the surface, America's public commitment to provide access to any individual who seeks a postsecondary education seems to be working. Our higher educational system has one of the highest participation rates in the world. More than 16 million students are currently enrolled in U.S. public and private two- and four-year colleges, an increase of more than 25 percent in the past 20 years. The proportion of high school graduates entering college immediately after high school has increased from about 49 percent in 1980 to 67 percent in 2004. As overall enrollments have grown, so too have the number of economically disadvantaged students who attend college (National Center for Education Statistics (NCES), (2005a)

But scratch the surface of this apparent achievement and the news about access and opportunity in American higher education is much more

complex and a lot less hopeful. Despite gains in access generally, marked economic stratification in patterns of access and participation remain. For too many students, especially those from low-income families, the door to higher education is only partially open because financial and other constraints limit not only where but also how they attend college.

This is most noticeable in shifting patterns of attendance at two- versus four-year institutions. In 1973–74, the first year of the Pell Grant program, 62 percent of Pell Grant recipients were enrolled in four-year colleges and universities. By 2001–02, the proportion of Pell Grant recipients enrolled in four-year colleges and universities had shrunk to 45 percent, a relative decline of 28 percent (Mortenson, 2003).² Strikingly, the shift from four-year to two-year colleges among Pell Grant recipients has been most dramatic since the late 1990s. Between 1998–99 and 2001–02, the share of Pell Grant recipients enrolled in four-

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year institutions dropped from 50 to 45 percent, where it remains today (Mortenson, 2003; U.S. Department of Education, 2006). In other words, nearly 28 percent of the 30-year decline in enrollment in four-year institutions among Pell Grant recipients occurred in just a recent three-year period. Notably, this period has coincided with economic recession, large job losses, state cutbacks in financial support for higher education, large tuition increases, and frozen Pell Grant maximum awards (St. John, 2002, 2005).³

Understandably, some, if not a substantial portion of differential participation can be attributed to well-documented differences in levels of academic preparation between low- and high-income students⁴, as well as the impact of recent policies that have restricted access to four-year institutions for students who have substantial academic needs. There is little question that academic preparation matters and that differences in preparation continue to pose daunting challenges to promoting greater equality in patterns of access (Bowen, Kurzweil, & Tobin, 2005). But even among students with similar levels of academic “resources,” low socioeconomic students are less likely to attend four-year institutions than students from high socioeconomic backgrounds (Cabrera, Burkum, & La Nasa, 2005). Economic stratification can also be observed in forms of participation. Students from low-income families are considerably less likely to attend college full-time than are students from higher-income families and more likely to work full-time while attending college. For example, among students who began college in the 1995–96 academic year, 57 percent of dependent students from families earning less than \$25,000 were enrolled in college full-time for the entire academic year compared to 71 percent of those from families with incomes of more than \$75,000 (NCES, 1999).

Why does such stratification matter? It matters because where and how one goes to college influences the likelihood of college completion.⁵

Although gaps in overall access have decreased over time (NCES, 2007), gaps between high- and low-income students in college completion generally, and in the completion of four-year degrees in particular, remain. Indeed, they appear to have widened somewhat in recent years (NCES, 2005b).

This trend reflects in large measure the fact that a greater proportion of low-income youth are entering two-year rather than four-year colleges and, in so doing, reducing their likelihood of earning four-year degrees. Consider the data from a six-year national longitudinal study of students who began college in 1995–96: Whereas nearly 6 in 10 four-year college entrants earned a bachelor’s degree within six years, only a little more than 1 in 10 public two-year college entrants did so (NCES, 2003). But even among those who began higher education in a two-year college, income matters. While nearly 25 percent of high-income students who began in a two-year college earned four-year degrees within six years, only 8 percent of low-income students did so (NCES, 2003). Although some of the difference can be explained by variations in academic preparation and educational aspirations, it is still the case that students from lower socioeconomic backgrounds with similar levels of preparation are less likely to transfer to four-year institutions (Dougherty & Kienzl, 2006).

The facts are unavoidable. Although access to higher education has increased, greater equality in the attainment of four-year college degrees has not followed suit. For too many low-income students, the promise of a bachelor’s degree is still unfulfilled in large measure because they are increasingly entering two-year colleges and often do so without the requisite academic skills to succeed. The open door of American higher education has been a revolving door for too many low-income students.

What is to be done? There is no “magic bullet.” That being said, it is clear that no long-term solution is possible until we find a way to address the

² The shift of low-income students from four-year to two-year colleges has occurred among both dependent (typically 18–24 years old) and independent students (typically 24 years and over). The percentage of dependent low-income undergraduates with Pell Grants enrolled in four-year institutions declined from a peak of 69 percent in 1980–81 to about 58 percent by 2001–02. The share of independent undergraduates with Pell Grants enrolled in four-year institutions has declined from 49 percent in 1977–78 to 35 percent in 2001–02 (Mortenson, 2003).

³ For a more detailed analysis of the impact of Pell Grants and other tuition assistance programs see Kane (2003, 2004).

⁴ According to Cabrera et al (2005) only seven percent of students from high socioeconomic status backgrounds begin college with “low academic resources” whereas 22 percent of students from low-socioeconomic status backgrounds do so.

⁵ Understandably it also impacts the economic returns to one’s investment in higher education (Long, 2004). The net effect is that stratification in participation also shapes the future social attainment of different groups of students.

academic needs of under-prepared low-income students who are increasingly enrolling in two-year colleges. Unless low-income students are able to succeed in these “colleges of opportunity” as they are often called, there is little chance they will be able to transfer and eventually attain bachelor’s degrees. Unfortunately, the evidence suggests that community colleges have thus far not been very successful in addressing the issue of basic skills (see Bailey, Jenkins, & Leinbach, 2005).⁶ This problem reflects not only a lack of resources at two-year institutions, but also a paucity of models of effective programs that can be utilized in the community college context. Consequently, a good deal of attention is now being paid not only to the restructuring of existing programs but also the development of new, innovative efforts that demonstrate potential for addressing the academic preparation needs of low-income community college students. One particularly promising effort we explore here is the adaptation of learning communities for students taking required non-credit bearing basic skills classes.

This article describes the major findings from a systematic, multi-institution, longitudinal study of the impact of learning communities on the success of academically under-prepared, predominantly low-income students in 13 two-year colleges across the country. In this study, funded with a grant from the Lumina Foundation for Education and with additional support from the William and Flora Hewlett Foundation, we employed both quantitative longitudinal survey and qualitative case study and interview methods. We utilized the former in order to ascertain to what degree, if at all, participation in a learning community enhanced student success and the latter to shed light on why it is that such communities enhance student success, should they do so. These distinct methodologies were employed in parallel so as to produce a fuller, richer, and more complex picture not only of the success of students in those communities, but also of the experiences that help shape that success.

Figure 1. Participating Two-Year Institutions

Camden College
 Cerritos College
 Community College of Baltimore County
 DeAnza College
 Grossmont College
 Holyoke Community College,
 LaGuardia Community College
 San Jose City College
 Sandhills Community College
 Santa Fe Community College
 Seattle Central Community College
 Shoreline Community College
 Spokane Falls Community College

The Learning Community Model: An Overview

In their most basic form, learning communities begin with a kind of co-registration or block scheduling that enables students to take courses together. In some cases, learning communities link two courses together, such as a course in writing with a content course such as Sociology or History. In other cases, the entire first-semester curriculum is the same for all students in the learning community. Under this type of arrangement, students might take all of their classes together either as separate but linked classes, as they do at DeAnza College in California, or as one large class that meets four to six hours at a time several times a week, as they do in the Coordinated Studies Program at Seattle Central Community College.

The courses in which students co-register are not coincidental or random. They are typically connected by an organizing theme or problem, which gives meaning to their linkage. The point of doing so is to engender a coherent interdisciplinary or cross-subject learning that enables students to apply what is being learned in one course to what is being learned in another. At the same time, many learning communities change the manner in which students experience the curriculum and the way they are taught. Faculty members have reorganized their syllabi and their classrooms to promote shared, collaborative learning experiences among students within and across the linked classrooms. This form of classroom organization

⁶ Many descriptors are used in the literature and on college campuses to label non-credit earning courses in math, reading, or writing. Throughout this article we will refer to these courses as “basic skills” courses because other terms such as remedial and developmental suggest deficits in the individual student rather than the absence of sufficient skills to succeed in college.

requires students to work together and to become active, indeed responsible, for their own learning as well as their peers.

As a curricular structure, learning communities can be applied to any content and any group of students. For students who enter college academically under-prepared, as do many low-income students, one or more courses may involve basic skills. For instance, students in the Business Academy at LaGuardia Community College take a three-credit Introduction to Business course with a non-credit English course and a credit-bearing freshman seminar. In other cases, a basic skills course in Writing is linked to a content course such as U.S. History. However organized, the linking of basic skills courses to content courses enables faculty to tailor academic support in basic skills courses to the specific learning needs of students in their other content courses. Many learning communities also bring together faculty, student affairs professionals, and other staff charged with addressing the academic needs of new and continuing students (e.g. learning center staff). In this manner, learning communities are able to attain a higher level of alignment with support services than is typically possible when various services operate independently of one another.

Learning communities are not new. Over the past two decades they have been adopted with varying degrees of success in over several hundred four- and two-year colleges (Gablenick, MacGregor, & Smith, 1990). Indeed, they have been cited by a number of foundations and educational organizations as one of several effective practices that improve student engagement (Zhao & Kuh, 2004), learning, and persistence. Even *U.S. News and World Report* now includes a ranking of institutions that have learning communities in their annual college rankings issue.

While a number of community colleges have adapted learning communities to serve the needs of academically under-prepared students (Malnarich, 2004), evidence of their effectiveness has been scarce. An earlier study funded by the U.S. Department of Education (Tinto, Goodsell, and Russo, 1993) found that at least one learning community, the New Student House program at LaGuardia Community College, had evidence to support its claim of having been successful in

helping low-income, academically under-prepared students. However, there has been no large-scale study to test the effectiveness of learning communities with this population in the two-year context prior to this study.

Study Design

We carried out a systematic, multi-institution, longitudinal study of the impact of learning communities on the success of academically under-prepared, predominantly low-income students in 13 two-year colleges.⁷ In this study, we employed both quantitative longitudinal survey and qualitative case study and interview methods. We utilized the former in order to ascertain to what degree, if at all, participation in a learning community enhanced student success, and the latter to shed light on why or how learning communities enhance student success, should they be found to do so.

Our selection of institutions, and therefore the learning community programs studied, was driven by several considerations. First, the institutions had to have a learning community program of some duration for which there was institutional evidence to support the claim that the program was effective for academically under-prepared students. We were specifically interested in learning communities that situate basic skill development within a broader academic context, rather than merely linking several skills courses (Grubb, 1999). Second, the set of selected programs had to capture the significant variations in how learning communities are being adapted to serve the needs of basic skills students in order for us to ascertain whether some types of programs are more effective than others. Third, the set of institutions had to reflect the full spectrum of the “at-risk” population, including low-income, minority, first-generation, and immigrant students.

The institutions were selected through a multi-stage nomination, application, and screening process conducted with the assistance of a project advisory board, whose members represent many of the most knowledgeable and experienced educators in the field. While by no means a nationally representative sample of all learning community programs that serve academically under-prepared students, the 13 institutions selected for this study capture significant and policy-relevant variations in program location, type, and population served.

Quantitative Methods

Quantitative methods were used to ascertain the impact of participation in a learning community on (1) student behaviors known to be associated with learning and persistence (often referred to as engagement) and (2) student persistence to the next year of college. Specifically, we employed longitudinal survey analysis in a panel design that required the development of a survey instrument as well as the identification of program and comparison groups and the collection of survey data and subsequent follow-up data on persistence from each institution.

We used a modified version of the widely-used Community College Survey of Student Engagement (CCSSE) survey. We adapted the survey to capture more detailed information about the impact of certain activities we expect to observe in learning communities based on prior research, such as active-learning pedagogies and peer learning. In addition to collecting basic demographic information, the survey asked a range of questions about students' involvement in classroom activities, with classmates, and faculty; their perceptions of the support and encouragement they experienced on campus; and their evaluation of their own intellectual gains over time. Students' responses were collapsed into a series of factor scores for comparing group means, which were collapsed into a single score for regression analysis. Each factor has been shown in prior research to be independently related to both student learning and persistence (Pascarella & Terenzini, 2005). A draft version of the survey was pilot tested at a local community college and revised with the assistance of the advisory board.

On each campus, we selected two groups of students, those who participated in learning communities during their first year of college and a comparison sample of similar students who did not. To select the comparison group students, we asked each institutional contact person to identify courses that were similar in content to those that were part of the learning communities and

that enrolled students who were similar in their attributes and level of academic preparation to those enrolled in the learning communities. All students in the courses so identified comprised the comparison student population.^{8,9}

Students in both learning community and comparison group classrooms were surveyed in Fall 2003 during their first year in college. Out of 6,459 students, we obtained completed questionnaires from 3,907 students, (1,626 in learning communities and 2,281 in comparison classrooms) for a total response rate of 61 percent. We used the Enrollment Search services of the National Student Clearinghouse (NSC) to track all survey respondents to the following academic year to ascertain if and/or where they were enrolled at any institution in the country.

The data were analyzed using both univariate (means, frequencies, and chi-squares) and multivariate regression techniques in order to (1) ascertain to what degree learning community and comparison group students differed in their patterns of educational engagement and subsequent persistence and (2) whether participation in the basic skills learning communities was independently associated with subsequent persistence. In the latter case, we employed multivariate logistic regression analyses to identify to what degree and in what manner experiences during program participation were related to subsequent educational outcomes including persistence and degree completion (Menard, 2001). Logistic regression is ideally suited to model the effect of independent variables when the dependent variable under consideration is dichotomous (e.g. did or did not persist). Logistic regression not only captures the problematic distribution embedded in dichotomous measures, it also avoids violations to the assumption of homogeneity of variance and functional specification the direct application of Ordinary Least Squares regression models are likely to produce (Cabrera, 1994). SPSS statistical software was utilized in all analyses.

⁸ Although it might be claimed that that our sample is not representative, since we did not employ random sampling procedures, experience has taught us that classroom-based sampling not only results in higher response rates, but, in the final analysis, also yields a more representative sample. Random sampling techniques typically entail use of the mail and therefore are subject to high non-response rates and non-random response patterns.

⁹ It should be noted that in some cases all academically under-prepared students were enrolled in the institution's learning communities. As such, comparison group students were necessarily somewhat better academically prepared and from somewhat more advantaged socioeconomic backgrounds than were students in the learning communities. This, as we shall see later, served to reinforce some of the findings of the study.

Table 1. Race/Ethnicity of Interview Participants (with Three or More Interviews)

| Race/Ethnicity | Total Number | Percent of Total |
|------------------------------|--------------|------------------|
| African American/ African | 3 | 6% |
| Asian/Pacific Islander | 19 | 39% |
| Latino/Hispanic | 13 | 27% |
| Middle Eastern | 1 | 2% |
| Multi-Ethnic | 5 | 10% |
| Native American | 1 | 2% |
| Unknown | 1 | 2% |
| White/European | 6 | 12% |
| Total | 49 | 100% |

Qualitative Methods

Qualitative case study and interview methods were used to examine what features of the learning community experience contribute to students' success both at the time of participation and over time. Three institutions from our sample were selected for case study analysis, Cerritos College (California), DeAnza College (California), and LaGuardia Community College (New York).

These institutions were selected because they (1) offered a variety of well-established, campus-supported learning community offerings and models to students needing basic skills classes; (2) were based on interdisciplinary, team-taught, collaborative learning practices; (3) served first-generation, working-class students from diverse backgrounds; and (4) provided on-going faculty development. Each institution was also selected because it offered some learning community models and practices unique from the others.

A team of two researchers visited each institution to initially observe the programs and to interview a range of people on campus, including students, staff, and faculty, to better understand the philosophy, goals, and organizational structures supporting the range of learning community offerings on these campuses. We conducted the first set of interviews with a diverse group of learning community students at the end of the Fall 2003 term or the beginning of the Spring 2004 term. In the first round of interviews, students could choose to participate in focus groups or individual interviews. In the next round, we individually interviewed these same students at the end of the 2003–2004

academic year. We continued to interview students three or more times over the next two and a half years; we concluded with focus groups with all students who had participated in two or more interviews during the study. During the first three years, we interviewed 165 students from the three institutions, with 49 students participating in three or more interviews. Overall, we conducted 266 individual interviews and 20 focus groups over three years. A breakdown of the ethnic/racial diversity of the 49 students who participated in three or more interviews can be found in Table 1.

The purpose of the student interviews at the case study institutions was to learn more about students' experiences in these programs and whether and how their participation affected their success in college. The interviews focused on two major questions:

1. How do students reflect upon the role and influence of the learning community experience throughout their college enrollment? Specifically, how does learning community participation affect these students' identities as learners, in terms of habits, attitudes, and knowledge, and how does this in turn affect their chances of college success?
2. What obstacles do students identify as having faced while enrolled in college, how did they negotiate these experiences, and what role did their learning community experience play in overcoming these obstacles (if they were able to do so), particularly in relation to other institutional or external factors?

There are a number of studies in the literature that examine the influence of learning communities on student success using qualitative data about students' perceptions either during or immediately following the learning community experience. This study is unique in that we asked students to continually reflect about the influence of the program on their persistence over time.

Study Findings

Quantitative Findings

In terms of demographics, students enrolled in the learning communities and the comparison classrooms were generally quite similar, although students in the learning communities were somewhat more likely to come from minority

Table 2. Attributes of Learning Community and Comparison Group Students

| Student Attributes | Learning Community | Comparison Group |
|--|--------------------|------------------|
| Age ^a | 3.05 | 3.23 |
| Gender (% Female) | 65% | 61% |
| Highest Level of Father's Education ^b | 4.17 | 4.20 |
| Highest Level of Mother's Education | 3.86 | 3.88 |
| Highest Educational Credential ^c | 1.19 | 1.22 |
| U.S. Citizenship (% U.S. Citizen) | 82% | 83% |
| English as Native Language | 67% | 69% |
| Ethnicity (% Non-White) | 63% | 59% |

Bold denotes significant differences at the .01 level

^a Age: 1=17 or younger, 2=18, 3=19-22, 4=23-25, 5=26-29, 6=30-39, 7=40-49, 8=50-59, 9=60 plus

^b Parental Education Level: 1=None, 2=HS diploma/GED, 3=Vocational or trade school, 4=Some college, 5=Associate degree, 6=Bachelor's degree, 7=Master's degree/1st professional, 8=Doctorate degree, 9=Unknown

^c Own Educational Level: 1=None, 2=HS diploma, 3=GED, 4=Vocational or trade school, 5=Associate degree, 6=Bachelor's degree, 7=Master's degree/1st Professional/Doctorate degree, 8=Other

Table 3. Engagement Among Learning Community and Comparison Group Students

| Factor Scores | Learning Community | Comparison Group |
|---|--------------------|------------------|
| Engagement in Classrooms ^a | 3.32* | 3.15 |
| Engagement with Classmates ^a | 2.85* | 2.68 |
| Engagement with Faculty ^a | 2.88* | 2.75 |
| Perceived Encouragement ^b | 2.91* | 2.73 |
| Perceived Support ^b | 2.51 | 2.44 |
| Perceived Intellectual Gains ^b | 2.83* | 2.70 |

^a Scoring ranges from 1=Never to 5=Very Often

^b Scoring ranges from 1=Very little to 4=Very much

* Indicates significant difference at the .05 level

backgrounds, to be younger, and to be female than comparison group students (see Table 2).

Table 3 shows that students in the learning communities were significantly more engaged than students in the comparison groups along all measures of engagement (classroom, classmates, and faculty), were significantly more positive in their perceptions of the encouragement they experienced on campus, and significantly more positive in their estimation of their intellectual gains.

Given their higher levels of engagement, it is not surprising that students in the learning communities were also significantly more likely to persist from freshman to sophomore year than comparison group students, 62 to 57 percent respectively ($p < .05$).

To test whether participation in a learning community was independently associated with increased persistence, we employed multivariate logistic regression analysis. First, we regressed student demographics on persistence, and then added a variable indicating whether or not students participated in a learning community. Finally, we regressed student demographics, participation in a learning community, and engagement on student persistence. It should be noted that in the final regression we combined the separate factor scores on engagement (classrooms, classmates, and faculty) into one score on overall engagement. These results are presented in Table 4.

Several findings are evident. First, age and citizenship matter. Specifically, older students and non-U.S. citizens have lower persistence rates than do younger

students and those who are U.S. citizens. Second, participation in a learning community proves to be independently associated with persistence even after controlling for student demographics and engagement.

Third, once one takes being in a learning community into account, differences in engagement are not significantly associated with persistence. This latter finding is telling because it indicates that the impact of participation in a learning community on persistence is not taken up by the fact that students are more engaged in those communities. Rather it suggests that there is something specific about being in a learning community that promotes the persistence of academically under-prepared community college students.

To understand what it is about these learning communities that may explain their impact upon persistence we now turn to the qualitative data.

Qualitative Findings

Based on our interviews at the three case study institutions—Cerritos College, DeAnza College, and LaGuardia Community College—we were able to identify important elements of the learning community experience that students perceive as critical to promoting their learning and success in college. First and foremost, students found that learning communities provided a safe and supportive environment in which to learn. This did not merely “happen” because students were co-enrolled in the same courses, however. As we will discuss here, we found that learning community faculty employed four key strategies to create a true “community of learners:” (1) using active and collaborative pedagogies that engaged students with their peers; (2) collaborating with other faculty to develop an integrated, coherent curriculum; (3) integrating campus services and programs into the learning community experience; and perhaps most important, (4) developing personal connections and relationships with students in which they encouraged students to meet high expectations while offering them high levels of support. Finally, students reported that participating in a basic skills learning community was not a “remedial” experience at all; rather it was the foundation or the building blocks for their success in the first year of college and beyond.

The Learning Community Environment: A Safe and Supportive Place to Learn

Many of the students in our study did not enter college feeling “safe” to learn. They were often afraid to speak in class and to participate fully in the learning process. According to students in our study who were born in the United States, their

Table 4. Results of Multivariate Regressions on Persistence Among Learning Community and Comparison Group Students

| Variable | Beta | Beta | Beta |
|--------------------------------|---------|---------|---------|
| Highest Education Credential | -.006 | -.006 | -.006 |
| Mother's Education Level | .028 | .028 | .028 |
| Age | -.078** | -.075** | -.076** |
| Gender (% Female) | .114 | .107 | .107 |
| English as Native Language | .062 | .055 | .056 |
| U.S. Citizenship | .517** | .524** | .522** |
| Ethnicity (% Non-White) | .104 | .114 | .117 |
| Learning Community Participant | | .217** | .212** |
| Engagement | | | .031 |

** Indicates a significant relationship at the .001 level.

prior high school experiences seemed irrelevant and left them feeling disconnected, invalidated as knowers, and lacking any motivation to learn or excel. They consistently said that high school was a waste of time, they learned little from the lecture mode of class delivery, and spent few hours (if any) studying. Quite simply, they were not engaged in the academic environment. However, participating in a learning community improved these students’ confidence in their abilities to learn as well as their motivation to succeed by creating a safe, supportive learning space. As Audrey, a participant in the DeAnza College Language Arts (LART) learning community explained:

When I came to college, I didn't know who exactly I was, and how do I feel, and what do I like. And before I was afraid of saying what I thought or what my feelings were, now I'm not afraid. I am like "I think this."

Diana said that the Business Academy at LaGuardia Community College “has benefited me because I have gotten to know people. I am not alone anymore. It has helped me feel more comfortable, more confident. The more confident I feel, the better I do.” Tasha at Cerritos College shared, “I think I have gotten smarter since I have been here. I can feel it.”

For the immigrant students in our study, their lack of confidence in their academic abilities and lack of participation in the classroom was directly tied to their ability to speak, read, and write in English. Even if they did well in school in their

native country, their identity as college students in the U.S. was primarily shaped through their perceived competence in the English language. Learning communities provided a safe environment for these students to gain the confidence they needed to improve their language skills, thereby allowing them to participate more fully in their classes. Song, a participant in the linked ESL courses at LaGuardia Community College, explained:

First of all, when I came here I was so scared. I was afraid of everything because of language. Now I am not afraid. We won't be scared to raise our hands, even if it sounds stupid because we know each other so it's not that stupid.

Cecelia, another LaGuardia ESL student, shared, “Now, I can write. I can speak. I speak more. I understand more. I feel more confident and before I was ashamed. Now I feel really good.” Christopher from LaGuardia Community College added:

Being in the same classes, it's comforting. You are scared and maybe somebody speaks much better than you and writes better so you feel more comfortable seeing the same faces everyday and you communicate more and more often, little by little. Now I have different friends, different faces every class but I got the confidence from seeing the same faces in the first cluster. I'm not afraid of saying anything now, but I was.

Students felt that the learning community environment was a safe place to learn because they got to know one another, they trusted and respected each other, which allowed them to take risks and to participate and learn with each other. Issac, another DeAnza College LART participant, said, “This class is more of a family, a small family. You go into the class and you're like, ‘Oh, Joe's not here. I hope everything is okay.’ It's a close-knit classroom. We were really able to share experiences, and I think it improved me a lot.” Sue from Cerritos College agreed:

Before I took the linked course, I always communicated with the teacher. Now you spend so much more time with your classmates, and we are sort of a community. In this environment you become more confident, you become more alive, you become more responsible for your own opinions and you aren't afraid to speak your views, you aren't afraid to speak up.

Clearly, students found the linked classes fostered a sense of community that helped them overcome their fears and encouraged them to get engaged and active in class. This was very different from their experiences in their other courses. At DeAnza College, Robert explained: “In LART, it's more friendly. We just trust each other more. We're more glad to see each other.” Tiffany from DeAnza shared:

In my math class, usually I just do my own work and there is no friendship involved in math class and outside of class. I won't say “hi” to my math classmates, but in my LinC class, I will talk to them and say “hi” because we are closer to each other and this is important to learn. You don't want to always feel alone and you always want someone who knows you and you can get more help. In my math class, if I have a problem, I will go first and ask the instructor. I will not ask my classmates because I don't know them. But in the LinC class, I will discuss my problems or questions with my classmates.

The safe, supportive learning environment that students describe as present in the learning communities did not just “happen” because they moved from one class to another with each other. It was purposefully created by learning community faculty who employed the following four strategies to create a “community of learners” among students enrolled in basic skills courses at the case study institutions.

Using Active and Collaborative Learning Strategies

Learning community faculty employed active and collaborative pedagogies that fostered relationships among students, which made them more confident about and engaged in their learning both inside and outside of the classroom. Faculty use of collaborative learning strategies, such as group discussions and assignments, allowed students to feel more secure with themselves as learners and to recognize the value of their own and others' contributions to the learning process. Jasmine, a student from DeAnza College, reflected:

I remember sitting in my English class for LART three years ago. I didn't know anybody at all. I didn't know what to expect and one thing that my teachers taught me very early is to value knowledge and don't be afraid to speak. They were very

interested to hear my opinions, what I had to bring and at that time I wasn't used to it that much.

So, I was very hesitant, but you know, as the year passed by, I noticed that it's very important to just speak up and hear other people's opinions. They combine individual work as well as group work because they want to hear from different people and they want the students engaged as well. It makes the class more interesting.

During group exercises, students describe how working with their peers also promoted deeper, more meaningful interactions with and greater understanding of the course material. Attila, another student from DeAnza College, said:

Instead of them (faculty) making a point, like reading a story or an essay, they don't just tell you the point of the essay. They start asking questions and they make you think and find out on your own, but with your classmates. They are not going to say to you "This is the point of this class" you know, like a lecture class, "This is how you have to do it." No, they are going to make you work for it, you have to find out. And by the time you find out you actually know it and you're not going to forget it.

By using active and collaborative learning strategies, learning community faculty encouraged students to take more responsibility for and ownership of the teaching and learning that took place in the classroom, which not only validated them as learners but improved their learning outcomes as well.

Students' learning together extended beyond the classroom in the form of study groups. Learning community faculty were instrumental in encouraging students to form study groups and teaching them how to set them up and run them. Mack at Cerritos College explained about the direction he got from faculty to establish peer study groups:

The learning community program, they give you an opportunity to work more with your classmates where in other classes you don't get that chance. In my LC English class, they always want you to get into study groups, but in other classes they don't promote making you do it. Once you know how to do it, you get comfortable and you just continue on initiating study groups in other classes even if the professor won't. In learning communities they say you have to go meet with people outside of class.

Participating in the learning community facilitated the scheduling of study groups since students were in all the same classes together and had similar breaks in the day. As Veronika from the Business Academy at LaGuardia also said, "Yeah, we are all friends now because we do all these projects together and interact with each other. We take all three classes together so we all go together, we eat together, we talk about homework together, we study together."

Students found that the study groups were a safe and supportive environment where they could ask for help from peers without fear of criticism from each other or faculty. Marie from DeAnza College explained:

In the LART class, you used group members to improve your skills; it is a little harsh to get criticism from the teacher as opposed to your peers. So we had our peers look over our papers first which is really cool.

Pedro from Cerritos College said, "Right now, half of us are struggling in math class so we try to form a study group and then we go to the same tutor. And whoever understands the problem better, we try to help each other out."

Students also found that the study groups provided a serious atmosphere for learning where they and their peers kept each other motivated, focused, and on task in their studies. Stan at DeAnza College described:

There are a lot more people in my LinC that are more serious behind what they're doing. So, I mean, that helps out as far as your learning environment. You can set up study groups and everybody there can get stuff accomplished.

Stan went on to say that this was much different than his experience in high school. "As far as high school, none of that. Its like, soon as that bell rung, I was out of there. And you don't want to think about class at all. That isn't the case here." Max, another student at DeAnza College, said:

We motivate each other and we keep each other on track. Cherry and I are in these classes together so we usually are doing our homework together. We have discussions with ourselves, sometimes heated discussions on a lot of different topics. When we get back to class we know what we want to talk about, ask about, what we want to present. So it

helps to get friends to help you with essays, readings, discussion topics.

Students who participated in study groups in the learning communities often formed study groups in other classes with or without faculty support. Maria, an ESL student at DeAnza College described how, two years after participating in a learning community, she worked with her peers in her nursing program to provide much needed support to each other:

We survived second quarter, and then third quarter it became much, much worse, and people just started to disappear from our program. We thought “Okay, what can we do?” Because we have to survive, so if nobody cares about us, we have to care about ourselves somehow. So this is how we came up with the idea of the website. Everyone takes turns typing up the lecture, so everyone can use it, and you can put your own notes. We have five people with tape recorders, and some of the girls have very good writing skills, and will write the lecture, scan it, and give it to our group. We put it on the website. And if somebody has some information about the code for the supply room, or where to find syringes you put the information on this website, and we print it and have a hard copy to put in our binders and take it with you. When you have some support group, it’s much more helpful.

Maria said that she gained an appreciation of the benefits of learning together with her peers in her ESL learning community experience.

Students’ experiences with study groups demonstrate how learning among peers continued outside of the classroom because the collaborative learning pedagogies used by faculty inside the learning community classroom led to meaningful relationships among peers. These relationships helped to create a safe and supportive learning environment in which students developed more confidence in themselves as learners and in their contributions to the learning process, thereby increasing their engagement in the classroom and with the curriculum.

Developing an Integrated, Coherent Curriculum

Collaboration between learning community faculty led to the development of an integrated, coherent curriculum that encouraged students

to acquire metacognitive knowledge about their identity as learners, the conditions under which they best learn, and their role in the learning process, thereby allowing them to more deeply learn the course material.

Learning community faculty colleagues developed an integrated curricular experience by working together to find interdisciplinary links in the course content and to coordinate assignments and activities so they complemented and built upon each other in order to increase students’ learning outcomes across courses. Stephanie, a participant in the New House at Cerritos College explained:

It’s great because the teachers and the material—they are connected. The teachers work together for us. For example, in basic writing, we write about something, let’s say culture. In basic reading, we’re reading about cultures too. In our communications or speech class we are making presentations about different cultures. It’s good for us to have these connections because we are learning more.

Pedro from the Business Academy at LaGuardia Community College added, “The English teacher gave us an essay title related to business class. So I am thinking about business all the time. All the projects are connecting. We apply, for example, what we discussed in business ethics in an essay [for English].” Students emphasized the benefits of curricular links between reading and writing courses in particular. As Attila from DeAnza College commented, “If you write you have to read something to write about. They just go hand and hand.”

As these students explain, the linked learning community courses made learning easier and more efficient, thus enabling them to learn more, because they spent more time focused on the course material and the information and skills learned in one course were reinforced in their other courses. The curricular links between the courses also made the material being presented seem more relevant, which increased students’ interest in the subject matter, and as a result, their motivation to study and learn. As Cecile from LaGuardia shared:

The relationship in classes between accounting and ESL is helping a lot because the accounting professor is teaching us to answer questions in complete sentences—to write better. And we are more motivated to learn vocabulary because it is accounting vocabulary—something we want to learn

about. I am learning accounting better by learning the accounting language.

Stephen and John, both from DeAnza College, eloquently summarized their experience with a coherent, integrated curriculum in the learning community setting. Stephen shared:

LART is like a big puzzle. Every day, they give us piece by piece and by the end it all connects together. The teachers have us figure out how to put it together.

John agreed: “The classes are intertwined, like two colors joined into one; they just come together nicely. I actually think that other people who have their classes split up as opposed to us are missing out and not learning as much as we are.”

An integrated curriculum not only improved students’ learning experience and outcomes, but also promoted an understanding about themselves as learners and their role in the learning process. Faculty taught this lesson by modeling dynamic teacher–learning roles as instructors in the learning communities.

Students appreciated how faculty worked together to make the curricular links between the courses in the learning communities. These partnerships led to faculty moving seamlessly from teacher to “student” roles, modeling to students that faculty too have much to learn from each other and from students. John, a student at DeAnza College, commented on how the learning community model enabled faculty to learn alongside students:

You really saw the classes were linked because the other teacher would sit in on the other teacher’s class on her off day, and she would not sit there as a teacher, she would sit there as a student. She would take the opportunity to learn. It was very nice, like we were just there to learn, so it made for a nice learning atmosphere. It wasn’t like we had two teachers at that time, one of the teachers was a student with us. So you really felt like they weren’t talking down to you or at you, they were talking with you.

Alex at Cerritos College shared a similar view about the importance of faculty expressing an openness to learn: “If we challenge the math teacher, he always wants to be right. He won’t let us talk. The learning community faculty say, “We are wrong. Tell us how we are wrong and how can we learn from you.” Jose, another student at Cer-

ritos, explained about how faculty team teaching made him feel “less dumb:”

You are focusing on two opinions, two thoughts (with team teaching). You are not bored. You are more focused. It’s kind of fun. They tell you about their opinions, they want your opinion. They learn from us and we learn from them. They make everyone feel as if they are just as smart as everyone else. No one is dumber than anyone else.

Students valued observing faculty moving fluidly between teacher–learner roles. This modeling sent messages to students that they too can move from expert to learner depending upon their own knowledge and expertise. In addition, faculty who took on the “learner” role sent a powerful message to students that “it is okay” to ask questions, to seek out knowledge, and to take risks in the classroom, which made students feel like they belonged there. In this way, faculty created a comfortable yet challenging learning environment, a genuine community of scholars.

Integrating Campus Support Services

By integrating campus services and programs into the learning community experience, faculty were able to connect students to networks of support throughout the campus community, thereby increasing their chances of success in the first year and beyond.

The learning communities provided a conduit to an array of campus support services, often through a new student seminar offered in conjunction with students’ other classes. The House A and B learning community programs at Cerritos College, for example, offered a credit-bearing new student seminar course called Career and Guidance linked to basic skills math, reading, and writing courses. By connecting students with campus support services and helping them interact with campus offices, such as financial aid and registration, the faculty and counselors in the first-year seminars were actually helping students learn “how college works,” which they did not know given the lack of college-going experience in their families and communities. Maria from Cerritos explained:

We don’t know how college works. We don’t know the difference between grants, loans, scholarships and all that stuff. Also, we don’t know the credits, the grades, the letter grades, and GPA—how all that

works. The class [Career and Guidance] is good for letting you know all that.

Pedro had a similar experience in the new student seminar at LaGuardia Community College: “[They] tell you what you need to know, step-by-step, and that’s a good thing.” Another student, Tony at LaGuardia, who wasn’t actually taking the seminar, nonetheless benefited from the information he learned from his friend, who was enrolled: “We really don’t know where to go for help so we ask our friend for advice. In the seminar, they teach him what courses to take.”

The new student seminars clearly helped students develop some of the social and cultural capital required to understand and navigate the college system. The seminars also helped students develop strategies, including critical time management and study skills, and tap into a web of resources, such as tutoring, that further supported their success on campus.

Students talked about how the endless “distractions” they faced trying to combine going to college with their work and family responsibilities caused them to struggle with time management and organization of their studies. The new student seminars helped students address these issues by providing them with resources to better understand their own learning styles and processes as well as how to manage their time and learning priorities. Elizabeth from Cerritos College shared:

I learned that I was a visual person. You know, it’s like that’s why I didn’t like school the first time around ‘cause everything you had to read. The learning community, they taught us what is the best way you learn and for me it was visual. I also learned time management. I’m a mother and I’m a student and I work part-time too, so it was so funny how the math teacher always told us for every hour you’re here, you have to study two hours and it’s like are you crazy? But it’s true; they taught us how to prioritize.

The first-year seminars also connected students with resources on campus, such as tutoring, that helped them better develop their time management and study skills. Learning community faculty often incorporated tutoring into their students’ weekly schedules and routines. In fact, students at both LaGuardia and Cerritos described going to tutoring up to four and five times as week, even after they were no longer participating in the

learning community. Mack, a student at Cerritos College, described:

I always go to math tutoring. I get as much help as I can. At 11 o’clock I’ve got English tutoring. For an hour we go over our papers and support each other, critique papers we’ve written, and it gives you a chance to get a different perspective on your ideas and what you’ve written.

Tutoring not only enhanced students’ understanding of the required course material, but also kept them on campus, immersed in their college pursuits and participating in the college community.

By integrating campus services and programs into the learning community experience, faculty were able to reinforce critical habits and skills essential to students’ success, to engage students more fully in their studies, and to connect them with networks of support on campus.

Holding Students to High Expectations While Providing High Levels of Support

Through their efforts to engage students in the learning process, learning community faculty not only let students know that they had high expectations for them, but that they would provide them with the encouragement and support necessary to help them meet these expectations. In other words, by caring so much about students’ learning in the classroom, the students felt that the instructors cared about them. As Danielle, a student at Cerritos College shared:

It is amazing the impact these teachers in the learning community have on students because you have teachers that want to learn from you and they want to talk to you about how you’re learning and how you are developing. They just want to show that they really care, like it’s sincere and it’s not just something to do for a paycheck. It means a lot more and makes you want to view life differently, It makes you want to view life positively because teachers actually care about you. You are like “wow!”

Cecilia, an ESL student at LaGuardia, agreed when she said that the faculty “work so hard for our benefit and it makes me feel good to know the teachers care. They are really into your work. They want to make sure you do it because they are concerned that we succeed. There are a lot of people giving us reassurance all the time.”

For some students, like Judy at Cerritos College, the care and concern of the learning community faculty was unexpected, but much appreciated:

I thought college would be really cold. When I took the First Year Experience, I even had two teachers call me at my house when I wasn't showing up for a week. They called me to say "Are you okay? Can we help you?" When somebody cares for you, especially when you're just coming out of high school, you get motivated to do your homework and go to class.

Students like Judy and Jasmine were motivated by the care and support they received from faculty. The faculty members believed in them even when they didn't believe in themselves. By expressing unwavering confidence in students' abilities, particularly if they were willing to work hard, students felt that they could, in fact, rise to faculty expectations to succeed in college. Jasmine from DeAnza College shared her experience:

In the beginning, I was not confident in my writing, but you know, she [my instructor] came up to me and said, 'You know, I don't want you to be discouraged. I am here to help you and when you see the results later on, you'll realize that, okay, you know, I can do this!'

Nemo, also from DeAnza, added that the faculty "really appreciate us. They want us to learn. They will give you lots of homework and that keeps you going. They don't give up on us." Finally, Anna from LaGuardia said, "Our teachers in the Academy have a lot of dedication toward us. Our English teacher, she might be a little hard on grading things but she's trying to mold us into college students. She sees the potential that we might not see at the moment and brings it out."

By holding students to high expectations yet offering high levels of encouragement and support to enable them to meet those expectations, learning community faculty helped their students to gain confidence in themselves as learners and to view themselves as belonging in college, thereby enabling their success.

A Foundational Experience

Clearly, the students in this study felt they benefited greatly from participating in basic skills learning communities during their first year of college.

However, what benefits did students realize, *particularly over time*, as a result of their participation in these learning communities? How did their initial involvement in a learning community shape their academic progress and success throughout their college experience?

Foremost, many students felt their learning community experience benefited them by laying a solid "foundation" for college, setting them on the "right track" by providing the knowledge, resources, and support they needed to be successful in their courses during the first year and beyond. John from DeAnza College shared his experience:

Taking LART 100 was one stepping stone for me. When I took the LART, you got the sense, the feeling that they really wanted to get you off on the right foot for your college life. So they really offered you a lot of resources, not just within reading and writing and English, but they would bring in the counselors and bring in outside people. That showed us that people are interested in the students. It was really showing us that there are resources out there helping us, and really supporting students.

Students also felt that participating in the learning communities not only taught them the skills they needed to succeed with respect to the college curriculum, but they also learned what they needed to know about how to navigate the college system, including how to deal with any challenges they may have to face in the years ahead. Maria from Cerritos College shared:

This experience in House A, like I said, is like the foundation of a building. It's teaching me to overcome obstacles in school. That's something I like. They are teaching us how to prepare ourselves for what is to come, how to see it in a positive way, not a negative way, and that's a good way to learn.

While many students, particularly the native English-speaking students, actually initially resented being placed into basic skills classes, they soon felt that participating in the learning communities was positively shaping their college experience. We did not have one interview in which students described themselves as part of a "developmental," "remedial" or "basic skills" program. Rather, they described how they took required basic skills classes because they didn't do well on the placement test and/or missed some "stuff" in high school. As Shanee from explained:

I didn't come here under-developed. I was just under-prepared. I didn't have the opportunity to learn how to write in my high school and appreciate that I have the chance now.

Rather than making students feel like they weren't "college ready" or "college material," the basic skills learning communities actually made students feel like they belonged in college, particularly that institution, and that they were capable of succeeding there. As Mack from Cerritos College said:

When I went through the FYE program, it changed the whole perspective because I wasn't an individual in a class. I was part of a class, I was part of a college.

The validation and sense of belonging that students received from the learning community experience not only raised their confidence in their abilities to succeed in college, but increased their commitment and motivation to pursue their studies through the completion of their degrees—a lasting benefit indeed.

Conclusions and Recommendations

For many low-income, minority, and first-generation college students, access to higher education means enrolling in community colleges. Given the lack of college-going experience in these students' backgrounds, they tend to arrive on campus with fewer academic, social, and financial resources and with greater work and family responsibilities than their peers, which significantly decrease their chances of success. The odds that low-income and other educationally-disadvantaged community college students will successfully transfer to four-year institutions and earn bachelor's degrees are especially low. A major problem is the paucity of effective models to address these students' academic preparation needs through basic skills courses and programs. In this article, we have examined the extent to which the learning community model can be adapted for community college students taking basic skills classes to provide them with the academic and social support they need to succeed.

The findings from our study provide ample evidence that basic skills learning communities work for academically under-prepared, low-income students at community colleges. The quantitative findings demonstrate that students participating in learning communities are significantly more

likely than their peers to persist from freshman to sophomore year—a crucial point at which many students leave higher education—and their higher persistence rates can be attributed to their participation in the learning community even after controlling for other factors such as student achievement and demographic characteristics.

The qualitative analyses identify the important elements of the learning community experience that promote students' learning, success, and persistence in college. In fact, we found that the type of learning community model is not as important as including the following four conditions for promoting a safe, engaging learning environment:

1. Employing active and collaborative pedagogies that foster a sense of community among students, thereby making them more confident about and engaged in their learning both inside and outside of the classroom.
2. Collaborating with other learning community faculty to develop an integrated, coherent curriculum and to model fluid teacher-student roles that encourage students to develop meta-cognitive knowledge about their identity as learners, the conditions under which they best learn, and their role in the learning process.
3. Integrating campus support services and programs into the learning community experience, such as new student seminars and tutoring, to reinforce critical habits and skills essential to students' success, thereby engaging students more deeply in their studies and integrating them into networks of support on campus.
4. Holding students to high expectations yet offering high levels of encouragement and support to enable students to meet those expectations, which help students to gain confidence in themselves as learners and to view themselves as belonging in college, thereby enabling their success.

Furthermore, it is crucial that students' experiences in basic skills learning communities be viewed as "foundational" rather than "remedial" in nature. Basic skills courses can often unintentionally reinforce students' doubts that they are not "college material" and that they do not belong in college. In contrast, the students in this study felt that participating in basic skills learning communities not only

provided them with the knowledge, resources, and support they needed to be successful, it also raised their confidence in their abilities to succeed in college, thus validating their presence on campus and increasing their connection to the campus community – both requisites for college success.

The significance of the findings from this study for transforming basic skills courses into a positive learning experience for under-prepared students should not be taken for granted, particularly in light of more negative findings from other studies. For instance, a national study conducted by Bailey, Jenkins, and Leinbach (2005) found that students who started at community colleges and took at least one basic skills courses in their first year were less likely to earn a certificate, associates, or bachelor's degree (28 percent) than those who required no remediation (40 percent). In addition, they found that white students at community colleges who took basic skills courses were two times more likely to earn a credential or transfer (51 percent) than were black or Hispanic students (24 percent each). Given the demographics of the students in our study, the learning community structures and pedagogies discussed here may be particularly promising and appropriate for the increasingly diverse populations of students entering community colleges today.

Based on our findings, we put forth five major recommendations for community colleges for adapting the learning community model to basic skills instruction for academically under-prepared, low-income students:

1. Increase the number and variety of learning community programs for students taking basic skills and/or ESL non-credit bearing courses with a special emphasis on linking reading and writing courses as well as integrating basic skills math courses into the models.
2. Identify and remove potential barriers, such as personnel, campus policies, local or state policies that can hinder the development of linked course offerings that infuse critical academic support services. For example, institutional policies should not limit students with basic skill (or ESL) requirements to complete these courses before being able to enroll in credit-bearing general education or major courses. In addition, student requirements to pass state-mandated proficiency tests

often can get in the way of developing linked curricula.

3. Students tend to enroll in learning communities because the model appears to be more convenient and a more efficient use of their time. Although students later realize the other benefits of participation (e.g., connections with faculty and peers, deeper learning), their decision-making focuses on factors that seem to make their life less complicated. These elements of the learning community programs should be more clearly communicated and marketed to students, using student vernacular and stories in publication pieces, on the campus website, or orientation programs.
4. Design learning community programs using the key structural and pedagogical elements that were shown in this study to contribute to the positive delivery of basic skills classes.
5. Provide ongoing faculty development programs about how to use active and collaborative pedagogies in the classroom as well as strategies for introducing and rewarding student participation in activities that keep them on task outside of the classroom such as study groups and tutoring services. Faculty also need to learn how to teach in ways that engage and motivate students who have been disengaged from their schooling experiences for some time.
6. Systematically evaluate learning community offering using longitudinal, quantitative data that examines student persistence over time and disaggregates findings based on racial, gender, age, income, and language proficiency.

In conclusion, the findings from this study enable us to relearn an important lesson, namely that access without support is not opportunity. For too many students, especially those from low-income backgrounds and who are academically under-prepared, the open door to higher education is a revolving one. As this study shows, providing meaningful support requires more than the mere provision of tutoring, basic skills courses, and learning centers. It requires establishing key conditions conducive to student success on campus. Although learning communities are not the only possible vehicle to establish those conditions, our study demonstrates that they are surely a viable one. The creation of such communities requires

intentional institutional action and the collaborative efforts of faculty, staff, and administrators across campus. To address the success of low-income students, we must stop tinkering at the margins of institutional life; stop our tendency to take an “add-on” or marginalization approach to institutional innovation. We must adopt systematic efforts to restructure students’ learning environments. Student success does not arise by chance. Simply put, access without support does not equate to meaningful opportunity for a huge segment of our college population. ↗ ↗ ↗

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In Their Own Words:

Voices of First-Generation College Students in a Multicultural Learning Community

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Abstract

Research has shown that first-generation, low-income college students experience both isolation and marginalization, especially during their first-year of college, which contributes to lower retention and graduation rates among this population. In this article, the author proposes a fusion of learning community pedagogy and multicultural curriculum as one vehicle to address the challenges faced by first-generation college students. Organizing around the themes of identity, community, and agency, an interdisciplinary Multicultural Learning Community (MLC) was created at a large, public Midwestern research university to provide students participating in the federally-funded TRIO Student Support Services (SSS) program with challenging academic coursework that would connect with their lived experience and help them build bridges of social and academic integration during their critical first year of college. This article presents qualitative data from a multiple case study of two cohorts of the MLC that captures students' perceptions of their experience.

Introduction

I remembered how awkward I felt upon entering the room where the course was to be taught because I came in with nothing and I didn't know what to expect. There was something about the course that made me feel tense. Maybe it was the work, the effort, and the people that made me realize what I was in for. I was nervous about the decision I'd made by taking this course because I was a freshman—I was lost. —David, Asian-American Male

In his own voice, David, a first-generation college student at a large, public, predominantly White, Midwestern research university describes his first day of college in words that express his anxiety and concern about this new place. While

it is not uncommon for many college students to feel “lost” as freshmen, unlike his counterparts who come from college-educated families, David is lost in a different way. He is not just lost in the expanse of campus, rather he has arrived without the codebook. He must now traverse an alien landscape while simultaneously figuring out the rules and expectations, both implicit and explicit, that shape every facet of the collegiate experience. In addition, it is unlikely that he will find many familiar markers that reinforce his lived experience, further solidifying his concern that he has indeed come to this new land with “nothing.”

This article describes a curricular program designed in cooperation with a TRIO Student Support Services (SSS) program at this univer-

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sity to address the isolation and marginalization experienced by first-generation, low-income students, many of whom are students of color, on the college campus. Three faculty members, including the author, collaborated to create a Multicultural Learning Community (MLC) curriculum that sought to offer a challenging and supportive academic environment for TRIO students in their first year of college. In this article, the author begins by presenting arguments for a design that fuses learning community pedagogy with multicultural curriculum as well as by providing a description of the MLC. The author then presents themes from qualitative data generated through reflective writing assignments that were used to collect students' perceptions about their experiences in the MLC over two cohorts for a total of 34 students. Finally, the article concludes with implications for improving practice in order to increase college retention and engagement for first-generation, low-income college students.

Frameworks

Isolation and Marginalization Among First-Generation College Students

The last two decades have seen a major change in the demographics of higher education, with increasing numbers of women, students of color, and students from low-income backgrounds going to college, many of whom are the first in their families to do so. Despite such gains in access to postsecondary education, first-generation college students remain at a disadvantage in terms of maintaining enrollment and attaining degrees, particularly in comparison to their peers whose parents attended college (Horn & Nunez, 2000; Nunez & Cuccaro-Alamin, 1998; Warburton, Bugarin, & Nunez, 2001). For example, first-generation students are more than twice as likely to drop out of college compared to students whose parents have college degrees (Chen, 2005).

A critical problem for first-generation students is the significant isolation and marginalization they experience on college campuses. This experience results partly from their challenges in navigating the social milieu on campus, but it is also reinforced by a curriculum that does little to reflect their life worlds. Isolation on campus is typified by the fact that the nature of the journey to higher education is quite different for first-generation college

students than for their traditional counterparts. First-generation students are more likely than not to be Hispanic or Black, to come from low-income families, to be older, and to be foreign born (Ishitani, 2003; Warburton et al, 2001). Thus, while most students grapple with the expected transition to a new environment, first-generation students' transition and isolation are heightened by other social factors ranging from economic and language struggles to geographical, racial, and cultural adjustments. These struggles present themselves in the form of anxieties, a sense of dislocation, and challenges in navigating a cultural landscape that is often alien to first-generation college students (Lara, 1992; Rendon, 1992; Pascarella, Pierson, Wolniak, & Terenzini, 2004; Terenzini, Rendon, Upcraft, Millar, Allison, Gregg, & Jalomo, 1994).

Isolation for first-generation students deeply limits their engagement, involvement, and persistence in higher education (Edwards, 1993; Nunez & Cuccaro-Alamin, 1998; Pascarella et al, 2004). Moreover, this effect is heightened when they find themselves marginalized in the curriculum. Populations who have historically been excluded from higher education, such as minority, low-income, and first-generation students, also often find themselves excluded from the college curriculum. Adrienne Rich (as cited in Takaki, 1993) captures this experience when she writes: "What happens when someone with the authority of a teacher describes our society and you are not in it?" (p.16). Students who are first in their family to attend college bring with them histories and experiences that have the capacity to inform and enrich the learning experience and, in doing so, make them part of the academic community. If they are excluded, silenced, and rendered invisible in the curriculum it only further marginalizes and isolates them on campus.

The problem for first-generation college students is that, while the composition of the student body in higher education continues to change, the definition of who belongs and is included in the academic community and the curriculum has remained fairly stagnant. Colleges need to find creative ways of building community that invite first-generation students to be actively involved in the educational experience. Acclimating to the academic milieu requires a structured space that allows diverse student groups to find a sense of place in the academy. It is proposed here that challenging learning communities designed for first-generation

college students are an effective vehicle by which to bring interdisciplinary, multicultural curricula into the first-year experience with the appropriate scaffolding and support to engage these students and invite their stories into higher education.

Toward Inclusion for First-Generation Students through Learning Communities

The concept of learning communities can be philosophically linked to John Dewey's principle "that education is most successful as a social process and is deeply rooted in our understanding of community and democracy" (Lennings & Ebbers, 1999; p. ix). The following definition best articulates the intention, function, and design of the learning community model developed for this study, the Multicultural Learning Community (MLC):

"Learning communities, as we define them, purposely restructure the curriculum to link together courses or coursework so that the students find greater coherence in what they are learning as well as increased intellectual interaction with faculty and fellow students. Learning communities are usually associated with collaborative and active approaches to learning, some form of team teaching, and interdisciplinary themes" (Gahlenick, MacGregor, Matthews, & Smith, 1990; p.5).

The MLC is best described first as a *curricular* learning community, which includes courses linked via interdisciplinary themes that demand close collaboration between faculty members. Second, it is a *student-type* learning community because it is designed to cater to the needs of a specific student population, first-generation college students. Student-type learning communities have been used successfully with at-risk populations, such as underprepared and underrepresented students (Lenning & Ebbers, 1999; Levine, Smith, Tinto, & Gardner, 1999; Smith, 1991). It may seem counterintuitive to "segregate" certain groups of students into separate learning communities in order to help them better integrate into the campus community. However, student development theorists and researchers alike have argued that there can be great value in such groups (Astin, 1995; Chickering, 1969). Students who have been marginalized in their educational journey often need a safe, welcoming, and protected environment where they can become acquainted with collegiate

expectations and simultaneously be encouraged to add their own voices to the academic dialogue. Furthermore, it is important to note that heterogeneity exists within student-type learning groups. For example, first-generation college students come from multiple ethnic backgrounds, cultures, and social classes. Students therefore benefit not only from their shared common experience as the first in their families to go to college, but from their diverse paths to college as well.

There is a significant and growing body of research on the benefits of learning communities with regard to increased retention, especially for disadvantaged student populations (Braxton, Sullivan, & Johnson, 1997; Tinto, 1997; Tinto, Goodsell-Love, & Russo, 1993). Such curricular structures have also been shown to improve the quality of students' learning experiences, to increase student involvement in a range of academic and social activities, and to enhance students' sense of identification with and belonging to the institution, all of which contribute to higher retention rates (Tinto, 1997; Tinto et al, 1993). The benefits of participating in learning communities derive from at least three aspects of the experience (Tinto, 1997; Tinto et al, 1993). The first is building supportive peer groups or networks. This learning format fosters a safe environment to meet and interact with other students as well as faculty, and to build a network of peers who can help them manage the struggles they face in navigating the institution. Students note the importance and benefits of making friends through learning communities, especially outside of their typical social circles. These diverse peer networks function as a bridge between students' academic and social systems or worlds, thereby extending their learning and involvement beyond the classroom, the second key aspect of the learning community experience (Tinto, 1997; Tinto et al, 1993).

Finally, learning communities benefit students by actively involving them in the learning experience in a diverse educational environment. The multidisciplinary, multidimensional, multiple-instructor approaches employed in learning communities allow students to gain diverse perspectives on the learning process and their place in it (Jehangir, 2001). Students increase in their ability to articulate their ideas or gain a voice in the learning process through their interactions with their diverse classmates. The learning community format provides the safety students need to express

and “connect their personal experiences to class content and to recognize the diversity of views and experiences that mark differing members of the classroom” (Tinto et al, 1993; p. 20). This diverse learning environment allows students to learn not only “*about each other...* but that diversity is an important factor in learning *about the content*” (Tinto, 1997; p. 612, emphasis in original).

Given the challenge for campuses to reflect the growing diversity of the student body in the college curriculum and community, this article presents a case study of a multicultural learning community design targeted toward first-year, first-generation college students. Angelo (1997) argues that the creation of “truly authentic learning communities requires a qualitative and transformative model of higher education, one in which the teaching culture applies relevant knowledge to improve practices and embraces a broader more inclusive vision of scholarship” (as cited in Lenning & Ebbers, 1991; p. 91). This study sought to understand the impact of such a design on students who have been historically isolated and marginalized in their college experience—first-generation college students from modest incomes—by examining their experiences in the MLC in their own voices.

Methodology

Study Context

The context for this study was a Multicultural Learning Community (MLC) that included three collegiate courses: a first-year writing composition course, a creativity art lab humanities course, and a multicultural relations social science course. The learning community required concurrent registration in all of the courses and enrollment was held to a maximum of 20 students. The MLC was offered five times between Fall 2001 and Fall 2004. The analysis presented in this article is based on data from Fall 2001 and Spring 2002.

The learning community courses were offered through a freshman-admitting college at a large public research university in an urban area. The MLC was managed by the TRIO Student Support Services (SSS) program housed in that college. Student Support Services is a federally-funded TRIO program that provides academic and social services aimed at improving persistence and graduation rates among low-income, first-generation, and disabled college students. This SSS program,

which has been funded since 1976, serves 250 students annually, 84 percent of whom are students of color who are also low-income, first-generation, and/or disabled college students. The program offers the services typical to most SSS programs, but it is unique in the extent to which academic engagement has been deeply embedded into its programmatic offerings. Working with faculty from the college, this SSS program has established a series of credit-bearing learning communities and supplemental instruction courses for credit that are reserved for TRIO students. The MLC is one of nine learning community and supplemental instruction registration options offered to first-year TRIO students each semester.

The main purpose of the MLC was to create a space that offers a curricular structure to explore issues that engage first-generation college students, many of whom are also students of color, and connect with their lived experience in order to create a place of belonging in the academy given their marginalized status in a predominately white institution. In order to create this sense of space and place, the MLC design incorporated small class sizes, linked course offerings, and coordinated curricula between the three learning community courses. The faculty instructors for each course worked together to create thematic links in their curricula around the issues of identity, community and agency: each of which ties to issues of race, class, gender, disability, and sexual orientation from a multidisciplinary, multicultural perspective. These linkages were designed to allow students to apply diverse interdisciplinary theories of multiculturalism to their lived experiences, while simultaneously being empowered to find their own voices as a means of knowledge construction within the context of a shared learning experience with other participants. The faculty also worked closely together to develop collective curricular goals to improve students’ critical skills in the areas of writing, creativity, and social science.

Study Participants

An SSS program advisor or the author/investigator, who was employed with the SSS program at that time, made initial contact with the participants during required orientation and pre-registration meetings for the Fall 2001 and Spring 2002 semesters. The meetings included a description of all the learning community offerings including the MLC. Students who expressed an interest in the MLC as

a registration option were informed of the nature of the study and were asked to sign a consent form that gave permission to keep copies of their written work for the duration of the study. The results presented here represent the experiences of 34 students who participated in the MLC during Fall 2001 and Spring 2002. Reflecting the demographics of the university and the SSS program, a majority of the participants in the MLC were low-income, first-generation students of color. Specifically, 58 percent were African American, 21 percent were Asian American, 6 percent were Native American, 6 percent were Hispanic, and 3 percent identified as “other”. In the two MLC cohorts, 59 percent of the participants were female and 41 percent were male.

Study Method

This study aimed to describe the experiences of first-generation students participating in the MLC and to explore the extent to which participating in the learning community created a sense of identity, community, and agency within the academy for participants, thereby reducing isolation and marginalization among these students. As such, the interpretative case study method (Merriam, 1998) used here is an appropriate design because it not only seeks to provide rich descriptive detail of the phenomenon being studied, it also seeks to capture process as well. While the intrinsic experience of the participants is critical to understanding the merits and limitations of this curricular design, there is also an instrumental inquiry imbedded in the study; in this case, advancing our understanding of creating community and pluralism among marginalized populations. Additionally, this study examined the experiences of two different cohorts who participated in the MLC in different semesters, so it is considered a collective case or multiple case study. The intent of the study was not to compare this case with other cases but rather to examine it in its particularity.

Data Collection

For each semester, there was data from all three courses as well as demographic data on the 34 student participants. The data from the three courses included academic papers as well as weekly reflective writing assignments in the form of learning logs. In both the learning logs and the final paper, students were asked to share their opinions, feelings, and reactions to the curriculum and their

experiences participating with other people in the learning community. Given that the intent of the research was to examine students’ own perceptions of their experience in the MLC, data analysis focused solely on students’ reflective writing assignments throughout the semester. The goal of collecting weekly reflective writing was to capture students’ perceptions of their experience as it was happening, rather than only retrospectively at the end of the semester.

Data Analysis

Data were read and initially coded under the three dimensions of identity, community, and agency, the core curricular themes of the linked courses in the learning community. Data were simultaneously read with attention to the emergence of other themes and sub-themes, clustering of themes, and interrelationships between these themes (Creswell, 1998; Merriam, 1998; Stake, 1995). Data analysis continued until there was “saturation of categories” or themes (Lincoln & Guba, 1985, p. 350). This process resulted in three major themes and 14 sub-themes reflecting the dominant and recurring aspects of students’ experiences in the learning community. Data were then tabulated under the themes and sub-themes and cross-referenced by student race (R), gender (G), a numerical student code (STC), and week in the semester (WK). Triangulation was used to assure internal validity in the data collection and coding process. Triangulation is “a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation” (Stake, 2000; p. 443). This includes the use of multiple sources, methods, and investigators. The case study of MLC included multiple data sources at various time periods from both learning logs and students’ final papers. A second reader was also employed to ensure “investigator triangulation” (Stake, 1995) to confirm and disconfirm the themes generated by the analysis.

Findings

This study considered whether and how multi-cultural learning communities can challenge the problems of isolation and marginalization among first-year, first-generation college students in order to improve retention among this at-risk population. As previously mentioned, the curriculum for the MLC was organized around three interrelated themes or concepts—identity, community, and

agency—and employed the use of critical pedagogy (Giroux, 2004). Critical pedagogy invites students to engage in praxis, a process of examining self, considering the relationship between self and others in order to enter into community, and gaining empowerment from community in order to engage in social change. The findings presented here explore students' experiences relative to identity, community, and agency in order to demonstrate how participating in the MLC helped to include, engage, and empower these students in the learning process, the classroom community, and the larger campus community, thereby improving the quality of their educational experience and outcomes.

The task of fostering students' participation in and sense of belonging to the learning community began by engaging them in a process of self-examination and empowerment through awareness of their personal and academic identities. Using a multicultural critical pedagogy approach (Gay, 1995), students were, in effect, asked to consider: Who am I and how does this shape my interaction with, as well as my contributions to, the learning experience? Course materials, class dialogue, and writing assignments that focused on identity, diversity, and multiculturalism helped students gain an appreciation of their own backgrounds. Although students often approached this process of self-examination tentatively, they recognized that they gained confidence in themselves as a result of it. This is important because underrepresented students, particularly students of color, often have lower academic and social appraisals of themselves than their peers (Chung & Sedlacek, 1999). As these students shared:

An exercise on self-identity was a really good project. I was never able to share with people my race and ethnic background before. As people started to ask questions I started to realize how much I didn't know about [my own] people. After that day I tried to make more sense of my past and tried to connect it to who I am now. I realized I was going to be in a mode of self-discovery and I was going to be prepared because my future was depending on it. I have direction now and was confident in myself. I knew I would be on my way to a better me.
—Diane, Asian American Female²

I found a lot of my identity during these classes because I was never asked what I thought and it was never important that everyone hear what I had to say. I also learned that I am a very caring person, maybe too caring at some times. I also learned that I am a lot smarter than I gave myself credit for because these issues were very present in my life. Another thing that I learned about myself is that I can do most anything if I just have some faith in myself. I view myself a lot differently after being part of this learning community. I am a lot more accepting of myself now, where as before I didn't accept myself because others were downplaying me in my life. —Tina, White Female

This past year I have been seeking my individuality. I am learning so much about myself aside from the expectations and limitations placed on me by society and even loved ones. This learning community and its environment suited this time in my life so perfectly that I just know I am blessed. I feel special because of the people I've met and the discussions we had. It seems every one of us is just trying to be ourselves. And that takes work to find out who we really are. The process from that to being okay with it is difficult but I am treasuring every moment.
—Diane, Asian American Female

By gaining an appreciation of and confidence in their own identities, students also gained an understanding of the diverse identities of other students in the learning community. In doing so, students found that they could make affective connections to others across both their similarities and differences. Despite their racial and ethnic diversity, for instance, students found that they shared the experience of being first-generation and of modest income, which made them feel less alone and more connected to their classmates and the community:

I was so surprised how I related to so many of my classmates [about classism]. You know how sometimes you think that you are the only one who has problems or that you think that your problems are way worse than everyone else's. I thought that I was the only one who has been going through problems with my family facing class issues. I soon realized that others were going through or had gone through the exact same thing.
—Olivia, Native American Female

² All student names are pseudonyms.

The process of discovering and engaging students' personal identities helped them gain a growing awareness of their roles as learners as well as the value of their interactions with and contributions to the learning experience.

The professors in the learning community courses facilitated the process by which students came to develop their academic identities by demonstrating an understanding of students' personal backgrounds and the challenges they face in their lives—and how this affects their studies. This includes, as this student shares, attention to habits or behaviors that interfere with learning as well as those that enhance it:

The way you [the professor] expressed understanding of our lives and other responsibilities. It helped us not to feel so guilty about that, but to learn how to prioritize. I will plan to be more sharp about my time management. After I saw the outline of time blocks on the overhead, I thought, "I have no excuse." I think it was catching the reality that now I have certain homework responsibilities too and adjusting to the change in my life. I haven't been in school for many years and I think I was just a little shaken because all the freedom of time I had before quickly changed.

—Lauren, African American Female

The format and structure of the learning community, particularly the use of active and collaborative learning pedagogies, also helped students develop their identities as learners by inviting their voices into the academic dialogue, which was an empowering experience for the students, many of whom had previously felt silenced or marginalized in the classroom:

The first five weeks of class I feel was about me finding my voice, finding ways to let go of these uncomfortable feelings and become an important part of every single discussion. I said in more than one learning log, "I got my point across well." That became very important to me. I took every class period of all the TRIO courses very seriously, as an opportunity to express my views in all of the topics that we were studying. I took it upon myself to always convey how I felt. In the first few weeks this came as a big shock. Throughout school I always was the kid in the back pretending to listen. In conversations I had with family members, I can't describe their surprise that I was constantly talking in class and becoming an important voice in all my

classes. —Jarod, White Male

Students' interactions with diverse peers in the learning community were perhaps most important in helping them find and use their voice in the classroom, though. Listening to peers talk about their different perspectives and life experiences was a process of modeling that served to reinforce the value of sharing one's ideas in the classroom. As a result, students felt more engaged in the classroom discourse even when they were still too cautious to participate themselves:

I felt the most engaged this week in class when we were talking about how people get treated because of their race. I feel more engaged with the discussion in class but I am still kind of afraid to speak up and shy to speak out what I have to say. I liked how a lot of people came out and said what they wanted to say without being ashamed of the group... Asking each other and one another questions.

—Arriana, African American Female

Peer interactions also helped students overcome anxieties about their abilities to succeed academically in college. As this student shared, part of belonging to an academic community is recognizing that you are not the only one with questions:

One thing that surprised me was when the guy next to me was really confused about what a toboggan was. Because at one time I didn't know what it was either. I didn't feel like I was alone. One thing I took with me from the community was we learn better from others.

—Diane, Asian American Female

For students in the learning community, engaging with their peers was a form of both teaching and being taught by other students, rather than simply by the instructors:

When we started our presentations we were able to take what we were learning and communicate it to the rest of the class. This process showed me how influential it is to hear the facts in a language that is similar to your peers'. This taught me how to present in a way that was comfortable and clear but yet open enough to invite discussion. It was not intimidating and it helped me get used to speaking in front of people. —Lauren, African-American Female

This represents students' growing awareness of their ability as learners to contribute to the classroom dialogue, as well as to the learning process and to the academy itself.

The processes by which students became engaged as learners in the community, while ultimately rewarding, were not without conflict and frustration, however. The effort to build community involved developing the capacity for trust, cooperation, and constructive criticism among the students. The instructors in the learning community had to work to provide a safe space that allowed for difference and disagreement among the students while helping them find points of relationship and ways to work together. When problems arose, the instructors had to intervene by modeling appropriate behavior and by guiding students toward self-management and resolution of the problem through group facilitation techniques, thereby allowing the students to take ownership of the learning process. As this student explained:

The feelings I had concerning my group and my relationship with my group were pretty negative. I didn't want to exclude anyone else's ideas from what we portrayed to the rest of the class, but on the other hand I knew what had to be done. The resolution to this problem came in the form of the group assessment or check-in. I learned how to better relate to each of my group members in order to encourage them. —Gregory, African American Male

When students learned to respectfully manage disagreements, they began to understand that dealing with difference is part of the learning experience:

I remember sitting in class thinking, "This is boring! Who cares about this?" Now I think about how interested I was when we actually had classroom discussion and everyone participated and had something to say. What really made things interesting was when someone would have a difference of opinion with another person. It showed the true passion that each person had behind that specific issue, and I learned to appreciate those differences. I've also learned that even though someone is speaking on an issue and being heard, it doesn't mean that you need to agree with them. Disagreements are where the interesting debates come in anyway.

—Nekisha, African American Female

According to students, not only is difference part of the learning experience, it is also integral to developing community:

I am grateful for the arguments that came from the disagreements, and the alliances formed because of the agreements. I am grateful for the friendships that I have formed. I got to know a lot of my classmates on a personal level because we were supportive of each others' ideas and experiences, and I think that is because we all realized that every time we spoke in class, we were risking something. We all formed a strong respect for one another, and like I said before, it may have come at different times for some, but respect was gained.

—Nekisha, African American Female

I have really made a bond with a bunch of people I had no intention of bonding with. I always refer to us as a family. Why? Because to me we act like family, we all have our differences and things that annoy each other. We all get on each other's nerves, some seem as if they don't do their share of work and others seem like they do too much. Sometimes we want to complain about each other, we fight more often than not, but we can never stay mad at each other. And we always respect each other and we care about each other's feelings. It is because of everyone's attributes and ability to work with each other, that's why we have that sense of home.

—Janet, African American Female

It was by finding this sense of home in the learning community that the students also began to find a place for themselves at the university.

By participating in the learning community, students developed a sense of empowerment or agency as learners in the classroom, but they also found empowerment outside the classroom as members of the larger campus community and beyond. As these students shared, they found that they could use what they had learned about themselves and their classmates as part of the learning community to affect positive change in their lives and the lives of others:

What can I do to apply what I've learned to real life? Well, the knowledge I have obtained has irrevocably changed me. I've deconstructed myself and now seek to subtly deconstruct others. I've started with myself, no longer adding to the problem, uttering the dirty words. Since I've stopped adding to the hate there has been less. . . . Now I try to abolish

hate when I see it. I might not be able to explain to a person how I feel for them, but I know I can be an ally now. I can no longer stand not to be.

—Jon, White Male

When I saw that the eyes of my classmates were opening up along with mine, I knew that although change comes slowly and at different rates for different people, it does eventually come. This gave me hope. Hearing the comments at the end of the semester gave me hope that change is possible. Because of this course, I no longer see the closed-minded person that I used to be because I know better. I no longer see others as being permanently close-minded, because I know that change is possible, because I have changed. With this changed attitude that I have adopted, I think twice before I say anything. That's the smartest thing a person can do. Think. —Nekisha, African American Female

The transformation of these students from not being able to speak up in class to being able to speak out against injustice in society was a dramatic and complex process. Students began by undergoing a process of examining their own personal and academic identities, which was facilitated by the multicultural course content, the use of active and cooperative pedagogies by instructors, and their interactions with a diverse group of their peers. Students' interactions and connections with peers in a safe environment that fostered communication and trust across differences were particularly important. Students' growing awareness of their own identities helped them recognize the value of their contributions to knowledge construction and dialogue in the classroom, their participation in the learning community, and their place in the academy. Empowered by this newfound sense of self and belonging, students were able to overcome their feelings of isolation and marginalization in order to become active members of the campus community, thereby improving their chances of staying at the university through the completion of their degrees.

Conclusions

The qualitative data presented in this study provide support in students' own voices to support the use of multicultural learning communities to provide a place in the academy for first-generation students in order to challenge the isolation and marginalization they experience during the crucial

first year of college. This type of learning community design provides a challenging and supportive academic environment for first-generation students through multicultural curricula that connects with their lived experience and through interaction with diverse peers that helps them build bridges of social and academic integration in the classroom and on campus, thereby easing their transition to college. Based on the findings in this study, practitioners who want to utilize this type of design with their students should ensure that any multicultural learning community is:

- **Challenging.** For first-generation students and students of color, the use of multicultural curricula resonates with their lived experience and offers them the opportunity to contribute their cultural capital to the classroom, thus providing a much needed sense of validation and belonging in the academy (Rendon, 1992). However, students need to be able to differentiate between sharing their personal stories and histories and contextualizing those stories within the framework and objectives of the curriculum. Therefore, validation must occur while also building skill development and providing appropriate scaffolding, footholds, and support so that students can develop the academic competencies (such as critical thinking, writing, reading, and verbal skills) necessary to succeed in college.
- **Supportive.** Students' learning is not separate from their lives, their feelings, or their personal struggles; rather, the affective can impede students' learning, particularly among at-risk populations like first-generation college students. However, the affective can also facilitate learning. Allowing for both cognitive and affective knowing in the classroom can help students become "connected knowers" (Clinchy, 2000) who use their feelings and experiences as a basis for understanding course content, contributing to classroom dialogue, and making connections to peers.
- **Interactive.** While it is important to have a well-structured curriculum with strong thematic connections among courses in a learning community, it is also important to leave space in the curriculum and classroom for student-driven interests, issues, and interaction. The use of active and cooperative pedagogies in which students take responsibility for teaching each

other, as well as the use of process-based learning and multimodal assessments, allow students to participate more fully in knowledge construction and discourse in the classroom.

- **Safe.** The use of multicultural curricula in a learning community format with a diverse group can create many opportunities for learning, as well as conflict. Without proscribing students' actions, there is a need for instructors to set ground rules in order to provide a safe space for students to interact with each other in the classroom. When conflict arises, instructors must intervene by modeling appropriate behavior for engaging in constructive disagreement and by guiding students toward self-management and resolution of the problem through facilitation techniques such as group assessments or check-ins. This allows students to take collective ownership of the learning process.

In conclusion, while there have been a number of studies that have focused on the retention and graduation rates of first-generation college students, this study considers more deeply the academic, social, and cultural issues that underlie the nature of the retention problem itself for this population. This study further puts forth a pedagogical model that serves as a vehicle to engage first-generation students in the learning process and the academic and social communities of the institution in order to address these issues. As our universities become more diverse, it will be more and more important to find ways to invite diverse students and their stories to move out of the periphery and to take their place in the academy.

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Can Leadership Development Through Civic Engagement Activities Improve Retention for Disadvantaged College Students?

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Abstract

The research presented here describes a one-year study of the impact of an introductory leadership development course that utilized civic engagement activities—including service learning and political advocacy—on disadvantaged college freshmen. First-generation and/or low-income freshmen enrolled in a TRIO Student Support Services (SSS) program completed a one-credit hour introductory leadership development course during their second semester. Results indicated that students who completed the course significantly increased in openness to diversity, political efficacy, political knowledge, and some political attitudes and behaviors. Additionally, students who completed the course had a significantly higher one-year retention rate than comparison groups.

Introduction

“Why bother? One person can’t make a difference.” Persons between the ages of 18 and 24, especially individuals from low educational attainment and low-income backgrounds, are less likely to participate in political activities (Holder, 2006; Keeter, Zukin, Andolina, & Jenkins, 2002). The founders of *The American Democracy Project*, along with several other national civic-focused organizations, have challenged colleges and universities to focus on developing responsible citizens. “Recognition of the obligation to prepare citizens for participation in a democratic system implies that certain values, both moral and civic, ought to be represented in these institutions’ educational goals and practices.... These values include mutual respect and tolerance, concern for both the rights and welfare of individuals and the community, recognition that each individual is part of the

larger social fabric, critical self-reflectiveness, and a commitment to civil and rational discourse and procedural impartiality” (Colby, Ehrlich, Beaumont & Stephens, 2003; p.13). In the present study we consider whether a first-year introductory leadership development course, which incorporates civic engagement activities, helps college students from low-socioeconomic backgrounds become more open to diversity, more politically engaged, and more likely to remain in college.

Participants in this research were first-time, first-year students considered at-risk for earning a college degree who were involved in the Student Support Services (SSS) project, a federally-funded TRIO program that provides support to low-income, first-generation, and disabled college students. A total of 105 SSS students participated in the one-credit hour course during the second semester of their freshman year. The elective

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course is one component of the SSS program's retention plan, a part of the first-year experience to help students make connections to their immediate community, including peers and faculty; engage in the learning process; and think about social responsibilities. Results from this study indicate that students who completed the course significantly increased their openness to diversity, political efficacy, political knowledge, and some political attitudes and behaviors. Students who completed the course also had significantly higher one-year retention rates than comparison groups. These findings provide initial support for incorporating civic engagement activities, including service learning and political advocacy, into program and/or course designs in order to increase student engagement and success among disadvantaged populations, both on campus and in the larger society.

Rationale for Intervention

Low-income and first-generation students not only face barriers to gaining entry to college (Mortenson, 1999), they also confront obstacles to graduating once enrolled. The initial transition to college presents one of the greatest challenges for disadvantaged students since they are much less likely to persist to their second year than their peers (Choy, 2001). In making the transition to college, this population experiences problems stemming from poor academic preparation, inadequate finances, and a lack of support from peers and family members (Engle, 2007). Due to their inexperience with higher education, many low-income and first-generation college students also have problems integrating academically and socially into the college environment (Nunez & Cuccaro-Alamin, 1998). For instance, they are less likely to engage in activities such as studying in groups with other students, meeting with faculty outside of class, and participating in extracurricular activities (Nunez & Cuccaro-Alamin, 1998). Student engagement on campus is a key factor in college retention (Tinto, 1993).

Additionally, the families of low-income and first-generation students are less likely to be civically engaged in their communities and the larger society. According to the 2006 U.S. Census *Current Population Report*, 58 percent of adults who earned less than a college degree voted in the 2004 presidential election compared to 80 percent of those

with at least a baccalaureate degree. Voting rates for families with incomes less than \$20,000 were 48 percent compared to 81 percent for families with incomes over \$100,000 (Holder, 2006). Many young adults express hopelessness about change through political approaches (Williams, 2002). For example, only 47 percent of 18- to 24-year-olds voted in the 2004 presidential election (Holder, 2006). Given the lack of familial involvement in political activities, the rates are likely even lower among young people from disadvantaged backgrounds.

If one of the purposes of a college education is to develop responsible citizens, then there is a need for this population in particular, which has previously lacked access to higher education, to develop these skills in order to more fully participate in our democratic system. In this paper, we suggest that promoting civic engagement for disadvantaged college students is an important responsibility of college campuses, and can improve retention through active learning experiences, such as service learning and political advocacy, where students make connections with peers, faculty, the college, and the larger community.

Service learning is defined as a "course-based, credit-bearing educational experience that allows students to (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility" (Bringle & Hatcher, 1995; p.112). Previous research suggests that service learning engages students socially and academically; facilitates teamwork; promotes a sense of belonging; enhances an understanding of community needs and civic engagement; builds connections between students, faculty, and peers; promotes leadership development; facilitates self-understanding; and increases students' feelings of empowerment and their appreciation for diversity (Astin & Sax, 1998; Astin, Vogelgesang, Ikeda, & Yee, 2000; Sax & Astin, 1997). Evenbeck and Jackson (2005) found that students further engage in the college experience when faculty involve them in activities that promote advocacy for change. Vogelgesang and colleagues found that volunteerism and service learning significantly enhance first-year involvement and integration. "Service participation... during the first college year is significantly and

positively related to retention... volunteerism and service-learning appear to enhance involvement and facilitate integration (both social and academic) during the first year of college, and these, research shows...are critical to student retention” (Vogelgesang, Ikeda, Gilmartin, & Keup, 2002; p.20). Given the evidence of the positive impact on student learning and success, we suggest that students are likely to experience gains in retention when they have the opportunity to participate in service learning.

However, service-learning experiences alone may not be sufficient to promote political engagement in the larger society. Students often perceive that they can make a difference by performing community service, but they tend not to generalize their experiences to the level of institutions or policies. Williams (2002) argues that educators need to expand service learning experiences to include political engagement, which was the approach taken in the present study. Civic engagement can be enhanced by service learning, as students have the opportunity to both learn about and practice skills that can promote civic skill building (Kirlin, 2002). Helping students make connections between their community service activities and the political realm encourages them to view their community and its needs in a larger political context. Understanding the “bigger picture” can promote students’ civic involvement and their belief that they are competent enough to participate politically (Niemi, Craig, & Mattei, 1991). Political efficacy—the perception that one’s individual political action can impact the political process— influences perceptions of ability to participate effectively in political discussions and processes, and is positively correlated with engagement in community activities and willingness to lead (Zimmerman, 1989).

Leadership training can be a vehicle for developing political efficacy and engagement. Leadership training can help students develop their own ability and willingness to lead, and make reasoned decisions about their future leaders, thus engaging them civically (Lloyd, 2005; O’Brien & Kohlmeier, 2003). Students who receive leadership training report an increased sense of civic responsibility, more knowledge about social values, and more multicultural awareness (Cress, Astin, Zimmerman-Oster, & Burkhardt, 2001). Furthermore, we suggest that seeing themselves as potential leaders in the community may empower students to take a

leadership role and get more involved on campus, potentially promoting retention.

Thus, we argue that leadership development through experiential service learning and political advocacy can increase students’ academic and social integration on campus as well as their interaction and engagement with immediate and larger communities. This type of leadership development can actively involve students with peers and faculty, engage them in the learning process, increase their sense of civic responsibility and knowledge about social values, and promote campus and community involvement. These are activities congruent with increased student success and engagement, which in turn can have a positive impact on retention.

The Intervention

We developed a leadership course with a focus on civic engagement for first-year disadvantaged students participating in an SSS program. Leadership Dynamics (GSD 225) is a one-credit-hour, elective course that is offered as one component of the SSS first-year retention program. The course was designed to teach students about basic leadership styles while prompting them to reflect on their own style of leadership and its stage of development. Civic engagement activities, specifically service learning and political advocacy, were used as instructional strategies to help students begin to identify their leadership style and promote its development, while engaging in experiential learning activities. Students were required to choose a community service project of their choice. Through regular reflective activities and presentations, in conjunction with instruction on leadership theory and group dynamics, students developed a sense of their own leadership potential while working in teams to coordinate and provide a service to the community. Students also received basic instruction on political advocacy. They were challenged to apply their new political advocacy knowledge by identifying the larger social issues related to their community service and advocating for that cause. For instance, a team of students worked at a local elementary school to promote literacy among the students. They read stories that had a lesson or moral and designed activities that related to the story to encourage active participation from the elementary students. After the experience, the team sent letters to their congressional representatives expressing the need for

Table 1. Comparisons of Characteristics of Treatment and Comparison Groups

| Variable | Treatment (n=63) | Comparison (n=42) | Statistic | p value |
|------------------------------------|------------------|-------------------|-------------------|---------|
| Gender | | | | |
| Female | 44 | 27 | | |
| Male | 19 | 15 | $\chi^2(1) = .35$ | ns |
| ACT Composite | | | | |
| Mean(SD) | 20.24 (2.17) | 20.71 (1.70) | $t(103) = 1.19$ | ns |
| 1st Semester GPA | | | | |
| Mean(SD) | 3.84 (.67) | 2.26 (1.10) | $t(103) = 3.04$ | .001 |

continued funding of literacy initiatives within the state. The letters included research statistics, such as current state literacy rates, in order to demonstrate the need for continued funding.²

In the present research we explored the impact of this course on students’ openness to diversity, political engagement, grade point average (GPA), and first-year retention.

Method

Participants

Participants were 105 first-generation and/or low-income freshman students (69 females, 36 males) who entered the institution and its Student Support Services project in the Fall semester 2005 as first-time students. The institution is a baccalaureate-degree awarding, regional university with a student population of 16,219, and 2,429 first-time freshmen for the 2005–06 academic year. Student Support Services (SSS) is a federally-funded TRIO project designed to retain and graduate first-generation and low-income students. “First-generation” is defined as students coming from families where neither parent has earned a baccalaureate degree. “Low-income” is defined as a family income 150 percent or less of the federal poverty guidelines; generally students are eligible for the Federal Pell Grant. In Fall 2005, SSS participants had an average ACT composite score of 20, compared to the institution’s overall average ACT composite score of 21.

Early in the Fall semester of 2005, the research project was explained to the freshman cohort of SSS students and voluntary participation was pursued through a consent form, which was approved by the university’s Institutional Review

Board (IRB). Students were assured that their non-participation would not affect their grades, or any services offered to them in the SSS program. Ultimately, ninety-eight percent of SSS freshmen (n=105) participated in the study and completed a battery of pretests.

During preparation for registering for the Spring 2006 semester, all students

were encouraged to enroll in the SSS Introductory Leadership Dynamics course. The leadership course is a part of the SSS first-year experience service delivery design, but is optional. To encourage SSS students to enroll in the course, a grant funded with federal supplemental aid was offered, but the offer had other qualifying contingencies (e.g., students must be Pell-Grant eligible) and was not available until the following Fall semester. No one was guaranteed the grant monies. Students self-selected into either the treatment group by registering for the leadership course (n=63) or the comparison group by not registering for the course (n=42). There were no significant differences between the two groups in terms of demographics; however the treatment group had a higher first-semester GPA (3.84, *SD*=.67) than did the comparison group (2.26, *SD*=1.10), $t(103) = 3.04, p = .001$ (see Table 1).

Materials

One-year retention and GPA were determined by using students’ college transcripts. Retention was defined as re-enrolling at the same institution for the second year of college, and was determined by students’ registration status after the last date to drop classes in Fall 2006.

For openness to diversity, political efficacy and political engagement, students responded to measurement items on a scale from 1 (strongly disagree) to 6 (strongly agree). When items were summed to create scales, the sum was divided by the number of items to obtain an average. Thus, all scores had a possible range of 1 to 6, with higher numbers indicating more of the construct.

² Additional information about the course is available from the first author.

Openness to Diversity was measured with the 8-item Openness to Diversity Scale (Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1996), a valid and reliable measure of an individual's openness to cultural, racial, and value diversity. For the present sample, Cronbach's alpha for pretest data ($n=105$) was .87.

Political Efficacy was measured with the 6-item Political Efficacy Scale (Morrell, 2003; Niemi et al, 1991), a valid and reliable measure of individuals' feelings of personal competence to understand and participate effectively in politics (internal efficacy) and their perceptions of the responsiveness of politicians to citizens' demands (external efficacy). For the present sample, Cronbach's alpha for pretest data ($n=105$) was .80.

Political Engagement was measured via a 19-item survey developed by the researchers (see Appendix A) from core indicators of political engagement found in the literature: voting, persuading others, volunteering for candidates or political organizations, and contacting political officials (Keeter et al, 2002). Items on the scale addressed political attitudes, knowledge, and behaviors/behavioral intentions. Correlations among the three attitude items (1, 8, 18) were low; so, these items were analyzed as separate dependent variables. A scale was created from the 6 behavior items (2-7) that measured students' attempts to influence others. Cronbach's alpha for the pretest data ($n=105$) was .87. The three items related to voting behaviors (16, 17, 19) were analyzed separately. Knowledge items (9-15) were scored 1 for "Yes" responses and 0 for "I think so" and "No" responses. The possible range of total scores for the knowledge items was 0-7.

Procedure

In order to ameliorate the selection threat inherent in quasi-experimental nonequivalent comparison group designs, a pretest-posttest design was employed. Pretest data were collected early in the first semester (Fall 2005) before students were told about the leadership course. Posttest data were collected twice: the first posttest was administered at the end of the second semester after the leadership course (Spring 2006), and the second posttest was administered in the students' third semester (Fall 2006). The purpose of the second posttest was to determine if potential changes in students' attitudes/behaviors evident from pretest to the

first posttest would persist over time (from April to September 2006).

All participants ($n=105$) took the pretest. Of the treatment group ($n=63$) 57 (90 percent) completed the first posttest, and 14 (22 percent) completed the second posttest. However, only 8 students (19 percent) in the comparison group ($n=42$) completed the first posttest and 7 (17 percent) completed the second posttest.

We predicted that compared to students who did not complete the leadership course (comparison group), students who did complete the course (treatment group) would increase significantly more in: (1) openness to diversity; (2) political efficacy; and (3) political engagement, which included political attitudes, knowledge, behavioral intentions, and behaviors. Additionally, for the treatment group, we predicted that the gain in these constructs would persist over time; thus, we predicted that the second posttest scores would remain at least as high as the first posttest scores. Finally, we predicted that in relation to the comparison group, a higher percentage of treatment group students would be retained in college and they would have higher GPAs after the first year of college.

Results

All data were analyzed using SPSS. To determine whether the two groups differed prior to the leadership course, pretest data were compared with independent means *t*-tests. Differences in first-semester GPA were noted previously. Regarding openness to diversity and political engagement, the groups differed significantly on only one variable: "*How much does your vote count in the U.S. presidential elections?*" Comparison group students perceived that their vote counted *more* than did treatment group students, $t(103) = 2.23$, $p = .02$ (unequal variances assumed). See Table 2 for pretest data for both groups.

We had planned to compare pretest-posttest change scores for the treatment and comparison groups. However, valid statistical comparisons were impossible due to the comparison group's small posttest sample size. Consequently, for most data we report pretest-posttest change statistics for the treatment group only. However, we were able to compare the two groups on GPA and retention as data were available for all students from academic records.

We predicted that treatment students would increase significantly on several constructs from pretest to first posttest, and that this increase would persist through the second posttest. Because only 22 percent of the treatment students completed the second posttests, we attempted to determine if this second posttest group was significantly different from the students who completed only the first posttest. Using independent means *t*-tests, we compared these two groups' pretests scores, posttest scores, and change scores (pretest to first posttest) on openness to diversity, political efficacy, and political engagement. None of these comparisons were significant. Additionally, the two groups did not differ significantly on gender or one-year retention. However, students who completed both posttests had higher average first-semester GPAs ($M = 3.26, SD = .56$) and first-year GPAs ($M = 3.19, SD = .43$) than the group that completed only the first posttest ($M = 2.76, SD = .59; M = 2.57, SD = .56, t(55) = 2.79, p = .007$ and $t(55) = 3.84, p = .001$, respectively). Thus, the students who completed the second posttest were not different from students who did not complete the second posttest on most variables, except for academic performance.

To test our research predictions, we used paired-samples *t*-tests to compare the treatment group's pretest scores to their first posttest scores to determine if a significant change had occurred from their first college semester (Fall 2005) to the end of the second college semester following the leadership course (Spring 2006). Pretests were also compared to second posttests, which were completed in the students' third semester (Fall 2006). Means and standard deviations can be seen in Table 3.

Openness to diversity. Treatment students' openness to diversity significantly *decreased* from pretest to first posttest, $t(55) = 4.54, p = .001$, but significantly *increased* from pretest to second posttest, $t(13) = 2.14, p = .05$.

Table 2. Comparisons of Pretest Data for Treatment and Comparison Groups

| Variables | Treatment (n=63) Mean (SD) | Comparison (n=42) Mean(SD) | p value |
|--------------------------------|----------------------------|----------------------------|---------|
| Openness to Diversity* | 4.23 (.77) | 4.29 (.88) | ns |
| Political Efficacy* | 3.61 (.97) | 3.77 (1.00) | ns |
| Political Knowledge* | 2.98 (1.83) | 2.83 (2.03) | ns |
| Political Behavior Scale* | 2.26 (.96) | 2.49 (1.23) | ns |
| Item 1: Influence Others* | 3.46 (1.20) | 3.86 (1.37) | ns |
| Item 8: Influence Politicians* | 2.54 (1.13) | 2.95 (1.41) | ns |
| Item 18: Vote Counts* | 4.17 (1.62) | 4.83 (1.25) | .02 |
| Item 16: Will Vote Nov 2006* | 4.33 (1.81) | 4.86 (1.28) | ns |
| Item 17: Will Vote 2008* | 5.52 (1.16) | 5.45 (1.11) | ns |
| ACT Composite | 20.27 (2.12) | 20.69 (2.19) | ns |
| Registered to Vote | 54% | 43% | ns |

* Possible range of scores was 0-7 on political knowledge and 1-6 on all others.

Political efficacy. Treatment students' political efficacy significantly increased from pretest to first posttest, $t(5) = 4.03, p = .001$. The second posttest mean score was actually slightly higher than the first pretest, but because of greater variability and smaller sample size, the difference did not reach statistical significance, $t(13) = 1.65, p = 0.12$.

Political knowledge. Treatment students' knowledge about political issues (survey items 9-15) significantly increased from pretest to first posttest, $t(51) = 8.50, p = .001$, and pretest to second posttest, $t(13) = 3.39, p = .005$.

Political attitudes. Three separate items were used to measure attitudes. No significant differences were found for two items (survey items 1, 18): Students' perceptions regarding the importance of their vote in presidential elections and the influence they have on others by discussing political views, and how much their vote counts in the U.S. presidential elections. For both items, mean scores were already above the midpoint on the pretest and remained high on the posttests. For another item, significant differences were found from pretest to the first posttest, $t(56) = 7.75, p = .001$, and from pretest to the second posttest, $t(13) = 3.00, p = .01$. At both posttest times, students were more likely to perceive that contacting political representatives influences the representatives' votes (survey item 8).

Political behavior. Political behavior was measured with a scale of 6 items related to

Table 3. Comparisons of Pretest and Posttest Data for Treatment Group

| Variables | Pre** | | Post 1 | | P | Pre** | | Post 2 | | P |
|--------------------------------|--------------------|--------|--------|--------|------|--------------------|--------|--------|--------|-----|
| | (n=56) Mean(SD) | | | | | (n=14) Mean(SD) | | | | |
| Openness to Diversity* | 4.26 | (.76) | 3.77 | (.70) | .001 | 4.35 | (.62) | 4.84 | (.88) | .05 |
| Political Efficacy* | 3.57 | (.96) | 3.98 | (.96) | .001 | 3.67 | (.95) | 4.08 | (1.31) | ns |
| Political Knowledge* | 2.98 | (1.83) | 5.29 | (1.03) | .001 | 3.00 | (2.07) | 4.93 | (1.68) | .01 |
| Political Behavior Scale* | 2.31 | (.98) | 2.72 | (1.03) | .001 | 2.10 | (.84) | 2.88 | (1.20) | .01 |
| Item 1: Influence Others* | 3.45 | (1.26) | 3.55 | (1.17) | ns | 3.64 | (1.08) | 3.36 | (1.39) | ns |
| Item 8: Influence Politicians* | 2.53 | (1.18) | 4.02 | (1.26) | .001 | 2.64 | (1.01) | 4.14 | (1.66) | .01 |
| Item 18: Vote Counts* | 4.16 | (1.63) | 4.37 | (1.53) | ns | 4.21 | (1.85) | 4.14 | (1.79) | ns |
| Item 16: Vote Nov. 2006* | 4.30 | (1.79) | 4.33 | (1.68) | ns | 4.00 | (1.71) | 4.14 | (2.11) | ns |
| Item 17: Vote 2008* | 5.54 | (1.17) | 5.40 | (1.25) | ns | 5.57 | (1.09) | 5.43 | (1.09) | ns |
| Registered to Vote | 56% | | 67% | | .001 | 43% | | 79% | | .05 |

* Possible range of scores was 0-7 on Political Knowledge and 1-6 on all others.

** Pretest means change as a function of sample size since one assumption of paired-samples t-tests is that all subjects must have both pre and posttest scores.

attempts to influence others (survey items 2-7) and with three separate items related to voting behavior (survey items 16, 17, 19). Scale data showed that treatment students changed their behaviors in an attempt to influence others by volunteering or discussing their political views. Compared to pretest time, students reported engaging in significantly more volunteer and influence behaviors on the first posttest, $t(56) = 3.63, p = .001$, and the second posttest, $t(12) = 3.13, p = .01$. It is worth noting, however, that average ratings for these behaviors were below the midpoint at pretest and posttest times.

Two of the single items used to measure political behavior showed no significant changes from pretest to posttests: intention to vote in November 2006 (item 16) and the U.S. presidential election (item 17). Both items were rated well above the midpoint at pretest and posttest times. The third single item, registration to vote (item 19), showed significant changes from pretest to first and second posttest. Of those students who were not registered, or unsure whether they were registered to vote at pretest time ($n=25$), 36 percent ($n=9$) were registered by the time of the first posttest, $\chi^2(4) = 33.47, p = .001$. Of these same students who also completed the second posttest ($n=8$), 62 percent ($n=5$) were registered to vote by the time of the second posttest, $\chi^2(4) = 9.33, p = .05$.

GPA. All treatment and comparison students were compared on post-treatment (first-year

GPA. As previously noted, the treatment and comparison groups' first-semester GPA differed significantly, and this difference was still evident at one year. The treatment group had a significantly higher first-year GPA ($M = 2.67, SD = .67$) than the comparison group ($M = 2.28, SD = 1.02$), $t(103) = 2.20, p = .03$. It is noteworthy that the comparison group's GPA changed very little from pre- to posttest, whereas the treatment group's GPA decreased significantly, $t(62) = 3.68, p = .001, 2.26 (SD=1.10)$.

Retention. All treatment and comparison students were compared on one-year retention (Fall 2005 to Fall 2006). Significantly more students in the treatment group were retained (79 percent) than in the comparison group (62 percent), $\chi^2(1) = 3.84, p = .05$. Additionally, the treatment group's retention rate was significantly higher than the institution's retention rate for the same year (65 percent, $N=2,500$), $\chi^2(1) = 5.52, p = .05$, and higher than the rate for the institution's low-income and first-generation students who did not participate in SSS (51 percent, $N=146$), $\chi^2(1) = 14.35, p = .001$.

Discussion and Conclusions

In the present study, first-year college students from disadvantaged backgrounds who completed an introductory leadership development course involving civic engagement activities significantly increased in knowledge about politics, and the

perception that they can personally influence the political process. Additionally, data showed that the number of students registered to vote increased significantly from before the course to after the course, and showed another significant increase six months later. These findings suggest a way for colleges to respond to the challenge of developing politically informed and engaged citizens. Since first-generation and low-income college students are especially at-risk for political disengagement, the positive outcomes for these students are particularly encouraging.

The present data suggest an interesting pattern for students' openness to diversity. Openness to diversity significantly decreased from pretest to first posttest. However, when measured again in the students' third semester, openness to diversity had significantly increased.³ In the leadership course, the service-learning component required that students work intensely in a team on a group community service project. The students were exposed to people who may have typically been outside their social circle, from different racial backgrounds, and/or with different perspectives on the project. While these experiences are expected to increase openness to diversity (Jones, 2005), there is no reason to expect that change would come easily or quickly. Some previous findings have shown no change in appreciation for diversity when students involved in service learning were followed for only one semester (Moely, McFarland, Miron, Mercer & Ilustre, 2002). Research on identity development (Helms, 1990) and diversity training (Ramsey, 1996) suggest that when people's values and beliefs are challenged they may initially react with denial and defensiveness and only begin to accept the new information over time. The present findings suggest that providing students with experiences that expand their social and work circles, such as service learning activities, can increase openness to diversity. But, we should expect some resistance to change and allow sufficient time for students to process the information and modify their values and beliefs.

The primary limitation of the present research is the lack of a comparison group. The one-group design does not allow us to determine the cause of students' changes in political engagement and openness to diversity. However, in previous research, students who participated in service

learning activities increased in their appreciation for diversity more than students who did not participate (Astin & Sax, 1998; Sax & Astin, 1997). Thus, the present findings are consistent with previous research. Because the leadership course included learning objectives and activities that specifically focused on political attitudes, knowledge, and behaviors, it is reasonable to expect that the course was at least the partial cause of the change in students' scores regarding political engagement. In future research, data from a comparison group could help to clarify the relative contributions of the leadership course versus other college experiences.

In the present study, students who completed the introductory leadership course had a significantly higher one-year college retention rate than did the comparison students. Although this difference in retention is encouraging, we recognize that there are complicating factors. First, while the treatment and comparison groups had similar ACT scores, they had different first-semester GPAs. Second, students self-selected into the leadership course. These factors suggest that the two groups' academic ability was equivalent, but their first-semester effort, and their motivation to take the course, may not have been. Is motivation to take a course a necessary or sufficient factor for positive outcomes? We suspect that it is not, because what happens in a course can influence students' motivation, both positively and negatively. Thus, an important question for future research is whether requiring students to take this type of class would yield similar positive outcomes, including increased retention.

Previous research has shown many positive outcomes of service learning activities, including students' perceptions that they can make a difference in their community. Results of the present study suggest that expanding service learning experiences to include political advocacy might be a viable approach to increasing students' political knowledge, efficacy, and participation. With regards to college success, this study suggests a potential link between service learning and first-year retention, perhaps because students were engaged in structured classroom activities that actively involved them with peers and faculty, and helped them make connections to their college environment, all key to college retention (Tinto,

1993). Furthermore, seeing themselves as potential leaders in the community may have also empowered students to take a leadership role and get more involved on campus, potentially promoting retention.

Retention strategies are complicated and there is no one strategy that will promote the academic and social success of students. As Thayer (2000) points out, successful retention strategies must be multifaceted: “They will assist students in developing a sense of social security accompanied by a sense of academic competence and promote connections with student activities and support services at the same time as connections with majors, academic disciplines, and with faculty in and outside of the classroom” (p. 4). Service learning can be an effective strategy for promoting such connections, academic competence, and a sense of social awareness and security. Although the participants in this study were disadvantaged college students, “the strategies that are effective for increasing the persistence of first-generation and low-income students are also successful for the general campus population” (Thayer, 2000; p.2).

↗ ↗ ↗

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Appendix A

Political Engagement Scale

1. How much can you, personally, influence other people by discussing your political views?

| | | | | | |
|------------------|---|---|---|-----------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| CANNOT INFLUENCE | | | | I CAN INFLUENCE | |
| OTHERS AT ALL | | | | OTHERS A LOT | |

2. In the past 6 months, how often have you tried to influence other people by discussing your political views?

| | | | | | |
|-------|---|---|---|------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| NEVER | | | | VERY OFTEN | |

3. In the future, how often do you think you will try to influence other people by discussing your political views?

| | | | | | |
|-------|---|---|---|------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| NEVER | | | | VERY OFTEN | |

4. In the past 6 months, how often have you volunteered for a political organization or a candidate running for political office?

| | | | | | |
|-------|---|---|---|------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| NEVER | | | | VERY OFTEN | |

5. In the future, how often do you think you will volunteer for a political organization or a candidate running for political office?

| | | | | | |
|-------|---|---|---|------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| NEVER | | | | VERY OFTEN | |

6. In the past 6 months, how often have you attempted to influence a vote by contacting your Congressperson(s) (e-mail, letter, phone call, fax)?

| | | | | | |
|-------|---|---|---|------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| NEVER | | | | VERY OFTEN | |

7. In the future, how often do you think you will attempt to influence a vote by contacting your Congressperson(s) (e-mail, letter, phone call, fax)?

| | | | | | |
|-------|---|---|---|------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| NEVER | | | | VERY OFTEN | |

Assessing the Graduate School Readiness and Preparation Needs of Low-Income, First-Generation and Minority College Students

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Abstract

The federally-funded Ronald E. McNair Postbaccalaureate Achievement Program exists to promote equal access to, retention in, and graduation from doctoral programs among underrepresented populations, including low-income, minority, and first-generation college students. This study presents an assessment framework and tool for describing the academic, motivational, cognitive, and functional skill needs of eligible participants at a Research Intensive Institution in the Rocky Mountain region. Social-cognitive theories of career choice and expert advice guided the design of a locally-developed survey to assess self-efficacy beliefs for academic performance; career and educational aspirations; critical thinking, advanced study, and research skills; comfort with faculty interactions; and knowledge about the graduate admissions and financing process. A sample of 144 McNair-eligible participants provided responses. The needs of prospective McNair participants are described and interpreted in a specific institutional context with recommendations for improving service delivery on this campus. Recommendations for further research are also made.

Introduction

Students whose parents did not attend college, who are low-income, or who are members of certain racial/ethnic groups underrepresented in higher education face a variety of challenges on the way to earning the baccalaureate degree (Nevill & Chen, 2007). When these students leave before completing their degrees, institutions of higher education lose the diverse perspectives they bring to teaching and learning outcomes (Gurin, Dey,

Hurtado, & Gurin, 2002). In addition, when these students prematurely terminate their educational careers, the opportunity is lost to educate, train, and encourage a more diverse group of individuals into advanced graduate work and, ultimately, into academic careers. In their longitudinal study of postbaccalaureate enrollment and degree attainment, Nevill and Chen (2007) found that first-generation college students were less likely to enroll in graduate education and that African American students were more likely to delay enrollment, with

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both groups persisting at lower rates. Educational support programs such as the Ronald E. McNair Postbaccalaureate Achievement Program aim to address the achievement gap at the graduate school level. The McNair Program, a federally-funded TRIO program, exists to promote equal access to, retention in, and graduation from doctoral programs among underrepresented populations.

The purpose of this study was to develop a tool that could be used to assess the transitional needs of McNair-eligible students on a single campus. The assessment tool was developed based on an examination of the literature on doctoral education and attrition, social-cognitive career choice theories, and the observations of McNair program staff who have special insight into the factors that encourage the successful transition of undergraduates to graduate work. The instrument was administered to a sample of 114 McNair-eligible students at a Research Intensive Institution in the Rocky Mountain region to assess several important dimensions relevant to graduate school readiness and preparedness. The needs of McNair-eligible participants as indicated by the assessment tool will be described and interpreted in a specific institutional context with recommendations toward improving service delivery on this campus. Recommendations for further research will also be made.

Theoretical Framework

An important transition for many high-achieving college students, regardless of background, is the move from undergraduate work to graduate school. Planning and preparing for graduate admission is just as critical as any other transition, with equally significant consequences and outcomes for the student. In fact, it could be argued that the transition from undergraduate work to graduate school is not unlike a school-to-work transition, where graduate school is the career, and undergraduates who wish to be successful must acquire specialized knowledge and engage in formative, preparatory experiences in order to gain entry and succeed. For those who are envisioning a career where a graduate degree is required, successful management of this transition can determine whether and where they are admitted, how much funding is received, and what opportunities are available once admitted.

As a career option, graduate school is not easy, and rewards do not come immediately. Social-

cognitive models of career choice may help to explain how this choice is made and how students are motivated to succeed. A model developed by Lent, Brown, and Hackett (1994) provides a useful framework for understanding motivations, attitudes, and behaviors contributing to career outcomes. Based on childhood experiences, individuals develop self-efficacy perceptions and outcome expectations that influence their career interests and goals, which, in turn, influence the activities in which they engage, leading to the desired outcome or career (Lent et al., 1994). Adapting this model, we suggest that students possess varying levels of self-efficacy beliefs and career expectations related to their educational and career aspirations. For those students interested in graduate school, the activities they pursue as undergraduates provide the foundation for a successful transition to their goal attainment (i.e. graduate education). Using career choice theory, then, the preparatory undergraduate work that is so important for producing successful outcomes in graduate school can be seen as purposeful, goal-oriented behavior requiring prolonged motivation and commitment to persist even in the face of hardship. In this light, attainment of a graduate degree is motivated, in large part, by career aspirations.

Given the importance of undergraduate preparation for graduate school, there is surprisingly little research examining the necessary attributes and preparatory experiences undergraduates need in order to successfully navigate the graduate school transition. To understand what contributes to graduate school preparedness and success, we can look to the literature on graduate students. A few studies suggest several critical skill areas useful for entry into and successful progress in doctoral programs. Since the doctoral degree is primarily a research degree, the ability to engage in sophisticated, independent research and critical thinking about important topics in one's field are commonly accepted as important factors influencing doctoral admission and success (Girves & Wemmerus, 1988; Nettles & Millet, 2006). Participation in undergraduate research is one activity that can prepare students for doctoral-level research. The benefits of participation in undergraduate research are many and include the development of higher-level cognitive and functional skills, improved relationships with faculty, and increased readiness for graduate education (Bauer & Bennett, 2003; Kardash, 2000; Landrum & Nelson, 2002; Lopatto,

2006; Nnadozie, Ishiyama, & Chon, 2001). Landrum and Nelson (2002) found that both faculty and students reported an increase in key areas related to graduate education readiness including technical skills related to data analysis, self-regulated learning strategies (e.g. time management), and social-cognitive and motivational beliefs (e.g. greater self-confidence). A study of University of Delaware alumni found that participation in undergraduate research increased the likelihood of enrolling in graduate education, with students who participated in formal research programs twice as likely to enroll in Ph.D. programs (Bauer & Bennett, 2003).

Socially, graduate students reporting the most satisfaction with their graduate training have demonstrated the ability to enter into formal mentoring relationships, as well as to engage in informal, collegial interactions with faculty and peers (Girves & Wemmerus, 1988, Golde, 2005; Golde, 2000). Bowie, Cherry, and Wooding (2005) found that faculty were one of three important influences on African American female social work students' decision to enroll in Master's programs. Faculty also plays an important role in promoting participation in academic conferences and presentations and publication of research (Nettles & Millet, 2006). Austin (2002) further found that doctoral students identified their relationships with faculty as an important element in their understanding of the role and responsibility of faculty members.

A final dimension of importance to graduate school success is the acquisition of specialized information about graduate school culture, admissions, and financing. Nauta (2000) found that psychology students tended to both underestimate and overestimate the importance of a diverse array of variables influencing graduate admissions decisions, suggesting a lack of understanding of the requirements for admission. The importance of financial aid and other college knowledge on successful entry into and completion of an undergraduate degree has been well-established (Conley, 2005) but less is known about what undergraduates know about graduate school financing. In the context of Astin's (1984) career choice theory, specialized information on admissions and financing procedures serves as a vehicle to the best outcomes, such as access to funding and entry into selective, prestigious institutions.

Arguably then, from a career transition perspective, prospective doctoral students need to understand the culture of graduate admissions and education, develop basic competencies in how to conduct research in their field, and possess a certain degree of comfort interacting in a collegial manner with faculty and other graduate students in order to gain entry to and succeed in a doctoral program. Given the importance of these factors in promoting positive graduate school entry and outcomes, we developed a needs assessment tool to measure the extent to which low-income, first-generation, and underrepresented students at one institution possess these core attributes, knowledge, and preparatory experiences. The development of the tool and the results of our study are intended to improve service delivery in the McNair program on this campus (and possibly others) that, with its emphasis on providing opportunities to engage in faculty-mentored research, develop important functional skills, and gain an increased knowledge base, aims to help this student population manage the complex transition from college to graduate school (Ishiyama & Hopkins, 2001; Parker, 2003).

Method

Participants

The study was conducted at a mid-sized Research Intensive university in the Rocky Mountain region. The institution's statutory mission is the preparation of teachers and education professionals, and it also has strong programs in business, health, and performing and visual arts. The study population was defined as junior and senior students enrolled in classes in the 2006 spring semester who also met eligibility for the McNair program. Students were deemed eligible for the program if they indicated that (a) neither of their parents received a baccalaureate degree and they received any amount of a Pell Grant award indicating low-income status; or they were members of a racial/ethnic minority group underrepresented in higher education (e.g. Hispanic, Native American, and African American); (b) they were advanced in their college careers, having completed at least 60 credits or more; (c) they had a cumulative GPA of 3.0 or more; and (d) they indicated an interest in pursuing a graduate degree.² Individuals who were enrolled in majors not generally conducive to a terminal Ph.D. degree (performance and visual arts) were excluded from the sample. These

Table 1. Comparison of Demographic Characteristics of Respondent Pool and Population

| | Respondent Pool % | Population % |
|---------------------------------|-------------------|--------------|
| Gender | | |
| Female | 78.5 | 74.0 |
| Male | 21.5 | 26.0 |
| Race/Ethnicity | | |
| Black/African American | 6.9 | 6.6 |
| American Indian/Alaskan Native | 4.2 | 4.6 |
| Asian American/Pacific Islander | 1.4 | 0.8 |
| Hispanic | 45.1 | 42.1 |
| White/Caucasian | 40.3 | 44.0 |
| Unknown | 2.1 | 1.9 |
| First Generation Status | | |
| Neither parent has BA | 78.5 | 75.7 |
| One or both has BA | 17.4 | 19.9 |
| Unknown | 4.2 | 4.4 |
| Student Classification | | |
| Juniors (61 to 90 credits) | 43.8 | 45.5 |
| Seniors (91+ credits) | 56.3 | 54.5 |
| Cumulative GPA | 3.42 | 3.40 |
| Total credits earned | 97.66 | 96.60 |

Note: Respondents N = 144, Population N = 336

criteria produced a census of 336 McNair eligible students. The final respondent pool consisted of 144 students for a 39 percent response rate. Of those responding, 56 percent were from underrepresented minority groups, 78 percent were female, and 43 percent were low-income, first-generation students only. Three McNair participants completed the survey, and their responses were removed prior to analysis. The average GPA of the respondent pool was 3.42, and the average credits earned were 97.66. Breakdown by additional demographic characteristics is presented in Table 1. As is shown in Table 1, the characteristics of students responding to the survey were very similar to all McNair-eligible students, indicating a good match

between the population and the respondent pool.

Procedure

Program staff worked with institutional offices to produce the list of McNair-eligible students, which consisted of data including student name, ID number, contact information, first-generation status, race/ethnicity, gender, cumulative GPA, total credit hours, and major. A pilot test of the locally-developed instrument was given to approximately 20 undergraduates prior to sending out the survey in order to identify poorly-worded or confusing items. A revised instrument was then formatted, edited, and proofed by program staff. The final instrument was administered online with institutional assistance. An initial e-mail was sent to students in the sample soliciting participation in the survey. The initial solicitation contained an electronic cover letter that

explained issues of participation and confidentiality and an embedded link to the website containing the survey. Student ID numbers were required in order to send an abbreviated reminder at three weeks to students who had not responded to the original e-mail and to match institutional variables with survey responses. Upon completion of the survey, respondents were offered the opportunity to participate in a lottery drawing for campus bookstore certificates or coffeehouse gift cards. Several drawings were made at the conclusion of the study, and prizes were awarded prior to the end of the semester.

² The authors are aware that, for many McNair programs, recruitment begins in the sophomore year and selection of students occurs by the beginning of the junior year in order to ideally accommodate the two-year intensive graduate school preparation program the project provides. However, the purpose of this article was to understand the needs of the specific target population to be served, in this case, first-generation/low-income and/or underrepresented students who have remained enrolled at the institution beyond the second year. While the largest proportion of students depart college in the first year, a recent study demonstrates that departure risk still remains high well into the second year for some first-generation, low-income, and minority students (Ishitani, 2006). We wanted to reduce the possible confounding of retention needs and graduate school needs for our target group by selecting those who remained enrolled into the third and fourth year.

Measures

To collect information on McNair-eligible students' graduate school awareness and preparation needs, a survey was developed locally. Based on social-cognitive and motivational variables identified in the literature and expert opinion on additional factors and skills involved with graduate school preparedness, an existing intake survey used to assess the needs of incoming participants to the local McNair program was revised and updated to include questions about core graduate school competencies and aspirations to create the *Graduate School Awareness and Preparation Survey*. The survey contained five sections. The first section, *Prior Research Experiences*, consisted of a checklist of 14 increasingly sophisticated research activities in which students had to indicate whether or not they had engaged thus far as undergraduates. Sample items on this scale included "Used library article indexes and databases" and "Presented research at an academic conference." The second section, *Faculty Interactions*, consisted of 10 items on a 5-point agreement scale from 1 (not at all true of me) to 5 (very true of me). Sample items on this scale included "Informal conversations with faculty members intimidate me" and "Faculty know me well enough to write a letter of recommendation for me." The third section, *Career and Educational Aspirations*, contained two standard questions. Career aspirations were measured by asking respondents to indicate the type of job or career they were preparing for. Educational aspirations were assessed by asking respondents to indicate the level of education they desired to complete. Respondents were given five separate choices ranging from Bachelor's degree only through Master's, Ph.D., and various professional degrees, such as the J.D. and M.D.

The fourth section consisted of 22 multiple-choice and true/false questions and 14 rating questions that assessed three areas: (1) ratings of the perceived importance of various admissions criteria, (2) general knowledge of graduate school procedures, and (3) knowledge of financing options. The items used in the *Ratings of Perceived Importance* scale were taken from the Nauta (2000) study. The 14 questions asked students to rate the importance of various criteria to admissions committees, such as "standardized test scores" or "selectivity of undergraduate institution." Respondents again used a 5-point scale ranging

from 1 (not at all important) to 5 (very important). Materials from informational workshops and admissions textbooks were used to create the items on the two knowledge scales: *Admissions Knowledge* and *Finance Knowledge*. Each scale consisted of 11 items that asked an array of multiple choice and true/false questions related to admissions procedures and financing knowledge respectively. Sample items included "A curriculum vitae is a resume used to chronicle an academic career" and "Assistantships pay for teaching or research."

In the fifth and final section of the survey, items from three subscales of the *Motivated Strategies for Learning Questionnaire (MSLQ) Scales* (Pintrich, Smith, Garcia, & McKeachie, 1991) were used and modified to assess the motivational and cognitive learning strategy needs hypothesized to be important in determining graduate school choice, expectations, and outcomes. The MSLQ has enjoyed widespread use in education because it is publicly available and the authors encourage its use and adaptation to address unique assessment needs in a variety of educational contexts (Duncan & McKeachie, 2005). The complete MSLQ consists of 81 items grouped into 15 different scales. Items from the following scales were modified to fit the needs assessment context of this study: (a) self-efficacy for learning and academic performance; (b) time and study environment management; and (c) critical thinking. Since the MSLQ was designed to measure course-specific self-regulation strategies, items from these three scales were adapted to remove course-specific wording and assess them more broadly. Self-efficacy items were adapted to assess respondents' self-efficacy for learning and academic performance during the upcoming semester. A sample item was "Compared to other students in my major, I expect to do well in my classes." Similarly, items from the time and study environment management and critical thinking subscales were adapted to assess the use of these cognitive strategies as they are applied to all courses and when studying in general. Sample items included "When studying for classes, I make up questions to help focus my reading" (study environment) and "In class, I try to play around with ideas or theories of my own related to what I am learning" (critical thinking). Each scale in the MSLQ consists of a set of statements to which respondents indicate how true each statement is for them on a 7-point scale, which was modified to a 5-point scale for the current study. Reversed scored items were recoded after data had been collected

so all item and scale level data could be interpreted similarly, with higher scores indicating more of the attribute.

The items adapted from the MSLQ were factor analyzed to determine if they conformed to the same scales as on the MSLQ or if they formed new dimensions or scales when used with McNair-eligible participants. From these analyses, three new and interpretable social-cognitive dimensions emerged, resulting in a *Critical Thinking* scale consisting of four items that corresponded to the original MSLQ critical thinking scale. The second dimension, which consisted of 12 items, was comprised of items from the original MSLQ critical thinking scale and the time and study environment management scales. Since both critical thinking and study and time management are metacognitive strategies in Pintrich's model (1995), this new dimension was renamed for better clarity as the *Advanced Study Practices* scale. The final dimension consisted of many of the original items from the MSLQ self-efficacy scale, but not all conformed to it. Most of the items in this dimension pertained specifically to students' self-efficacy for academic performance, thus this final dimension was renamed the *Self-Efficacy for Academic Performance* scale.

Results

Educational and Career Aspirations

The educational aspirations of the 144 survey respondents were high. Only 28 percent aspired to the B.A. level only, with the largest majority of respondents desiring a Master's degree (44 percent). The second most commonly desired degree level was the Ph.D. (13 percent), followed by professional degrees (e.g., M.D., Psy.D., Ed.D.) (9 percent), and the J.D. (6 percent). Since postbaccalaureate aspirations are an important eligibility criterion for McNair program participation, we chose to exclude from our analyses those respondents who did not indicate an interest in attaining a graduate degree of any kind. This restricted all subsequent analyses of needs to a specific target population of McNair programs: low-income, first-generation, and underrepresented college students who aspire to attain a graduate degree. While this restriction

Table 2. Descriptive Statistics of Scales for McNair-Eligible Students

| Scale | Mean | SD | N | # Items | α |
|--------------------------|------|------|-----|---------|----------|
| Research Experiences | 6.02 | 2.61 | 104 | 14 | NA |
| Faculty Interactions | 3.59 | 0.70 | 100 | 10 | .85 |
| Advanced Study Practices | 3.43 | 0.45 | 100 | 12 | .88 |
| Critical Thinking | 3.60 | 0.10 | 103 | 4 | .79 |
| Academic Self-Efficacy | 4.35 | 0.24 | 103 | 6 | .89 |
| Admissions Knowledge | 7.15 | 1.55 | 100 | 11 | NA |
| Finance Knowledge | 5.99 | 1.76 | 100 | 11 | NA |

Note: NA means internal consistency indices of reliability are not applicable to these measures.

reduced our sample to 104 respondents, it allowed for a more accurate assessment of the current status and service needs of the target group.

Table 2 provides an overview of the cognitive, behavioral, motivational, and knowledge needs of McNair-eligible students aspiring beyond the bachelor's degree. Scale descriptives include means, standard deviations, and scale reliability as measured by Cronbach's alpha procedure where appropriate. Scale means for *Faculty Interactions*, *Critical Thinking*, *Self-Efficacy for Academic Performance*, and *Advanced Study Practices* were scored to reflect the average response option interpreted on a 1 to 5 scale, with higher scores indicating more facility with faculty interactions, critical thought, and advanced study practices and more positive ratings of self-efficacy. The scale mean for *Research Experiences* indicates the number of research activities out of 14 in which students reported being engaged as undergraduates. The scale means for *Admissions Knowledge* and *Finance Knowledge* indicate the number of items to which students responded correctly out of 11.

Prior Research Experiences

Respondents reported engaging in an average of 6 out of 14 research activities during their undergraduate careers thus far. The most and least common undergraduate research experiences are listed in Table 3. Most respondents have engaged in basic undergraduate research activities such as use of the library to search for source material (95 percent) and use of library databases and article indexes (94 percent). Slightly more than half of respondents indicated completion of a statistics course (56 percent) and experience analyzing either qualitative or quantitative data (57 percent), and 44 percent reported membership in a profes-

Table 3. McNair-Eligible Students Engaging in Undergraduate Research Behaviors

| Research Activity | % |
|---|----|
| Used the library to search for source materials | 95 |
| Used library databases and article indexes | 94 |
| Read academic journal articles on a topic of interest | 78 |
| Analyzed data (qualitative or quantitative) | 57 |
| Completed statistics course | 56 |
| Joined a professional organization | 44 |
| Attended an academic conference | 41 |
| Wrote a comprehensive literature review | 40 |
| Completed research methods course | 31 |
| Engaged in independent research, not part of regularly scheduled course | 20 |
| Asked a faculty member to mentor on independent research project | 14 |
| Presented at a conference | 13 |
| Worked with faculty member on his or her research project | 12 |
| Published an article in peer-reviewed journal | 5 |

Table 4. Perceived Importance of Selected Admissions Criteria

| Criterion | Mean | SD |
|---|------|------|
| Undergraduate GPA | 4.48 | .66 |
| Standardized admissions tests | 3.88 | 1.03 |
| In-person or phone interview | 4.47 | .78 |
| Recommendation letters from employers | 3.91 | 1.00 |
| Undergraduate research experiences | 3.88 | 1.08 |
| Resume | 4.13 | .90 |
| Recommendation letters from faculty | 4.45 | .78 |
| Volunteer experiences | 3.69 | 1.08 |
| Undergraduate student leadership | 3.71 | 1.09 |
| Quality/prestige of undergraduate institution | 3.16 | 1.16 |
| Awards or recognitions received | 3.59 | .96 |
| Age of applicant | 1.94 | 1.05 |
| Ethnicity of applicant | 1.91 | 1.22 |
| Personal statement or essay | 4.12 | .98 |

Note: N = 104 except for "awards or recognitions received" N = 103.

sional organization. Research activities that were not as common, but that are more important formative experiences for postbaccalaureate aspiring students, were completion of a research methods course (31 percent), involvement in independent faculty-mentored research (14 percent), presentation at an academic conference (13 percent), or publication of an article (5 percent).

Faculty Interactions

On a 5-point scale, respondents indicated a mean item response of 3.59 for a variety of faculty interactions. For many of the items, respondents indicated an average level of comfort and experience interacting with faculty members. However, several items on this scale indicated less comfort and experience for postbaccalaureate aspiring students such as "I learn about graduate school through conversations with my professors" (M = 2.83, SD = 1.40), "Several faculty members have suggested that I apply to graduate school" (M = 2.64, SD = 1.52), and "On a weekly basis, I informally visit with a professor" (M = 2.84, SD = 1.39).

Graduate School Admissions and Finance Knowledge

Table 4 displays descriptive statistics of the perceived importance of various admissions criteria. Undergraduate GPA received the highest importance rating, followed closely by in-person or telephone interview, recommendation letters from faculty, resume, and personal statement and essay. It is interesting to note that these individual criteria together closely resemble the important credentials for a traditional job interview (i.e. performance or GPA, letters of reference, resume, and interview). Standardized admissions tests and undergraduate research experiences were rated as less important compared to these more typical job-related credentials, and the quality/prestige of the undergraduate institution and

ethnicity of applicant were rated as less important than all of the above, with ethnicity of applicant receiving the lowest rating of importance.

The average number correct on the eleven admissions knowledge scale items was 7. This amounts to 64 percent correct. Closer examination reveals that respondents had more difficulty with questions about admissions specifics such as which standardized test is used for most graduate degrees (GRE) and the purpose of a curriculum vitae, as well as admission processes, such as how many schools to apply to and how committees weigh undergraduate leadership activities.³ As shown in Table 2, respondents did slightly worse on the finance knowledge items, with an average number correct of 6 out of 11 or 54 percent correct. Some of the more difficult items on the finance knowledge section were about common graduate school finance options, such as assistantships, tuition remissions, and dissertation fellowships and the importance of faculty assistance in finding special opportunities for graduate funding.

Metacognitive Self-Regulated Learning Strategies

Respondents generally reported high self-efficacy for academic performance ($M = 4.35$ on a 5.00 point scale), which is not surprising given the high academic achievement of the target population. Mean responses for critical thinking and advanced study practices were lower, but were certainly not low. Some of the less highly rated items on the advanced study practices questions pertained to high levels of academic engagement with course materials such as asking additional questions of the professor or of oneself about assigned readings to help guide and focus study sessions or seeking out additional readings or activities to better understand what is being taught.

Table 5. Intercorrelation Matrix of Needs

| | 1 | 2 | 3 | 4 | 5 | 6 |
|--|-------|-------|-------|-------|------|-------|
| 1 Research Experiences | 1.00 | | | | | |
| 2 Faculty Interactions | .37** | 1.00 | | | | |
| 3 Advanced Study Practices | .25* | .47** | 1.00 | | | |
| 4 Critical Thinking | .21* | .49** | .53** | 1.00 | | |
| 5 Self-Efficacy for Academic Performance | .22* | .49** | .55** | .43** | 1.00 | |
| 6 Knowledge of Graduate Finances | .10 | .01 | -.06 | -.04 | -.01 | 1.00 |
| 7 Knowledge of Graduate Admissions | .29** | .31* | .23* | .12 | .11 | .28** |

* $p < .05$, ** $p < .01$

Relationships between the Identified Needs of McNair-Eligible Participants

Table 5 displays the bivariate correlations between the key dimensions or scales in the needs assessment tool. Significant and moderate correlations were found between prior research experiences and almost all other dimensions, indicating the important positive relationship between research experiences and faculty interactions, self-efficacy beliefs for performance, advanced study skills, critical thinking, and knowledge of graduate school admissions. Similarly, faculty interactions were positively and strongly related to advanced study practices, critical thinking, self-efficacy beliefs, and knowledge of graduate admissions. While causal relationships cannot be inferred, the strength of these correlations provides preliminary evidence in support of the selected variables in the assessment tool, as they indicate separate but interrelated influences and needs.

Discussion

The purpose of this study was to develop a needs assessment tool to measure the extent to which low-income, first-generation and underrepresented students—or McNair-eligible students—at one institution possess the core attributes, knowledge, and preparatory experiences necessary to gain entry to and succeed in graduate school. Both the tool and the results of the study are intended to improve program recruitment, development, and delivery in the McNair program on this campus

³ Difficult items were identified by calculating the proportion correct for each item and choosing those with a 60 percent or less success rate.

in order to better help this student population manage the complex transition from college to graduate school. The results of the study are interpreted here within this specific institutional context in order to identify the service need areas of the McNair-eligible participants on this campus, as well as to make recommendations for improvement at both the program and institutional level.

Educational and Career Aspirations

The results from the needs assessment suggest that a sizable proportion of McNair-eligible students on this campus, 72 percent, aspire to a graduate degree. While only 13 percent of those responding aspire to the doctorate level, McNair program staff can attest that some students change their goals from an M.A. to a Ph.D. after learning about possible Ph.D. careers and as their self-efficacy beliefs for achieving a doctorate increase. While it cannot be said that these educational aspirations are representative of all McNair-eligible participants on campus, it does indicate that there is a sufficient subgroup of McNair-eligible participants from which to recruit.⁴ Furthermore, in the context of social-cognitive career theory, these high educational aspirations suggest that a substantial portion of McNair-eligible participants on campus already understand the value of an advanced degree and have set a specific educational goal for themselves to attain it. The McNair program could support these students by providing additional information about the subtle differences between the various types of graduate degrees to encourage them to make the right choice for their career goals and lifestyle needs. Excellent student-program fit has been linked to the best student outcomes and to a greater likelihood of graduate degree attainment (Golde, 2005).

As previously mentioned, we chose to exclude the respondents aspiring to only the B.A. from the rest of our analyses of the assessment results in order to narrow our focus on the met and unmet needs of McNair-eligible students who indicated an interest in graduate work, which are discussed in detail here.

Self-Efficacy for Academic Performance

From a social-cognitive career theory perspective, it is imperative that students who desire a graduate degree appreciate their proven academic ability. The results from this needs assessment suggest that McNair-eligible students on this campus had appropriately high expectations for their academic abilities. On average, they tended to agree with items that asked about their short-term ability to successfully perform in their current classes and to maintain a high overall GPA for the semester. This result is consistent with the general literature on academic self-efficacy beliefs, which demonstrates a positive relationship between high achievement and high academic self-efficacy beliefs. Social-cognitive career theory emphasizes the importance of high self-efficacy expectations in influencing persistence and goal attainment (Lent, Brown, & Hackett, 1984). Participation in the McNair program could help maintain and strengthen the self-efficacy beliefs of eligible participants through career-specific, mastery experiences and vicarious observation of others' success (Black & Posselt, 2006).

Engagement in Higher-Level Undergraduate Research Experiences

As noted previously, the results from this survey show that most of the respondents report participating in basic undergraduate research activities, such as searching for articles, using the library, and analyzing data. However, given the academic qualifications, educational aspirations, and advanced class standing of the respondents, the infrequency of participation in higher-level undergraduate research experiences does indicate a gap in needs and available resources on the campus. In particular, the results suggest that McNair-eligible students were not engaging in undergraduate research activities, were not taking statistics and research methodology courses at the expected level given their future aspirations, and were not actively participating in their chosen fields through presentation and publication experiences. Considering the importance of these experiences

⁴ One of the limitations of this study is possible non-response bias. It is likely that students who responded did so because of the salience of the issue. That is, respondents may have participated out of interest in graduate school, and the results, in particular the career and educational aspirations of the participants, may not reflect those of all McNair-eligible students on the campus. However, one of the main goals of the study was to assess the needs of McNair-eligible participants who desire a graduate level degree, and to the extent that the respondent pool contains responses from this subgroup of the population of McNair-eligible students, then the results can be said to reasonably reflect the graduate school awareness and preparedness of this subgroup.

to graduate admissions committees (Landrum, Jeglum, & Cashin, 1994), it is critical that postbaccalaureate aspiring McNair-eligible students be involved in these activities as undergraduates. These findings reinforce the need for the McNair program on this campus where the only other structured avenue for students to gain undergraduate research experiences is through the Honors program. Participation in the Honors program, which requires higher GPA and admissions test credentials, additional coursework, and a longer time commitment, may be difficult for McNair-eligible students, many of whom have work commitments while enrolled. However, given the relatively limited capacity of the McNair program, which can only serve 30 students per year, this institution will likely need to provide multiple avenues for undergraduate research experiences in order to meet the needs of this population.

Comfort with Faculty Interactions

The results from this needs assessment indicate that McNair-eligible respondents on this campus are generally comfortable interacting with faculty in an expected manner for advanced undergraduates. Typical and common interactions include approaching faculty members with a question about a class or talking with them about academic interests. However, respondents reported less comfort with frequent, informal meetings with faculty and less experience talking with faculty about graduate school. These results suggest that for some McNair-eligible students who aspire to a graduate degree, faculty members are not meeting their needs on this campus. Several areas of service might be suggested. At the institutional level, faculty and advisors need to be better educated about the graduate school aspirations and preparation needs of this population, and they should be encouraged to initiate frequent and early discussions of graduate education opportunities and to guide students toward important preparatory experiences. At the program level, McNair staff should design interventions to raise awareness among both students and faculty about the role faculty members play in promoting graduate school as an option, as well as the importance of faculty relationships in students' graduate school careers. McNair staff should also restructure the faculty-mentored research component of the program to include discussions about graduate education in order to address students' needs for

increased interaction with faculty about graduate school admissions. Finally, program staff need to provide as many structured opportunities for students to interact with faculty as possible.

Critical Thinking and Advanced Study Skills

Pintrich's (1995) self-regulated learning model theorizes that academic achievement is enhanced when students learn to become "self-regulated learners" who can think deeply about a topic and fully engage the learning materials provided by an instructor. The ability to think critically and deeply and to manage one's study time effectively are critical skills for an advanced graduate student and, fortunately, can be learned through practice and modeling. Faculty members play an important role in engaging their students with the material that is presented in classes, but they also can provide one-on-one mentoring and modeling of study skills and critical thinking techniques. The results of this needs assessment indicate specific critical thinking and advanced study skill areas where McNair-eligible students, on average, reported less proficiency, such as asking additional questions of the professor about assigned readings to help guide and focus study sessions or seeking out additional readings or activities to help them learn what is being taught. These areas would likely be enhanced through participation in the McNair program given the opportunity to engage in structured undergraduate research experiences with faculty mentors and to gather with other high-achieving students who may teach them new and diverse approaches to learning.

Specialized Graduate School Knowledge

The most striking need among McNair-eligible students emerging from this assessment is the huge deficit in respondents' knowledge of graduate school information. Respondents aspiring to attain a graduate degree did poorly on two tests of knowledge about graduate school admissions and financing. Students answered items incorrectly about the admissions process including suggested admissions timelines, standardized tests for graduate admission, and the importance of various criteria used for admissions as well as the types of funding available and how those funds are awarded. Without this specialized knowledge, these students

will be less likely to know what types of undergraduate activities will make them competitive for graduate school and various financial awards, and, consequently, they may be less likely to succeed at gaining admission and securing superior financing opportunities. For advanced juniors and seniors interested in graduate school, these results identify an unmet information need on campus, suggesting there are limited opportunities for students to learn about graduate school as a career option. With no formal outlet of information on graduate school other than the McNair program, the institution should consider improving student access to this type of information through changes to advising practices, career services, and other interventions.

Conclusions and Recommendations

The Ronald E. McNair Postbaccalaureate Achievement Program was created to address the systematic underrepresentation of low-income, first-generation students and students from certain racial and ethnic minority groups at the doctoral level. By offering an intensive faculty-mentored research experience for undergraduates, McNair programs increase the functional skills and specialized knowledge base of participants and facilitate a smooth transition from undergraduate to graduate studies. The purpose of this article was to present a framework and a tool for assessing the graduate school readiness and preparation needs of McNair-eligible students in order to guide program recruitment, development, and delivery on one campus. The results of this project demonstrate initial support for a graduate school needs assessment tool grounded in social-cognitive career theory and provide insight into the service need areas of McNair-eligible participants in a specific institutional context. As a result, we were able to make some recommendations for improvement at both the program and institutional level relative to the graduate school needs of this population on this campus.

Although the specific results of this study may or may not be generalizable to other students and institutions, the assessment tool and analyses employed here could be used on other campuses to determine the graduate school preparation needs among underrepresented populations that may be addressed by McNair and other undergraduate

research and mentoring programs. Given the recent emphasis on the use of local data by the U.S. Department of Education with respect to TRIO program proposals and performance reports, these tools have value for McNair programs both in developing services in response to identified needs as well as preparing future proposals (Tower, 2006).

The assessment tool might also be used in future research to expand on the limited scope of the current study. For instance, the tool might be used to determine the extent to which McNair-eligible students differ from their non-eligible peers with respect to graduate school preparedness. The tool might also be used to determine if there are any differences in graduate school awareness and preparation by student characteristics (e.g. race, gender, field of study) among McNair-eligible students. Furthermore, the tool might be used as a pre-post test to evaluate the effectiveness of McNair programs at improving the graduate readiness of participants and/or to correlate students' pre-graduate school knowledge and experiences with their actual graduate school outcomes.

Despite its scope, we believe this study offers several contributions to the literature on graduate school preparation among underrepresented populations. In this article, we suggest that the achievement gap for certain groups at the doctoral level is, at least in part, the result of a failed transitional period during the later undergraduate years. Conceptualizing the graduate school decision as a career choice, as we have done here, may serve to focus attention on what can be done to address student needs during this transition so that those who aspire to attain a graduate degree can reach their potential. Based on social-cognitive career theory, we piloted a needs assessment to identify deficits in graduate school motivation, knowledge, and engagement in preparatory experiences among underrepresented student populations. We demonstrated the value of evaluating the results of the needs assessment within a specific institutional context so that the unmet needs of this group can be addressed in McNair and other program designs. Finally, we argued that using assessments in a specific institutional context provides justification for programs like McNair above and beyond what traditional "counts" of eligible participants on campus can do, and provides additional details about the specific needs of the institution's target population that national data cannot provide.

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The Drive to Attract More Students into Higher Education:

Access Initiatives from the United Kingdom

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Abstract

The drive to attract more students into higher education remains a major concern in the U.S. and the U.K. In recent years, both countries have been seeking ways to expand participation in higher education, particularly from underrepresented groups. This article offers a brief review of policies that helped finance and widen access to higher education in the U.K. in the last half century, and focuses on two major British government initiatives: the Aimhigher Program and the Education Maintenance Allowance. Both are aimed at pre-university age groups, where decisions are made that can affect life chances. The article goes on to discuss details of the implementation and evaluation of the two strategies, noting certain parallels with U.S. programs. The initiatives are aimed at closing the gaps in access to higher education, particularly for low-income youth, and carry policy implications that may be helpful in the U.S. context.

Introduction

Much as in the United States, higher education in the United Kingdom (U.K.) has expanded over the last half century from an elite system—where there was only a 5 percent participation rate among young adults in 1960—to a mass system with a participation rate of 43 percent among the same population by 2004. However, as seen in Figure 1, a large discrepancy remains between the participation of young adults from the wealthier social classes whose participation rose from 27 to 50 percent over this period, and those from the lower social classes whose participation has risen, but from a low of 4 percent to only 18 percent in 2004 (Department for Education and Skills (DfES), 2003a; DfES, 2003b). Despite years of

progress, young adults from lower social classes are still less than half as likely to participate in higher education today as their more economically advantaged peers. This represents a marked loss of talent for the country.

Awareness of the need to develop the whole pool of available talent within the U.K. has been growing steadily with the onset of globalization. The pressure to compete in the global knowledge society has become a major policy driver. Developing the highly skilled labor market needed to promote the economic prosperity of the country can only be done by making sure that all those who can benefit from higher education have the chance to do so. As a result, government efforts in recent years have focused on providing op-

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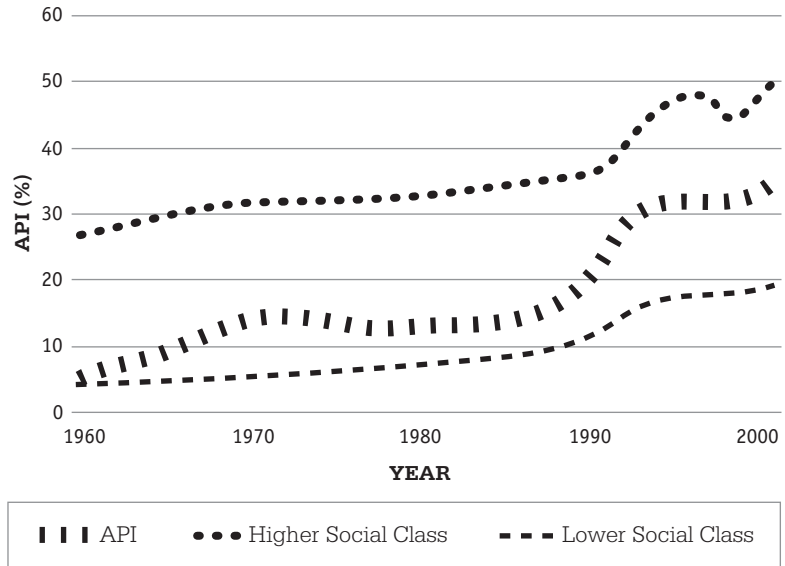
portunities for those from disadvantaged groups to access higher education.

This article starts with a brief review of higher education policies on finance and widening access in the U.K. in the last half century, thus setting the scene for an examination. Two major policy initiatives which the British government has put in place: the Aimhigher Program and the Education Maintenance Allowance. Both are aimed at pre-university age groups where decisions are made that affect life chances. The article continues by discussing details of the implementation and evaluation of the two strategies, noting certain parallels with U.S. programs. The initiatives are aimed at closing the gaps in access to higher education, and carry policy implications that may be of interest in the U.S. context.

Policy Context: A Brief History of Higher Education in the U.K.

The United Kingdom, like the United States, has seen a massive expansion of higher education since the end of the Second World War (Wolanin, 2003). In the U.K., the Education Act of 1944 laid the foundation for an educational structure whose basis still remains. Its key reforms were that all education from primary to secondary (K-12) should be free, and that all children should be given equal opportunities (see Table 1 for U.K. educational levels). Scholarships, bursaries, and other allowances were granted by Local Education Authorities (LEAs) “for the purpose of enabling pupils over compulsory school age to take advantage without hardship... of any educational facilities available to them.” As a result, the slow but steady expansion of higher education began. In 1944, the number of university students in the U.K. was only 38,000 or

Figure 1. Age Participation Index (API), Great Britain, 1960-2001



Notes: Age Participation Index (API) measured the number of home-domiciled young (aged under 21) initial entrants to full-time and sandwich undergraduate courses, expressed as a proportion of the average 18 to 19 year old Great Britain population. However, in 2002 API has been superseded by the Higher Education Initial Participation Rate (HEIPR) that covers English-domiciled, 17-30 year old, first-time entrants to higher education courses, enrolling in courses expected to last at least six months who stay on their courses for six months or more.
Source: Department for Education and Skills data.

less than 5 percent of the population. By 1964, the number had more than tripled to 139,000 (Barber, 1994), but this still represented less than 10 percent.

In 1963, the government established the Robbins Committee to review the provision of higher education and to make proposals for its long-term development, including examining the potential demand for increased access (Archer et al, 2003; Robbins, 1963b), making it the first report to explicitly examine governmental policy on access and equity to higher education. The Robbins Report (1963a) stated that “courses of higher education should be available for all those who are qualified by ability and attainment to pursue them and who wished to do so” (p. 7-8). It recommended the expansion of higher education in order to make better use of underutilized ability, especially among those from lower socio-economic groups. It therefore set the tone for a more equitable system of higher education. A group of new universities were established, grants were made more widely available (e.g. to all who gained two ‘A’ levels), and the number entering higher education steadily expanded. Tuition remained free.

From the late 1970s to the mid-1980s, university students in the U.K. experienced the highest

Table 1. Educational Levels in the U.K.

| Age | Grade | Known As | |
|-----------------|---------------------|--|---------------------------------|
| 3-4 | - | Nursery | |
| 4-5 | | Reception class | |
| 5-6 | 1 | | |
| 6-7 | 2 | | |
| 7-8 | 3 | | |
| 8-9 | 4 | Primary School | |
| 9-10 | 5 | | |
| 10-11 | 6 | | |
| 11-12 | 7 | | |
| 12-13 | 8 | | |
| 13-14 | 9 | Secondary School – General Certificate of Secondary Education (GCSE) | |
| 14-15 | 10 | | |
| 15-16 | 11 | | |
| 16-17 | | 6th Form College, 6th Form of a School or Specialist College | Further Education College |
| 17-18 | | | |
| 18 - onwards | Higher Education | Higher Education | Further Education |

Notes: **6th Form Colleges** are institutions where students aged 16 to 18 typically study for advanced school-level qualifications, such as A-levels, to prepare them for higher education. **Further Education Colleges** are institutions that provide post-compulsory (age 16) training similar to workforce and adult education provided by community colleges in the U.S. **Higher Education** institutions are universities where students age 18 and higher can earn bachelor's degrees.

levels of state support ever. Many students received a means-tested grant to cover living costs, and fees were paid by their Local Education Authority. Additionally, students could also make use of the social security system, receiving housing benefits to help with the cost of living off-campus and unemployment benefits during vacations. However, by the end of the 1980s, the numbers entering higher education were greatly increasing, thus putting a major financial burden on public resources. As a result, educational privileges were scaled back, the real value of maintenance grants was reduced, and student eligibility for unemployment and housing benefits was abolished (Blanden & Machin, 2004).

By 1990, with the continuing steady rise in the number of students entering universities, the cost to the system escalated, and many higher education institutions became underfunded. Costs to students also increased, as means-tested maintenance grants were frozen and later replaced by student loans. In 1996, the Dearing Committee was commissioned

as a response to concerns about the funding of higher education. The Dearing Report, entitled “Higher Education in the Learning Society;” concluded that higher education required a substantial increase in funding and recommended that graduates should make a flat rate contribution to their tuition, payable either up-front, or by taking out a student loan to be repaid on an income-contingent basis when they gained employment. It also proposed that a system of means-tested grants towards students’ living costs be maintained (Dearing, 1997).

The main thrust of Dearing’s recommendations relating to access was based on the idea that students from lower socio-economic groups were failing to access higher education because of poor qualifications, low aspiration levels, and flawed educational decision-making (Dearing, 1997). The report suggested that there was a need to develop a national strategy of widening participation because this would be the key to Britain’s economic prosperity of the country. When the Labour Government was elected in 1997, it embraced Dearing’s recommendations for developing a national widening participation strategy and requiring students to pay tuition, but ignored suggestions relating to means-tested grants and instead turned all student grants into loans. This latter decision “has become the Achilles heel of subsequent New Labour policy for higher education” (Watson & Bowden, 2005; p.2). Although students from low-income families were exempt from paying the newly-instituted tuition fees, there was no additional financial help other than loans to cover living costs. The effect was to burden students from disadvantaged socio-economic backgrounds with higher levels of debt.

Despite the introduction of tuition fees of £1,000 per year² adjusted annually for inflation, the government recognized in 2003 that higher

education was still underfunded by approximately £9 billion. Following intense pressure from universities for more funding, particularly from a group of prestigious institutions who referred to themselves as the “Russell Group,” the plan for a new Graduate Contribution Scheme was proposed by the government’s white paper “The Future of Higher Education” (DfES, 2003a). These reforms were later authorized by the Higher Education Act of 2004. From 2006, the upfront flat fee was replaced with a variable fee between £0 and £3,000 per year. Students can pay the fee upfront or can take out a loan, in which case the Student Loans Company, under the aegis of government, pays the fee directly to the university. The loan is repayable by graduates through the national tax system once their income reaches the threshold of £15,000 per annum.

To better promote access, the 2004 Act reintroduced means-tested maintenance grants. Since 2005, students from poor backgrounds (with family income of £18,000 and under) who were more likely to be put off by the new tuition reforms have been entitled to a full grant of £2,700 per year. Those from families with income of up to £39,305 are entitled to a partial grant. Moreover, for new students starting their courses in September 2008, the full maintenance grant threshold was increased to £25,000 in family income, suggesting that, each year, about 50,000 more students would benefit from the full grant. In addition, anyone whose family earns up to £60,000 will qualify for at least a portion of the grant (Garner, 2007).

Under the 2004 Act, there is also help for students with low earnings after graduation: any loan not repaid after 25 years will be forgiven. Furthermore, the Act created the Office for Fair Access, a regulatory body whose task is to ensure that universities have satisfactory plans to widen access. These plans include bursaries for students from poor backgrounds, and outreach to schools to improve the information available to younger students about higher education opportunities (Barr, 2005).

The recent British reforms to the financing of higher education and their effect on the U.K.’s widening participation strategy are a source of extensive debate among policymakers, academics, and society in general. There is evidence that suggests that the reforms of student finances in the last decade have had a significant effect on

student behavior. In particular, there was a growth in term-time employment, which affects both students’ academic attainment and their ability to participate fully in university life (Hunt, Lincoln, & Walker, 2004). Between 1998–99 and 2002–03, the proportion of students working during term-time increased from 47 to 58 percent. Students most likely to work came from the lowest social classes, who also worked the longest hours (Callender & Wilkinson, 2003).

Another change in student behavior associated with the student funding reforms is the rise in the number of students living at home with their parents while studying. There was a more than 30 percent increase between 1997 to 2002 (Osman & McVeigh, 2002). Living at home limits students’ choices as they have to attend their local university, and research suggests that students who live at home are more likely to be low-income, ethnic minorities, and/or residents of the London metropolitan area (Callender, 2004).

There are also a number of studies that suggested that the prospect of rising student debt is a deterrent. A study by Archer et al (2003) noted that young people were very concerned about the prospect of long-term debt and identified risks such as credit blacklisting and repossession of household goods as deterrents to participation in higher education. Connor and Dewson (2001) surveyed young people from lower social classes who were qualified to enter higher education but chose not to do so. They found that for half of the survey sample, a fear of debt factored in their decision not to enter higher education. The same conclusion was reached by Callender (2003) who suggested that financial barriers were a major cause of deterring participation in higher education, and students from lower social classes were more likely to be concerned about their ability to afford higher education. Metcalf’s study (2005) found that the introduction of tuition fees most impacted disabled students and students whose families did not provide any financial support.

Apart from rising student debt, others argue that more problems lie in the complexity of the new finance system. Adnett (2006) suggests that the reforms “will lead to a further major increase in the overall complexity of the financial decisions facing higher education entrants.” He contends that “in the absence of a national bursary system in England, potential applicants have to access

each higher education institution, and collect and analyse data concerning tuition fees and the size of, and eligibility conditions for, financial assistance schemes. Even if potential students had the necessary analytical skills to assess the information, the lack of any simple means of comparing the diverse packages available among higher education institutions makes a systematic search exceedingly expensive in time” (pp.306–307). This complexity is more likely to affect students from low-income families who typically are the least informed and the least likely to be able to interpret the information available due to a lack of higher education experience in their families.

Barr (2006) suggests that there are three roots of exclusion from higher education, all of which contribute to deterring participation among low-income students—shortage of information (e.g. about the benefits of higher education contributing to a lack of aspirations), shortage of money, and shortage of education or preparation (e.g. attending a failing school). Two new initiatives have been set up by the government in recent years in an effort to address the shortages of information and money among low-income populations in order to close participation gaps in the system.

The first initiative, the Aimhigher Program, rose from the recognition that underrepresented groups see little or no value in higher education. If neither parent has experienced higher education, it is more likely that the family will presume there is little benefit in it. In an effort to raise aspirations and encourage preparation for higher education among this population, the government made a commitment to “deliver a coherent national outreach programme called Aimhigher” in the 2003 White Paper, “Widening Participation in Higher Education” (DfES, 2003b). The initiative was launched in August 2004 and is now delivered in each country of the U.K.

The second initiative concerns the financial barriers to higher education entrance. An ongoing problem is the loss of talented pupils from underprivileged groups once they reach the age of 16. These pupils enter the labor market while their more affluent peers remain in full-time education until the age of 18 and thus are able to gain the qualifications for entrance to higher education. The Education Maintenance Allowance (EMA) program was developed to provide a financial incentive to families in order to encourage young

people to remain in school after compulsory education, allowing them to prepare for entry into higher education. To that end, this initiative also addresses the third “root” of exclusion from higher education, shortage of education or preparation.

In this section, we will discuss the details of the implementation and evaluation of these two government efforts to widen access to higher education in the U.K. while considering the use of similar strategies in the U.S. context.

Policy Initiatives: Expanding Access to Higher Education in the U.K.

Aimhigher Program

In 2004, the British government set an objective to increase participation in higher education in the 18–30-year-old cohort from 43 to 50 percent by 2010 (DfES, 2003a). To reach this objective, two programs were launched: the Excellence Challenge in October 2000 and Aimhigher: Partnerships for Progression which were integrated into one national Aimhigher project in August 2004 to become the major government vehicle for widening access to higher education in the U.K.

The Aimhigher program is jointly funded by the Higher Education Funding Council for England (HEFCE) and the Department for Education and Skills (DfES), which are both government entities. The main objective of the program is to widen participation in higher education by raising the aspirations and developing the abilities of young people from underrepresented groups. More specifically, the program aims to:

- Raise aspirations and motivation to enter higher education and enhance education and workplace learning among young people from underrepresented groups.
- Make higher education more attainable for students from underrepresented groups to ensure that they gain the academic or vocational qualifications and learning skills that will enable them to enter higher education.
- Strengthen progression routes into higher education via vocational courses (including apprenticeships) delivered in schools, colleges or the workplace.

- Provide support through the admissions and funding process to progress underrepresented students into higher education (HEFCE, 2007).

Aimhigher targets groups that are currently underrepresented in higher education at the national level or in certain types of higher education institutions or subjects. These include young people (ages 13 to 30) from neighborhoods with lower-than-average participation in higher education; lower socioeconomic groups; depressed geographical areas; families with no previous experience of higher education; and minority or ethnic groups, as well as young people in foster care and with disabilities (HEFCE, 2007).

Aimhigher reaches its target population by promoting partnerships between higher education institutions, schools, colleges, employers, and other agencies. There are nine regional partnerships and 45 area partnerships throughout England. Through these partnerships, the program provides a range of outreach activities at a regional and area level, which allows them to be tailored to the needs of specific communities. As a result, the scope of Aimhigher activities is extremely broad. The types of activities listed below, however, are common to many areas:

- Organizing residential visits, “taster” days, and student talks to raise students’ awareness and aspirations about their higher education options.
- Offering information, advice, and guidance regarding specific issues relating to the practicalities of applications and the reality of debt in progressing to higher education.
- Providing summer schools, master classes, mentoring schemes, and study groups to encourage students to obtain the qualifications they need to enter higher education, as well as working with employers and students on the vocational route to encourage greater progression (HEFCE, 2006b).

Activities offered at a regional and area level are supported by national Aimhigher activities, including a road show for schools and colleges, the website (www.aimhigher.ac.uk), and a range of information booklets about higher education aimed at practitioners, stakeholders, and the target cohort. To coordinate activities for widening participation in higher education in the U.K., the Action on Access team was set up, funded by

both the HEFCE and Northern Ireland’s Department for Employment and Learning. The team works with institutions and partnerships including Aimhigher, providing advice, information, and support to their widening participation activities.

There has been extensive evaluation of the Aimhigher program by the government, including:

- Longitudinal tracking studies of three cohorts of young people who have taken part in Aimhigher activities.
- Surveys of higher education institutions, further education colleges, and work-based learning providers about the activities they offer as part of the Aimhigher program.
- Studies of selected area partnerships to explore policy and practice at a local level and the perceived effectiveness of the Aimhigher program.
- Impact monitoring taking place at an area and regional level by Aimhigher partnerships.

Aimhigher evaluations have focused on assessing the program’s impact on students in terms of awareness, aspiration, attainment, and educational progression towards higher education. There are two caveats worth mentioning about the Aimhigher evaluations: (1) other educational reform and outreach initiatives are present in partnership areas, so the impact of Aimhigher cannot be considered entirely in isolation; and (2) the long-term nature of Aimhigher means that its full impact will not be known for many years. That said, the indications so far are positive (HEFCE, 2006b).

Although there is limited evidence about the impact of Aimhigher on students’ progression into higher education at this time, there is evidence that the program has been effective at raising students’ aspirations for higher education, as well as helping them stay in school beyond compulsory education, which ends at age 16. The tracking study shows that nearly all—90 percent—Aimhigher students in the youngest cohort (which received the greatest exposure to the program of the three cohorts) continued into post-16 education compared to the national average of 70 percent. Furthermore, the vast majority of these students—86 percent—were studying level three qualifications (A level or equivalent), which would prepare them for entry into higher education (Ireland, Golden, & Morris, 2006). The impact of the Aimhigher program is particularly strong for students with low levels of aspirations and achievement. For instance, among

young people who had initially intended to leave school at age 16, 71 percent had continued into post-compulsory education after exposure to Aimhigher (HEFCE, 2006b).

The evaluations of Aimhigher have also demonstrated the types of activities that are particularly effective at raising aspirations and attainment levels among young people from underrepresented backgrounds, including:

- Visits to university campuses, particularly residential visits outside of students' home region;
- Residential summer schools/programs held on university campuses;
- Mentoring by university students and faculty;
- Subject-related "taster" classes/events featuring interactive, hands-on instruction; and
- Information, advice, and guidance on applying to and paying for university.

These activities were found to be effective because they offered much needed financial and subject guidance on gaining entrance to higher education; provided an opportunity for personal contact with university staff and students; and allowed students to experience the university environment, thereby challenging misconceptions and changing attitudes about higher education. These activities were also considered to be especially effective when they were part of an ongoing, coordinated, and coherent support program delivered by a core team of staff who tailored the activities according to students' interests and needs over time. Long-term involvement in Aimhigher-related activities has been found to be more effective than short-term involvement or participation in one-time events such as the Aimhigher road show (HEFCE, 2006a).

The Aimhigher program is clearly influenced by programs in the U.S. where federal and state initiatives have been running for a number of years that provide non-financial support to encourage participation and increase access for low-income and disadvantaged students. The federally-funded TRIO and GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs) programs make use of similar approaches to encourage low-income and first-generation students to enter higher education. However, American programs can still benefit from the extensive Aimhigher practitioner materials and evaluation studies to find innovative and effective ways to ad-

dress the intractable problem of expanding access to higher education in the U.S.

Education Maintenance Allowance

The Education Maintenance Allowance (EMA) program was introduced to provide a financial incentive to encourage young people from low-income families to remain in school after the end of compulsory education at age 16. It became available for all 16 year-olds studying in England in September 2004. Prior to the national rollout, it was piloted in ten Local Education Authorities in England in 1999 and 2000. By the first term of the 2005–2006 academic year, more than 380,000 young people had received an EMA payment.

The EMA's objective is to help support young people to continue their education after the General Certificate of Secondary Education (GCSE), which is usually taken at age 16. The courses can be academic or vocational and must involve at least 12 hours guided learning each week. The allowance is a weekly payment of £30, £20, or £10 depending on the household income (see table below). In addition, there are also bonus payments of up to £500 to reward good performance and progression on the course. These payments are set up by the school or college that the student attends and paid to those students who can demonstrate real progress and commitment to their learning program.

The weekly EMA payments are only available to students who have had *no gap* in their education; they must have come straight from secondary school, moving to sixth-form or further education college. One condition is that the student stays in post-compulsory education after age 16, studying for a minimum of 12 hours a week. The EMA payment continues for a two-year period until the student is 18 or 19 years of age. If they go into full-time employment instead, they will not be able to claim EMA, although they may be able to apply for an Adult Learning Grant instead. However, students are allowed to work part-time while studying and receiving their EMA.

Continued receipt of the allowance and the bonuses is dependent on young people complying with the terms of the learning agreement between students, their parents, and their school or college. This agreement sets out conditions relating to attendance, behavior, and performance. Any unauthorized absences will cause the student

| Household Income per Annum | Weekly EMA |
|----------------------------|-----------------------|
| up to £20,817 | £30 a week (\$60 USD) |
| £20,818 - £25,521 | £20 a week (\$40 USD) |
| £25,522 - £30,810 | £10 a week (\$20 USD) |
| more than £30,810 | No entitlement to EMA |

to lose that week's allowance. Decisions regarding whether an EMA payment should be made for a particular week are made by the school or college according to guidelines set by the government's Department for Education and Skills.

The government has undertaken detailed evaluations of the EMA since its inception, including a quantitative longitudinal cohort study, a qualitative study, and annual implementation studies. The evaluation studies examine the impact of the EMA pilots, although the program has been rolled out nationally since 2004. There were four variants of the EMA pilots with differing levels of weekly allowances and bonuses. In some pilot areas, the weekly allowance was paid to the parent instead of the young person. The quantitative study involved large surveys of random samples of young people in 10 of the original 15 EMA pilot areas and 11 control areas. The first cohort included young people who completed compulsory education (Year 11) in 1999; the second cohort included young people who completed in 2000. The findings from the quantitative study are based on data collected from four interviews with the two cohorts of young people and their parents, conducted at annual intervals when the young people were 16, 17, 18 and 19 years of age (Middleton et al, 2005). The qualitative study followed up a sample of young people and parents from the first cohort who had taken part in the quantitative survey in 1999. The sample included 101 young people (55 participants and 46 non-participants) and 50 parents (30 parents of participants and 20 parents of non-participants) (Legard, Woodfield, & White, 2001). The main aims of the evaluation studies were to assess the impact of the EMA pilots on participation, retention, and achievement in post-compulsory full-time education.

In order for the EMA program to work, young people and their parents must know about it, how to apply for it, and how to use it. The evaluation shows that LEAs were generally successful in promoting EMA to eligible young people and their parents. Levels of awareness of

EMA were high, particularly among eligible young people in full-time education (96 percent). Overall, 63 percent of young people in lower-income families in the pilot areas had applied for EMA and the vast majority of applications had

been granted. While awareness was generally quite high, a substantial minority of young people had not heard of it, including 40 percent of young people who were not in employment, education or training (NEET), which demonstrates that there is still potential for EMA to exert an influence on the post-compulsory decision-making of key groups of young people (Ashworth et al, 2002).

The numbers of applications were highest in the pilot areas with the highest weekly allowances and/or bonuses. Young people eligible for the full award were more likely to apply than those eligible for the partial award, which suggests that either the partial award was not sufficiently motivating and/or there was a lack of adequate information about eligibility requirements (Ashworth et al, 2002). There is some evidence that confusion about the requirements caused some eligible young people not to apply. Young people's experience with the application process ranged from easy to difficult depending on the length and complexity of the form and the amount of evidence required from parents for income eligibility. A standardized form has since been developed to make the process easier for young people and their parents, although some parents are still reluctant to divulge financial information. Young people who received information about the scheme from "official" sources such as schools found the application process to be easier than students who heard about it from "unofficial" sources due to inaccurate information. Young people also said they would have liked to receive information about EMA earlier than they did because many of them had already made their post-compulsory plans by the time they found out about it. Given that these young people were in the first cohort, it is likely that young people currently are much more aware of and able to take advantage of the program, particularly since it has rolled out nationally (Legard et al, 2001).

In terms of outcomes, the evaluations show that EMA receipt has a significant impact on participation and retention in post-compulsory education. In comparison to young people in control areas,

eligible young people in EMA pilot areas were 6 percent more likely to be enrolled in full-time education during the two years following compulsory education. The effect was particularly strong for key groups of young people, including men (9 percent), youth from the lowest socio-economic groups (9 percent), and youth who had been low or moderate achievers at the end of compulsory education, 11 and 9 percent respectively. In each of these groups, the gains in participation and retention were largely due to a reduction in the percentage of young people who would not have experienced any post-compulsory education without the receipt of EMA (Middleton et al, 2005).

The impact of EMA on participation and retention was also greater for young people who were eligible for a full award than for those eligible for a partial award. In fact, the impact among young people eligible for a partial award was not significant at all. EMA paid directly to the student rather than the parent also proved to be more effective in raising participation and retention rates. Further, each additional pound of EMA had an incremental effect on participation and retention, and the more generous the weekly payment and bonus, the higher the participation and retention (Ashworth et al, 2002).

Based on qualitative reports, the impact on participation and retention was due to the combination of the “carrot and stick” in the EMA scheme (Legard et al, 2001). The “carrot” of the EMA weekly payment and bonus motivated students to attend classes and to do well in their courses because they felt a higher sense of responsibility since they were earning money to do so. The “stick” of losing the weekly payment due to non-attendance and failing to receive the bonus due to underperformance also impacted students’ behavior, particularly those with less motivation to study and those with fewer financial resources who depended more heavily on EMA as a source of income. Where EMA payments were made to parents, students were also motivated by concerns about parental reaction if they did not receive a weekly payment (Legard et al, 2001).

Finally, the evaluation shows that EMA students were more likely to enter full-time education at 18. From EMA areas, 60 percent went on to studying either in universities or further education colleges full-time, following academic or vocational courses. In comparison, 56 percent

of young people in control areas continued on (Middleton et al, 2005). An additional 23 percent of EMA-eligible young persons returned to full-time education after the age of 19, which may well indicate that they had taken a “gap” year, giving them the opportunity to earn and save for going to university the following year.

On applying for university, means-tested bursaries and loans are available for all students who are offered places. The significance of EMA is that it enables capable students from low socioeconomic groups to undertake the two years of education from ages 16 to 18, which then qualifies them to participate in higher education. These students, who had the potential to be high achievers at age 16, are able to develop their abilities through the necessary further two years of study to bring them to the level where they are then qualified to enter university.

Overall, the evaluation has concluded that the EMA program has met its policy objectives of increasing participation and retention in full-time post-compulsory education and in reducing the number of young people who failed to take part in employment, education, or training— at least for the two years of EMA eligibility. In addition, EMA had a disproportionately positive impact on specific target groups who tend to be underrepresented in post-compulsory education; namely, young people from lower-income families, particularly young men. Finally, there is some evidence that the receipt of EMA has lasting positive effects for young people in terms of their entry to higher education.

In fact, the benefits from the EMA are such that the government is now considering extending the age of compulsory education to 18. It will be interesting to see the details of this proposal.

Conclusions

The initiatives discussed in this article give some indication of the range of interventions currently being used by the U.K. government to widen participation in higher education. The two of most interest to U.S. readers are the Aimhigher and Education Maintenance Allowance programs. The Aimhigher program owes much inspiration to U.S. initiatives, particularly the Federal TRIO and GEAR UP programs, which have been shown to be successful. The difference is not so much concerned with the effectiveness of the programs, but with the scope of delivery. Funding for the TRIO programs remains limited and has stagnated since 2005. Although the programs serve nearly one million students, they reach only 7 percent of the eligible population. Aimhigher, on the other hand, intends to reach 100 percent of the eligible population. Although it will not likely attain that target, it will not fall far short since the government has funded it adequately to carry out its aims.

The EMA program is also a country-wide initiative that aims to reach 100 percent of the eligible population. The program has been carefully evaluated and found to offer a range of benefits for the individuals participating, for the labor market, and for social services. The possibility of setting up a similar pilot in the U.S. might be explored to retain or re-enroll the more than 30 percent of students who drop out of high school and, as a result, the higher education pipeline.

The drive to attract more students into higher education remains a major concern in the U.S. and the U.K. The U.K. initiatives to widen participation are driven by the need to respond effectively to economic pressures to have a highly-skilled workforce that can contribute to the emerging global knowledge society. In the context of globalization, it is essential that the participation gap in higher education must be closed for social as well as economic reasons. The costs are considerable, but, in the government's view, the results are worth the effort. ㄨㄨㄨ

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