

# Learning Communities and Student Success in Postsecondary Education

A Background Paper

Derek V. Price

With research support from Malisa Lee



December 2005

This paper is funded under contract to MDRC by the Ford Foundation, the Ford Motor Company, the New York Times Foundation, and the Robin Hood Foundation.

The findings and conclusions presented herein do not necessarily represent the official position or policies of the funders.

Dissemination of MDRC publications is supported by the following funders that help finance MDRC's public policy outreach and expanding efforts to communicate the results and implications of our work to policymakers, practitioners, and others: Alcoa Foundation, The Ambrose Monell Foundation, The Atlantic Philanthropies, Bristol-Myers Squibb Foundation, Open Society Institute, and The Starr Foundation. In addition, earnings from the MDRC Endowment help sustain our dissemination efforts. Contributors to the MDRC Endowment include Alcoa Foundation, The Ambrose Monell Foundation, Anheuser-Busch Foundation, Bristol-Myers Squibb Foundation, Charles Stewart Mott Foundation, Ford Foundation, The George Gund Foundation, The Grable Foundation, Jan Nicholson, John S. Reed, The Lizabeth and Frank Newman Charitable Foundation, The New York Times Company Foundation, Paul H. O'Neill Charitable Fund, The Sandler Family Supporting Foundation, and The Stupski Family Fund, as well as other individual contributors.

### **Author's Biography**

Derek V. Price, director of DVP-PRAXIS LTD, is a higher education consultant whose areas of expertise include research and analysis of college access, student success, and social inequality. The former director of higher education research at Lumina Foundation for Education, Dr. Price received his Ph.D. in sociology from American University and holds a master's degree from the University of Michigan — Ann Arbor. He works closely with Achieving the Dream: Community Colleges Count — a national initiative to improve student success at community colleges. He is the author of *Borrowing Inequality: Race, Class and Student Loans* (Lynne Rienner, 2004).

### **Author Acknowledgments**

Many individuals contributed to this report by coordinating site visits, finding research materials, or providing insightful suggestions and edits to the paper. I am especially grateful to Phyllis Worthy Dawkins, Tracey Elliott, Carole Lester, Linda Uzureau, and Catherine Willermet for welcoming me to their campuses. Staff at MDRC — Dan Bloom, Daniel Fallon, Rob Ivry, and Casey Macgregor — provided site-visit reports on campuses I was unable to visit personally. John Hutchins and Margaret Bald contributed exceptional and skillful reviewing and editing, and Tom Brock provided helpful comments on an earlier draft. Finally, thanks to the learning community symposium participants who met at MDRC in November to discuss the feasibility of a national demonstration and evaluation of learning communities — especially Marcia Babbitt, Tom Bailey, Emily Decker Lardner, Jodi Laufgraben, Mark McColloch, Cheryl Roberts, Cecilia Rouse, Rachel Singer, Barbara Smith, Vincent Tinto, and Phyllis Van Slyck. I am solely responsible for any errors and omissions.

For information about MDRC and copies of our publications, see our Web site: [www.mdrc.org](http://www.mdrc.org).  
Copyright © 2005 by MDRC. All rights reserved.

## Introduction

Learning communities bring together small groups of college students who take two or more linked courses together — typically as a cohort. During the last few decades, many colleges and universities have started or expanded learning communities as a method to deliver curricula to students and forge closer bonds between students, among students and faculty, and between students and the institution. The learning community “movement” has grown in large part because of the leadership and advocacy of the Washington Center for Undergraduate Education at Evergreen State College. Founded in 1985, the Washington Center expanded its support for learning communities nationally after 1996 with support from the Fund for the Improvement of Postsecondary Education (FIPSE) and the Pew Charitable Trusts. As of August 31, 2005, more than 245 learning communities were listed in the online directory of the National Learning Commons.<sup>1</sup> The learning communities registered on this Web site are located at both two-year and four-year colleges. A recent survey by the Policy Center on the First Year of College found that all types of colleges and universities offer some form of learning communities; 62 percent of responding institutions enrolled at least some cohorts of students into two or more courses.<sup>2</sup>

Alongside the increasingly widespread use of learning communities by colleges and universities, a literature on their effectiveness is emerging. Much of this research consists of single-institution assessment reports and qualitative case studies; however, a few quasi-experimental and correlative research studies indicate that students who participate in learning communities get better grades and re-enroll in subsequent terms at rates higher than their peers who take stand-alone academic courses. Recently, early data from a learning communities evaluation provided more robust evidence of their impact on student success. These results are from one of six sites in the Opening Doors project, which MDRC launched in 2002 to test strategies intended to promote student persistence and academic success among low-income students at community colleges. Kingsborough Community College in Brooklyn, New York (part of the City University of New York system), initiated a learning community program that targeted first-time freshmen who attend classes full-time during the day. Administrators at Kingsborough initially focused on Liberal Arts majors and “direct admits” (that is, students who missed the university-wide application deadline and applied directly to Kingsborough) because these students historically were not as successful as other Kingsborough students. The evaluation used an experimental design in which students randomly assigned to the learning community program were compared with a control group who received the existing first-semester experience. Preliminary results from the Kingsborough demonstration indicate that learning com-

---

<sup>1</sup>[http://www.evergreen.edu/washcenter/directory\\_entry.asp](http://www.evergreen.edu/washcenter/directory_entry.asp)

<sup>2</sup>Barefoot (2002).

munity students achieve higher course-pass rates and are more likely to complete their developmental English requirements one year later; however, there is not yet any apparent impact on semester-to-semester retention.<sup>3</sup> A national, multiyear initiative, Achieving the Dream: Community College Counts, sponsored by Lumina Foundation for Education and other foundations, has also generated enthusiasm for learning communities.<sup>4</sup> MDRC is the evaluation partner for this initiative, which focuses on improving student outcomes, such as course completion rates, persistence, and graduation. Eligibility for Achieving the Dream is limited to community colleges in selected states with African-American, Hispanic, and Native-American enrollment of at least 33 percent or low-income enrollment of at least 50 percent. The first cohort of Achieving the Dream colleges was identified in May 2004 — of these 27 colleges, 13 identified learning communities as an intervention strategy that could potentially improve student success.

The growing interest in learning communities at colleges and universities throughout the United States — combined with the early positive results from the Kingsborough Community College evaluation and the suggestive evidence from other published research literature — help make the case for a large, multicollege demonstration project to build more conclusive evidence for the effectiveness of learning communities. A national demonstration that employs a random assignment design can test for causality between learning communities and a range of student educational outcomes, including credit accumulation, grades, and term-to-term retention. The purpose of a demonstration would be to document the effectiveness of learning communities and, through planned variation and even differential-impact studies, to examine the aspects of learning communities that may account for their effects.

This paper reviews the history and theory underlying learning communities, describes various learning community models, summarizes published research, synthesizes how some learning communities operate based on field visits to nine colleges, and concludes by proposing program and research design questions to consider for a multicollege demonstration.

## What Is a Learning Community?

In *The Powerful Potential of Learning Communities* (1999), Oscar Lenning and Larry Ebbers call for the higher education community to “intentionally develop learning communities that promote and maximize student learning.”<sup>5</sup> They describe four basic categories of learning communities: curricular, classroom, residential, and student-type. The benefits to students who participate in learning communities include “higher academic achievement, better retention

---

<sup>3</sup>Bloom and Sommo (2005).

<sup>4</sup>As of November, 2005, KnowledgeWorks Foundation and the Nellie Mae Education Foundation are also supporting Achieving the Dream.

<sup>5</sup>Lenning and Ebbers (1999), p. iii.

rates, greater satisfaction with college life, improved quality of thinking and communicating, a better understanding of self and others, and a greater ability to bridge the gap between academic and social worlds.”<sup>6</sup> So what exactly is a learning community? In a speech to the National Teaching and Learning Forum in May 1998, Vincent Tinto described the bare bones of learning communities as “co-registration or block scheduling that enables students to take courses together.” A seminal monograph on learning communities offers the following definition:

[A]ny one of a variety of curricular structures that link together several existing courses — or actually restructure the material entirely — so that students have opportunities for deeper understanding and integration of the material they are learning, and more interaction with one another and their teachers as fellow participants in the learning enterprise.<sup>7</sup>

Although learning communities vary in scope and orientation, all types share several basic characteristics:

- Organizing students and faculty into smaller groups,
- Encouraging integration of the curriculum,
- Helping students establish academic and social support networks,
- Providing a setting for students to be socialized to the expectations of college,
- Bringing faculty together in more meaningful ways,
- Focusing faculty and students on learning outcomes,
- Providing a setting for community-based delivery of academic support programs, and
- Offering a critical lens for examining the first-year experience.<sup>8</sup>

According to Nancy Shapiro and Jodi Levine, these characteristics — broadly defined — are intended to “create an integrated teaching and learning experience for participants.”<sup>9</sup>

---

<sup>6</sup>Lenning and Ebbers (1999), p. iv.

<sup>7</sup>Gabelnick, MacGregor, Matthews, and Smith (1990), p. 19.

<sup>8</sup>Shapiro and Levine (1999).

<sup>9</sup>Shapiro and Levine (1999), p. 6.

## Theoretical and Philosophical Foundations

Learning communities draw on a rich scholarship informed by the philosophical, structural, and pedagogical writings of John Dewey and Alexander Meiklejohn in the 1920s.<sup>10</sup> These intellectual pioneers were part of a transformative debate over the purposes of education. Dewey's scholarship emphasized the diverse aspirations and experiences of students, and he called for educators to be experimental and intentional in their efforts to "meet students where they are at." A recent book on learning communities and reform of undergraduate education cites Dewey's student-centered learning and active learning models as the roots of experiential and cooperative learning embedded in the learning communities of the twenty-first century.<sup>11</sup> These authors also mention the scholarship of Paulo Freire, who advocated a "dialogic model" of educational practice. The dialogic model assumes that both teachers *and* students have experiences and knowledge to be shared, which Freire contrasts with the "banking model" of education, in which students are passive repositories of the knowledge deposited by the teacher.<sup>12</sup> In other words, the foundation of learning communities as places for experiential and cooperative learning that empower all students as learners — and the belief that students and teachers share responsibility for this learning — can be considered a contemporary extension of Freire's dialogic model of educational practice.

Alexander Meiklejohn was a dean at Brown University and president of Amherst College before starting the Experimental College at the University of Wisconsin in 1927. He wrote extensively about the fragmentation of learning and the increased specialization of academic disciplines; specifically, he argued that the German research university model that was ascending in the United States would undermine the social responsibility of higher education to provide general education to a broad cross-section of society.<sup>13</sup> His criticism was echoed by the sociologist C. Wright Mills in the *The Sociological Imagination* (1959), who lamented the "rationalization of social inquiry" by scholars as a symptom of "abstracted empiricism" and the rise of a "bureaucratic social science." Mills was referring to the de-linking of social inquiry from the very social milieu in which it was organized. For Mills, this trend was driven, in part, by the competition for status between disciplines and among professors within the research university, and was an indication that social scientists were placing individual ambition above responsibility to society. Mills, in contrast, advocated for the public role of social scientists "to help the individual become a self-educating man" and "to help build and to strengthen self-cultivating publics."<sup>14</sup> In short, both Meiklejohn and Mills believed strongly in educators' role

---

<sup>10</sup>Smith, MacGregor, Matthews, and Gabelnick (2004).

<sup>11</sup>Smith, MacGregor, Matthews, and Gabelnick (2004).

<sup>12</sup>Freire (1973).

<sup>13</sup>Smith, MacGregor, Matthews, and Gabelnick (2004).

<sup>14</sup>Mills (1959), p. 186.

to benefit society at large — and, just as for Dewey, this meant that education was to cultivate both mind and spirit (that is, the whole person).

Learning communities became Meiklejohn's experiment in practicing this ideal by teaching students "how to think, not what to think."<sup>15</sup> The Experimental College at the University of Wisconsin is considered to be one of the first learning communities. Meiklejohn focused the college on the principles of integrated learning with a common reference that dissected all aspects of a diverse curriculum taught by many faculty members.<sup>16</sup> By common reference, Meiklejohn meant that a recurrent theme, topic, or issue would cut across all courses taught in the Experimental College. The Experimental College enrolled between 74 and 119 freshmen each year in a two-year, lower-division integrated program.<sup>17</sup> Students would take upper-division courses within their major through regular courses. Meiklejohn wanted a broad cross-section of freshmen to participate in the learning communities of the Experimental College. His pedagogical approach intended to foster relationships between and among faculty and students quite distinct from the traditional structure of a college education. In fact, the Experimental College was designed as a living-learning residential community in which the community would support students, rather than distract them from intellectual work.<sup>18</sup>

The contemporary scholarship that informs learning communities is exemplified by a theoretical framework on student retention developed by Vincent Tinto. He posits that "interactions among different individuals within the academic and social systems of the institution lead individuals of different characteristics to withdraw from that institution prior to degree completion."<sup>19</sup> Tinto's theory is sociological — that is, students' behavior cannot be understood outside the social and cultural context in which they experience postsecondary education. The term "student engagement" is often used to refer to the process of interaction between individual students and their institution.

From an institutional perspective, Tinto's theory presents the possibility that a college can change its educational environment in order to retain more students. Thus, college officials can ask questions about the "formal and informal interactional environment" that operates throughout the institution. Put another way, Tinto's model of student retention suggests a core relationship between "the degree of one's social and intellectual integration into the academic and social communities of the college" and the likelihood of staying or leaving the college.<sup>20</sup> The question for colleges, then, is how to increase students' sense of social and intellectual inte-

---

<sup>15</sup>Smith, MacGregor, Matthews, and Gabelnick (2004).

<sup>16</sup>Shapiro and Levine (1999).

<sup>17</sup>Bureau of Guidance and Records (1932), as cited in Smith, MacGregor, Mathews, and Gabelnick (2004).

<sup>18</sup>Smith, MacGregor, Matthews, and Gabelnick (2004).

<sup>19</sup>Tinto (1987), p. 113.

<sup>20</sup>Tinto (1987), p. 116.

gration with the institution. For Tinto, the learning communities' model of academic and social interaction represents an ideal structure to increase students' connection with the college in general — and with the learning process specifically.

Each of these scholars conceives teaching and learning as a relational process; that is, effective learning depends as much on the learning environment as it does on the content of that learning. Students are shortchanged if the learning environment assumes that the student is passive. Rather, learning should actively engage the student and the teacher in order to cultivate a critical awareness of the context in which students experience learning — and life. As a result, students become empowered to transform that context should they so choose. Learning communities are the pedagogical embodiment of this belief: Teaching and learning involve co-creating knowledge through relationships among students, between students and teachers, and through the environment in which these relationships operate.

### **Models, Structures, and Practices**

The four most common models of learning communities are: 1) paired or clustered courses; 2) cohorts in large courses; 3) team-taught programs; and 4) residence-based programs.<sup>21</sup> The paired-course model connects individually taught courses through cohort or block scheduling — that is, small groups of students are enrolled together as a block and take the same courses together. This type of learning community typically enrolls between 20 and 30 students and often includes a basic writing or reading course linked to a core social science course. These classes tend to share curricular connections and/or make logical skill area connections — for example, pairing calculus with general chemistry could promote scientific discovery and quantitative reasoning skills.<sup>22</sup> In paired courses, faculty might combine class meetings or schedule an off-campus field trip; in addition, a service learning or community service component could also be integrated into both courses' requirements.<sup>23</sup> Clustered learning communities block-schedule four or five courses together, but often only two of the clustered courses tend to connect across the curriculum.

The cohorts-in-large-courses model is often used for large introductory lecture courses for freshmen to provide students a smaller group with whom they can study and work. These learning communities are generally called freshman interest groups and typically include a smaller writing course and a weekly seminar limited to students in a particular interest group.<sup>24</sup> Faculty seldom coordinate curricular materials or activities in this type of learning community;

---

<sup>21</sup> Laufgraben and Shapiro (2004); Shapiro and Levine (1999).

<sup>22</sup> Laufgraben and Shapiro (2004),

<sup>23</sup> Shapiro and Levine (1999).

<sup>24</sup> Laufgraben and Shapiro (2004); Shapiro and Levine (1999).

however, freshman interest groups provide ample opportunity for peer leaders — usually former interest-group students — to work as tutors and lead weekly seminars.<sup>25</sup> The seminars are often used as an “orientation” course where peer leaders help students to ease the transition from high school to college.

The team-taught model is the most comprehensive approach to learning communities because faculty members co-create curricula and organize two or more courses around an interdisciplinary theme. Themes can be broad-based, emphasize skill development, or prepare students for professions.<sup>26</sup> Enrollment in this type of learning community can be much larger than in the paired-course model; often up to 75 students can be enrolled. Students and faculty break off into smaller groups to build upon the lessons from the learning community course, discuss assigned texts, attend a lecture series, or participate in service learning opportunities.<sup>27</sup>

The residence-based model incorporates student residential life into the academic environment, based on the belief that not all learning occurs in the classroom.<sup>28</sup> In this type of learning community, students are intentionally organized into cohorts who enroll in specific courses together and reside in a dedicated living space.<sup>29</sup> The curricula within residential learning communities typically follow one of the three approaches described above. The important distinction of this model is that it allows ample opportunity for extracurricular activities, such as student-faculty retreats, theater productions, parties, and group dinners.<sup>30</sup> Residential learning communities often have full-time counselors in residence, faculty offices in the dorm hall, and students as leaders in governing the community. The four basic models provide some insight into the variability of learning communities in practice. Although the best learning communities incorporate “pedagogies of active engagement and reflection,” all learning communities “aim to foster a sense of community and shared purpose among learners and their teachers.”<sup>31</sup> In essence, learning communities can be customized to meet the needs and objectives of students and institutions; however, they are typified by the desire to make curricular connections and align pedagogical practices across multiple courses.<sup>32</sup> The main differences among learning communities are found in the degree to which faculty teams work together to integrate curricula across their courses.

According to the National Learning Communities Project, contemporary learning communities fall along a continuum from least to most integrative (see Table 1). On one end of

---

<sup>25</sup>Shapiro and Levine (1999).

<sup>26</sup>Laufgraben and Shapiro (2004).

<sup>27</sup>Shapiro and Levine (1999).

<sup>28</sup>Shapiro and Levine (1999).

<sup>29</sup>Laufgraben and Shapiro (2004).

<sup>30</sup>Shapiro and Levine (1999).

<sup>31</sup>Smith, MacGregor, Matthews, and Gabelnick (2004), pp. 68-69.

<sup>32</sup>Smith, MacGregor, Matthews, and Gabelnick (2004).

Table 1

**The Learning Communities Continuum:  
Most Integrative Activities to Least Integrative<sup>a</sup>**

<b>Degrees of Curricular Integration</b>	<b>Degrees of Collaboration on the Teaching Team</b>
A common syllabus for all courses and activities (requires a pure cohort of students)	All aspects of the program jointly planned and developed
Integrative assignments/projects  Assignments/research paper or project Discussion/integrative seminar Online discussions	Jointly developed, jointly graded assignments and projects
Co-curricular activity  Pot-lucks, socials Field trip, conference away from campus On-campus play or exhibit Service learning or community-based projects	Collaborative planning of co-curricular events  Regular meetings and communication throughout term
Common goals, and pedagogical approaches  Active learning, cooperative/collaborative learning, student self-assessment, Classroom Assessment Techniques Some common learning outcomes	Collaborative planning around themes, topics, concepts, and student learning outcomes  Collaborative effort to reach out to students in difficulty
Some common themes and topics	Coordination of calendar, tests, due dates  Exchange of syllabi and cursory communication

SOURCE: National Learning Communities Project “Learning Commons” Web site, <http://learningcommons.evergreen.edu>

<sup>a</sup>These columns should be read separately and vertically: They suggest activities moving from the most amount of integration at the top to the least amount at the bottom. This chart is the product of collaboration among Jean MacGregor (The Evergreen State College), and Will Koolsbergen and Phyllis van Slyck (LaGuardia Community College).

the continuum are *student cohort seminars* that connect smaller groups of students enrolled in larger courses, with limited or no faculty involvement. On the other end are *coordinated studies*, where faculty members team up to teach coursework in two or more classes through an integrated program of study. In between are variations of *linked or clustered courses*, which enroll cohorts of students and are connected by a common theme; sometimes these clusters offer joint course assignments, but, more often, courses are linked by theme only and assignments remain independent to each course.

### **Reflections from Site Visits**

Site visits to nine two-year and four-year colleges and universities revealed that linked clusters were the most prevalent form of learning communities, although all sites could point to one or more coordinated-studies learning communities that were offered regularly.<sup>33</sup> Institutions that used learning communities extensively appeared less likely to use a coordinated-studies model.

Learning communities at the University of Texas at El Paso (UTEP) began in 1997 with a pilot coordinated-studies program for entering pre-science and preengineering students, the CircLES program. The student retention rates for learning community participants in the early pilots of CircLES appeared to show significant improvement — 80 percent for CircLES students compared with 68 percent for students in regular classes. These data were from a simple comparison; even so, faculty and administrative leaders were so impressed by the difference that they immediately scaled up CircLES to include all entering pre-science and preengineering students. The program provides an extended summer orientation that includes hands-on science modules and special advising. In the fall, students enroll in clusters of four classes (a university seminar, English, Math, and a required science or engineering course, such as Biology); placement is based on students' math preparation from high school. Typically, these clusters enroll a cohort of 25 students, but assignments across the curricula are not required or widespread. The increase in dual enrollment of high school students in the local community college has further complicated the CircLES program's linked-clusters model because of the increased variation in students' English placement. It is likely that the program will further evolve into a paired-course model for a cohort of students, which links the university seminar to students' initial math course.

Learning communities at UTEP extend beyond pre-science and preengineering programs to the general student population; however, these learning communities are optional and occur only as a result of faculty initiative and interest. Many of them pair the university seminar with a core curriculum course or developmental English course and include peer advising and

---

<sup>33</sup>Site visits were conducted by the author and MDRC staff, including Robert Ivry, Dan Bloom, Dan Fallon, and Casey MacGregor.

in-class tutoring. The curricula for these paired courses are more likely to include joint assignments, but faculty members seldom teach together in each others' classrooms. In fall 2005, more than 1,100 students enrolled in 53 learning communities at UTEP — 30 CircLES programs for pre-science and preengineering students and 23 learning communities for the general student population.

Many institutions that offer cohort-seminar or linked-cluster forms of learning communities attach academic and social support services even when curricula are not well integrated. At Johnson C. Smith University (JCS) in Charlotte, North Carolina, one impetus for the implementation of a required cluster of five courses in its learning communities for all entering freshmen was that “authentic” learning communities provide the academic and social supports students ought to have, but are too often provided only as needed or when the student requests them. All clusters have case managers who advise students on the academic and social supports available to them and are assigned specific advising and tutoring personnel. Some clusters have required tutoring labs for all students, but most use faculty referrals to labs for students who need additional help. These referrals are not optional — faculty send students to tutoring labs with written directions that must be signed by the lab tutor and returned. Each learning community cluster has a common theme, and a minimum of two courses must have a joint assignment. An orientation class associated with each cluster meets weekly.

An important distinction at JCS is the significant commitment to faculty development around the learning community philosophy and model. Before JCS launched 17 clustered learning communities for all first-year students entering in fall 2005 (called the Freshmen Academy), it held a week-long summer institute for faculty. This institute included workshops on the philosophy of learning communities, the use of technology, and learning across the curriculum. The faculty worked in teams during the workshops and by the end of the week completed some preliminary planning for cluster themes and joint assignments. In August, cluster teams, including nonfaculty staff who were assigned as case managers, met for two days to develop practical applications to use during the Freshmen Academy. In fall 2005, more than 400 entering first-year students enrolled in learning communities at JCS.

At Prairie State College in Chicago Heights, Illinois, a Title III grant provided the resources to offer learning communities to all entering students who place in developmental writing and reading at the level just below college English. In fall 2005, more than 400 students were expected to enroll in at least 17 learning communities; however, not all of these will be identical. Some will reflect a six-hour coordinated curriculum for an integrated remedial reading and writing course. English faculty members who participated in a semester-long Faculty/Staff Learning Community the previous spring developed the curriculum. Other learning communities will include linked reading and writing courses that share a common theme and have joint assignments. Four of the 17 learning communities will have an “intrusive advising” component within the

classroom; college success skills will be taught during learning community class time, and students will have four mandatory meetings with an assigned advisor outside the classroom.

At the University of Central Arkansas (UCA), about 600 first-year students participate in three residential learning communities that include a resident “master,” 20 upper-class peer mentors, and graduate student residential advisors. Students take three of their five courses at their residential college during the first semester and two during the second semester, but students do not stay together as cohorts. Because these learning communities have a residential aspect, nonclassroom academic and social activities are readily available, including outings, community service efforts (for instance, Hurricane Katrina relief), book clubs, study halls, and on-site tutoring. Although each residential learning community has a theme, the focus at UCA is not on learning across the curricula; rather the residential learning communities create strong social networks, increase social integration with the college campus, provide academic support, and generate a sense of family.

UCA also offers 18 linked classes that are available to the general student population, and a University College learning community for students who require developmental reading, writing, or math instruction. University College enrolls about 450 students who cannot move into the regular college program until they pass their developmental classes and complete 12 credits in the general curriculum. Although UCA considers University College a learning community because it functions as a college within a college, with its own academic advisors and tutoring center, there are few linked courses offered. In fall 2005, about 75 percent of the 2,500 entering students at UCA were enrolled in some form of learning community: the residential college, linked courses, or University College.

Richland Community College (RCC) in Dallas, Texas, was the most committed to the coordinated-studies model of learning communities among the institutions visited; however, only about 200 students of a total enrollment of almost 14,000 participate in learning communities. RCC provides a dedicated classroom that can accommodate four learning communities each term. One year before it offers a learning community, interdisciplinary faculty teams propose a 6- to 12-hour cluster of classes organized around a common theme, project, or problem. Most learning communities are offered as six-hour blocks; courses are team-taught and faculty members integrate their curricula. For faculty interested in developing a learning community, the Office of Academic Enrichment offers a faculty guidebook, professional development workshops on collaborative learning, and the opportunity to “shadow” an existing learning community team. Learning communities reach a very small fraction of students at RCC because faculty self-select to teach in them, dedicated classroom space is limited, and they do not target specific groups of students.

Collin County Community College District in McKinney, Texas, also offers a fully integrated learning communities model that links two courses together around a common theme. In fall 2005, about 200 students were enrolled in 13 learning communities. Like RCC, Collin County faculty must propose a learning community one year before it is offered. Faculty need the approval of their respective academic deans before submitting their paired-course learning community to an advisory task force. The proposal must include the learning community theme, the two classes involved, the number of credits to be earned, and the preferred time period and days the learning community will meet. Faculty members are expected to visit each others' classrooms the previous semester and meet regularly to integrate the curricula. Learning communities at Collin County are not targeted to specific students and appear to be driven by faculty desire to team-teach across the sociology, history, and political science curricula.

Anecdotal evidence collected from limited site visits indicates that learning communities *in practice* were more likely to integrate academic and social support services within two courses linked by theme for a common cohort of students. The integration of curricula — if done at all — was generally limited to one or more joint assignments in two courses or to a shared large project due at term's end for both classes. In all cases, creating a sense of community among students appears to be the most important objective of faculty, staff, and administrators.

In addition, the trajectory of learning community growth at all campuses visited appeared to be an “organic” process: A core group of faculty became aware of learning communities as a valuable pedagogical tool and sought to implement them. This core group recruited additional faculty to teach, and asked for administrative support to expand learning community offerings. For the most part, learning communities did not expand much beyond the initial core of faculty; however, assessment data on student outcomes and an aggressive and persuasive faculty member or dean can eventually bring along the broader university community. For example, Jayme Stone at the University of Central Arkansas, Maggie Smith at the University of Texas at El Paso, and Phyllis Worthy Dawkins at Johnson C. Smith University have worked diligently to bring learning communities into the mainstream of campus life. At these institutions, learning communities offer students a more holistic college experience, create a sense of family, and build academic and social support networks. Whether a residential learning college, a required first-year learning community cluster, or a set of paired courses that share a common theme, learning communities on these campuses reach a significant proportion of students — providing the additional assistance and guidance many of them need to be successful in college.

## **Research on Learning Communities**

Most research on learning communities focuses on the philosophical and historical roots of collaborative and experiential learning and on rich descriptions of how this approach to teaching enhances both student and faculty learning. Several books that seek to explain the

complex structure and considerable flexibility of learning communities — and thus expand the knowledge and use of learning communities in higher education — were referenced earlier to establish common ground for a discussion on learning community models. In addition to these widely cited books, there are many unpublished studies about student and faculty experiences in learning communities — most prepared as part of institutional assessments.

An excellent resource that summarizes much of the assessment research on learning communities is from the National Learning Communities Project monograph series, published jointly by the Washington Center for Improving the Quality of Undergraduate Education and the now defunct American Association for Higher Education. The monograph, *Learning Community Research and Assessment: What We Know Now*, reviews 32 formal research studies (mostly doctoral dissertations), of which 4 are highlighted, and 119 single-institution assessment reports, of which 17 are identified as “notable.”<sup>34</sup>

One exemplar highlighted in this monograph is Barbara Oertel’s research study (2001), which identified the “essential characteristics of curricular learning communities.” Oertel asked 17 experienced learning community practitioners and/or researchers throughout the United States to generate an initial list of 79 characteristics of learning communities. She then used a Delphi process to pare these characteristics down to five:<sup>35</sup>

1. The curricula are integrated and interdisciplinary, cutting across departmental lines and divisions.
2. There is a high level of faculty collaboration and participation in all facets of the learning community program.
3. Learning is collaborative and active.
4. There are ongoing assessments and communication about student learning outcomes and program results.
5. The learning community program fits within the institution’s mission, structures, processes, culture, and climate.

---

<sup>34</sup>Taylor, Moore, MacGregor, and Lindblad (2003).

<sup>35</sup>A Delphi process is a method for developing consensus and making group-based decisions. It typically occurs in a series of stages over time. Participants comment on a particular set of issues or areas of interest. The group’s responses are then analyzed and reported back so that participants can compare their own responses with those of the group. Participants, having the benefit of the previous discussion, comment on the issues again, as well as other questions raised. A new group report is generated and the process is repeated with a new series of questions.

According to the monograph's authors, this study establishes a foundation for discussing the structure and design of learning communities from a curricular standpoint.<sup>36</sup>

A second exemplar cited in the monograph is a qualitative research study by Patricia Russo (1995), who interviewed 70 students enrolled in an interdisciplinary, team-taught coordinated studies program at an urban central community college. Russo identifies three dimensions of the student experience that learning communities needed to address: students' struggles to attend college, participate actively in the classroom, and understand an unfamiliar paradigm for learning that valued their own knowledge construction. The monograph summarizes Russo's key finding that learning communities "played a significant role in helping students make connections across disciplines, with peers, and between the knowledge and values they brought to college and their classroom experiences."<sup>37</sup>

The monograph on learning community research and assessment also reviewed 119 single-institution assessment reports representing 78 different institutions, including 23 community colleges, 54 baccalaureate institutions, and one technical institute. These reports were generally unpublished — but 19 were presented at professional conferences and 17 were journal articles. The most common student outcome measures used in these reports were retention rates and grades or course-pass rates. Very few studies used measures other than student self-reports of their experiences, gains, and overall satisfaction, and only 40 percent examined student self-reports specifically in connection to the learning community. The monograph authors make three general observations about learning communities based on their review:

1. Almost all learning communities are designed for first-year students, although different groups of incoming students are often targeted (for example, the academically underprepared, honors students, or students in a particular major).
2. Students and individuals who teach in learning communities generally *like* learning communities [*emphasis in original*].
3. Schools of engineering are leaders in learning communities for academic majors, primarily owing to significant multiyear grant support from the National Science Foundation.<sup>38</sup>

Despite the breadth of research and assessment on the learning community experience, few published studies measure the effects on key student outcomes, including persistence,

---

<sup>36</sup>Taylor, Moore, MacGregor, and Lindblad (2003).

<sup>37</sup>Taylor, Moore, MacGregor, and Lindblad (2003), p. 12.

<sup>38</sup>Taylor, Moore, MacGregor, and Lindblad (2003), pp. 20-21.

course completion, and degree attainment. A rare exception is a study of the coordinated studies program at Seattle Central Community College. Through analysis of longitudinal student records, student surveys, and interviews, the researchers found that students in the learning community had better grades and were more likely to remain in college; in addition, students who participated were more involved with their peers both inside and outside the classroom.<sup>39</sup>

A second case study of a learning community — one that grouped first-year students into 35 clusters of three common courses plus a freshmen seminar in the fall, and one course and a seminar during the spring — found similar positive outcomes. Students in the learning community had better grades individually, and the mean grade for all learning community students was higher than for those who were not part of the learning community.<sup>40</sup> This study also found that learning community students persisted to the second year of college at a higher rate than non-learning-community students. This descriptive difference, however, did not hold up in discriminant analysis — that is, involvement in a learning community at this institution was not a statistically significant predictor of student persistence after controlling for other factors such as ACT scores and parental educational attainment.<sup>41</sup>

Perhaps the most comprehensive research on learning communities and student outcomes was the three-year National Learning Communities Dissemination Project that involved 19 institutions, including 7 community colleges.<sup>42</sup> The common lessons from all participating sites were:

- Participation in learning communities resulted in the same or better grades for cohort students than for those in respective stand-alone course comparison groups;
- Students who participated in learning communities — especially at community colleges — had significantly higher rates of retention than did their respective stand-alone counterparts; and
- Student survey data indicated that the learning community college experience was inherently better than what they had experienced in stand-alone courses.<sup>43</sup>

And, as mentioned previously, the most rigorous research on the effect of learning communities on student outcomes comes from the Opening Doors demonstration managed by MDRC. At Kingsborough Community College, students randomly assigned to a learning community had higher course-pass rates and were more likely than a control group of non-learning-

---

<sup>39</sup>Tinto (1997); Tinto, Russo, and Kadel (1994).

<sup>40</sup>Gordon, Young, and Kalianov (2001).

<sup>41</sup>Gordon, Young, and Kalianov (2001).

<sup>42</sup>MacGregor (1999), as cited in Minkler (2002).

<sup>43</sup>Minkler (2002).

community students to have completed their remedial English requirements one year later. Specifically, among students who failed both reading and writing skills tests before they enrolled, 33 percent of learning community students retook and passed both tests one year later, compared with only 14 percent of control-group students.<sup>44</sup> However, at this stage in the evaluation, there has been no impact on semester-to-semester retention.

According to survey, interview, and focus group research, students prefer the learning community structure because of its enhanced academic and social engagement. Students at the sites visited concurred: They gushed with praise about their residential learning community experience. Among the students' comments: "This is our family"; "I feel supported"; "I can get the academic help I need"; "The classes in the residence are smaller and more personalized than the other classes I take on campus"; "I have the confidence to speak in the classes offered in residence"; and "I used to go home every weekend to be with my family, but now I sometimes stay on the weekend to be with my new college family."

Written comments by students voluntarily provided at one site also reflected their overwhelmingly positive experience in learning communities. A typical comment: "I enjoy having some students in both of my classes. It made it easier...to open up and have class discussions." Another student wrote: "My classmates are a big help, too. By...having the same classes with the same people, we can go to each other for help." Students also wrote favorably about the academic experience: "It's a great idea to combine English and Reading. When we read our text, we are able to understand what's being said...I am able to write more comfortably than before. It has expanded my vocabulary and ability to write papers with more variety. And now I have a better grasp on the text that we read."

Faculty also speak positively and enthusiastically about teaching in learning communities, primarily because it transforms the teaching experience from a typically isolated and individualistic one into a collaborative and empowering one. One seminal study (cited earlier) on learning communities put it this way:

Learning communities provide faculty members with new perspective on their discipline and a new window on pedagogy through which they can directly observe how other skillful teachers think and act. The modeling, mentoring, and learning inherent in this situation are invaluable in faculty development.<sup>45</sup>

Many of the faculty fellows of the National Learning Community Project also point to learning communities as a rewarding way to build a supportive environment for students.<sup>46</sup> On

---

<sup>44</sup>Bloom and Sommo (2005).

<sup>45</sup>Gabelnick, MacGregor, Matthews, and Smith (1990), p. 80.

<sup>46</sup>Smith, MacGregor, Matthews, and Gabelnick (2004).

one site visit, an engineering faculty member and dean volunteered that — aside from the benefits to students — learning communities were a vehicle to connect faculty and energize them to improve their students' learning environment. This faculty leader expressed a particular appreciation for the coordinated-studies model of learning communities and the week-long off-site workshop that invigorated the entire science and engineering faculty in his college.

The evidence reviewed for this paper and the observations and interviews from field visits to nine colleges and universities indicate that learning communities deserve a more robust examination. A multicollage demonstration using a random assignment design could test for a causal relationship between learning communities and improved student outcomes. The current research on learning communities and their effect on student outcomes tends to be from single-site studies. They seldom control for selection-bias inherent in programs that are limited to a small number of voluntarily enrolled students, are not well-publicized, and are available only as long as faculty and academic deans choose to offer them. Moreover, it remains unclear which aspects of the learning community experience (cohort learning, linked courses, peer advising, academic and social supports, or team-teaching) account for effects on student achievement and persistence.

The next section of the paper analyzes the learning community experience and the potential interventions that could be tested in a multifaceted evaluation that includes a random-assignment impact design, supplemented with strong qualitative research.

## **The Potential Payoff of Learning Communities: Formulating a Demonstration and Evaluation Strategy on the Effectiveness of Learning Communities**

The literature on teaching and learning indicates that both faculty and students want more collaborative and experiential learning; learning communities appear to meet this demand. Moreover, the available research and assessment literature suggests that learning communities in colleges can improve both the environment for learning as well as student outcomes. Unfortunately, several factors undermine their widespread implementation at both two-year and four-year institutions. First, the cost of scaling up learning communities seems prohibitive; for example, providing two faculty members to team-teach a paired course appears inefficient unless the learning community's enrollment exceeds that of each class if taught separately. Second, because the most integrated learning communities require advance planning and intensive faculty collaboration, many professors and instructors (especially those with large teaching loads) may be reluctant to offer learning communities without commensurate course-release time or additional compensation. Third, even those studies that document a correlation between learning communities and student success (or, in the best circumstances, assert causation) do not specify which aspects of a learning community are most responsible for the impact on student outcomes.

A demonstration of the impact of learning communities on student outcomes could address these issues by testing one or more learning communities using a random-assignment experimental design. The results from such a demonstration would provide empirical, causal evidence on the fundamental aspects of learning communities that lead to improved student outcomes. Further, a demonstration could include a differential impact study that compares two different learning community models at a specific site against the control group; for example, the evaluation could compare one-term with two-term learning communities, learning communities with and without student support services, or learning communities with and without a financial voucher for textbooks. This approach would require significantly more college capacity and increased sample size and would, therefore, be more costly.

A demonstration could also include a cost-benefit analysis to document the additional cost of adopting learning communities campus-wide and, based on the impact data, provide estimates for the increased revenue associated with better student retention — not to mention the corresponding reduction in recruitment and orientation costs. Finally, qualitative research could document the extent to which faculty take ownership of this structure of teaching and learning and, perhaps more crucially, could inform a much-needed national conversation about increasing the relative value of teaching in decisions on faculty tenure and promotion.

A demonstration would require four to six colleges willing to each enroll potentially 1,000 students in the research sample over four terms: 500 students (125 per semester) in the experimental learning community and 500 students in the control group who would receive the existing freshman experience at the college or university. Because learning communities demand significant planning (especially by faculty) and organizational commitment, demonstration sites would require a level of maturity consistent with several years of experience operating learning communities. MDRC's experience with Kingsborough Community College indicates that random assignment is feasible, but its success hinges on student demand for enrollment in a learning community that exceeds the number of learning community slots — thus enabling a lottery-like assignment process to take place. The lessons from the random assignment experience at KCC will not only inform the highest ethical standards for conducting a multicollge experimental design research study but also the logistics of how to integrate random assignment into a community college registration process. MDRC would adhere to an informed consent process for all students in the research sample, and the design would be subject to Internal Review Board approval (for use of human subjects).

### **Which learning community structure should be tested?**

For the purposes of designing a demonstration and evaluation of learning communities, it is important to determine whether it is preferable to test a uniform learning community intervention at multiple colleges or to select colleges with a range of learning community models (that is,

planned variation) and evaluate each college as its own test. Given the variation of learning communities across the country, the latter is more likely. As mentioned above, one college could potentially be used for a differential impact study of two learning community models.

Table 2 offers four typical learning community models that could be used for a national demonstration. Each college could implement the same model, or different models could be tested at each college. Another approach might use one of the four models in Table 2, but vary each college's intervention in terms of the availability of academic and student supports, such as advising and tutoring, and/or the operational delivery of these services (for example, in the classroom or as needed).

<p><b>Table 2</b></p> <p><b>Four Models for a Multisite Learning Community</b></p> <ol style="list-style-type: none"><li>1. A cohort of students taking at least two courses together (basic)</li><li>2. A cohort of students taking a cluster of four to five courses together in which two courses are linked by a common theme</li><li>3. A cohort of students taking at least two courses together that are linked by a common theme and have at least one joint assignment</li><li>4. A cohort of students taking at least two courses together as part of a coordinated studies program in which faculty team-teach an integrated curricula</li></ol>
---

A series of positive results from a standardized approach would make a powerful case for that model, and differences in operational practices or student populations among sites would provide insight into the most promising approaches for widespread adoption of learning communities nationally. On the other hand, the flexibility and customization of learning communities is more consistent with the underlying philosophy of learning communities as dynamic pedagogical models.

The coordinated-studies model that links at least two courses across a common theme — and is team-taught with faculty who co-designed the learning community curricula — is the most ambitious learning community approach. A test of this model could determine if the effects of learning communities on student outcomes require such a high level of curricula inte-

gration. However, this approach requires significant faculty planning and previous experience with collaborative learning. A participating college would need a core faculty who have taught in coordinated-studies learning communities, as well as additional faculty willing to participate in the demonstration. This approach would also require significant up-front investment in faculty development and training on the pedagogy of learning communities. If a college was interested in testing the coordinated-studies model, it might be an ideal site for a differential impact study — one experimental group could take two classes as a coordinated-studies pair and another experimental group could take the same two courses as a linked pair. Both experimental groups would need experienced faculty teaching the courses.

An important consideration in determining the design of the demonstration is how the eventual results can effectively influence public policy and institutional practice. To shift the allocation of public, private, and institutional resources toward widespread learning community implementation, is it necessary to rigorously examine the extent to which curricular integration improves student outcomes? Or, is the basic structure of learning communities — linked classes with a cohort of students — a sufficient factor to move public policy and institutional practice, even if the question about the effect of curricula integration remains unanswered?

### **Measuring student outcomes**

The most common student outcomes used for single-site assessments of learning communities are: 1) course-pass rates and credit accumulation; 2) grade point averages; and 3) student persistence to the second term or second year. Given the rich literature on student retention that points to the first year (and more specifically, the first term) as the pivotal juncture for students, it seems reasonable to use these quantifiable outcomes for any demonstration project. Moreover, these outcomes can be reliably measured over a 24-month period.

At the same time, most two-year and four-year institutions have dismal graduation rates, and degree attainment is an oft-stated public policy and institutional objective. However, a longitudinal study using degree attainment as a student outcome measure would require up to six years of follow-up. A compromise approach might be to design an intermediate study that measures course-pass rates, grade point averages, and student persistence at both two-year and four-year sites, as well as degree and certificate attainment or transfer at community colleges. This approach would require a three-year longitudinal study. If four-year degree attainment is pivotal, then a follow-up survey of sample participants after four and six years could provide insight into the longer-term effects of learning communities.

## **What is the sample population?**

In many states, the “baby boom echo” generation (that is, the children of the baby-boomers) will send the largest-ever high school graduating class into the potential college-going pool. In other states, high school graduates will maintain a steady or slight decline during the next several years.<sup>47</sup> In both cases, the college-going population pool will be comprised increasingly of students of color. Between 2000 and 2010, the projected percentage increase in overall population for 18- to 24-year-old blacks and Hispanics is 20 percent and 35 percent, respectively, compared to only 7 percent for white, non-Hispanics. More strikingly, the net population increase for persons of color (Asian, black, Hispanic, and other races) 25- to 54-years-old is expected to be almost 9 million during this decade, while the white, non-Hispanic population in this age-band will decline by more than 4 million.<sup>48</sup> Students from the growing population groups are more likely to be first-generation college students and/or those from low-income families, which are risk factors that negatively affect student success in college. Learning communities could mitigate these risk factors and help more first-generation and low-income students successfully complete postsecondary education.

With the demographic projections in mind, there are several options to consider for focusing on particular groups in a learning communities demonstration. In keeping with the central mission of MDRC, should the demonstration target first-generation and low-income students, assuming they can be identified as a cohesive population in college? Another approach might be to target students who enter college needing developmental education in math or English. These students are most vulnerable to “stopping out” of college and/or not completing a degree or certificate. But should a learning communities demonstration include only those students with developmental needs?

A third approach to sampling might be to target institutions in some states with bulging cohorts of high school graduates and other states that will need to increase enrollment and success of working adults if they want to increase educational attainment. This approach would be geographically diverse but may not yield sample populations that reflect the growing proportion of people of color nationally. At the same time, this approach could test for differences in effects among students from different age groups. An additional benefit is that this type of demonstration would be relevant to states with different demographic trajectories.

A fourth approach would be to target a specific type of postsecondary institution, such as community colleges or regional state colleges and universities. These institutions enroll significant numbers of first-generation students and students of color — both groups are correlated

---

<sup>47</sup>See WICHE (2003).

<sup>48</sup>Price and Wohlford (2005).

with low-income status. Although community colleges would appear to be the logical choice, given the students they serve, these institutions tend to have diverse and varied missions and priorities. Do the outcomes specified for this project congeal with a primary focus on community colleges? Or, should the demonstration and evaluation include a mix of two-year and four-year institutions in order to test the learning community interventions across institutional type? The results of the latter would be more policy relevant and applicable to a broader range of higher education institutions in the country.

## **Conclusion**

A large, multicollege learning community demonstration using a random assignment evaluation can produce more conclusive evidence on the effects of learning communities on student success. In addition, by documenting the experiential aspects of learning communities from faculty, student, and administrative perspectives, a national demonstration can generate formative information helpful to colleges interested in expanding learning communities. Thus, an ideal demonstration would include both a quantitative impact evaluation and a supplemental qualitative evaluation — the latter to answer the “how” and “why” questions.

Although testing a uniform learning community model across multiple colleges would provide the most robust results, the wide variation of learning community models makes the feasibility of this approach doubtful. A comprehensive demonstration and evaluation would include four to six colleges (including a mix of community colleges and four-year universities) with different learning community models, including basic linked courses, linked clusters with common themes and joint assignments, and coordinated studies. Each college would also participate in qualitative research to assess both student and faculty experiences among those who participate in learning communities. This approach to a multicollege learning community demonstration will build more conclusive evidence on the effectiveness of learning communities for improving student outcomes, and provide information to meet the needs of both policymakers and practitioners.

## References

- Barefoot, B.O. 2002. *Second National Survey of First-Year Academic Programs*. Policy Center on the First Year of College. Retrieved February 20, 2005, from <http://www.brevard.edu/fyc/survey2002/findings.htm>.
- Bloom, D., and C. Sommo. 2005. *Building Learning Communities: Early Results from the Opening Doors Demonstration at Kingsborough Community College*. New York: MDRC.
- Freire, P. 1973. *Education for Critical Consciousness*. New York: Continuum.
- Gabelnick, F., J. MacGregor, R.S. Matthews, and B.L. Smith. 1990. "Learning Communities: Creating Connections among Students, Faculty, and Disciplines." *New Directions for Teaching and Learning* 41 (Spring). San Francisco: Jossey-Bass.
- Gordon, T.W., J.C. Young and C.J. Kallianov. 2001. "Connecting the Freshman Year Experience through Learning Communities: Practical Implications for Academic and Student Affairs Units." *College Student Affairs Journal* 20 (2): 37-47.
- Laufgraben, J.L., and N.S. Shapiro. 2004. *Sustaining and Improving Learning Communities*. San Francisco: Jossey-Bass.
- Lenning, O.T., and L.H. Ebbers. 1999. *The Powerful Potential of Learning Communities: Improving Education for the Future*. ASHE-ERIC Higher Education Report Volume 26, No. 6. Washington, DC: The George Washington University. Graduate School of Education and Human Development.
- Mills, C.W. 1959. *The Sociological Imagination*. New York: Oxford.
- Minkler, J.E. 2002. "Learning Communities at the Community College." *Community College Review* 30 (3): 46-59.
- Price, D.V., and J.K. Wohlford. 2005. "Equity in Educational Attainment: Racial, Ethnic and Gender Inequality in the 50 States." Pages 59-82 in G. Orfield, P. Marin, and C.L. Horn (eds.), *Higher Education and the Color Line: College Access, Racial Equity, and Social Change*. Cambridge: Harvard Education Press.
- Shapiro, N.S., and J.J. Levine. 1999. *Creating Learning Communities: A Practical Guide to Winning Support, Organizing for Change, and Implementing Programs*. San Francisco: Jossey-Bass.
- Smith, B.L., J. MacGregor, R.S. Matthews, and F. Gabelnick. 2004. *Learning Communities: Reforming Undergraduate Education*. San Francisco: Jossey-Bass.
- Taylor, K., with W.S. Moore, J. MacGregor and J. Lindblad. 2003. *Learning Community Research and Assessment: What We Know Now*. National Learning Communities Project Monograph Series. Olympia, WA: The Evergreen State College, Washington Center for Improving the Quality of Undergraduate Education, in cooperation with the American Association for Higher Education.

- Tinto, V. 1998. "Learning Communities: Building Gateways to Student Success." *The National Teaching and Learning Forum* 7 (4) (May). Available from <http://www.ntlf.com/html/lib/suppmat/74tinto.htm>.
- Tinto, V. 1997. "Classrooms as Communities: Exploring the Educational Character of Student Persistence." *The Journal of Higher Education* 68 (6) (Nov/Dec): 599-623.
- Tinto, V., P. Russo, and S. Kadel. 1994. "Constructing Educational Communities: Increasing Retention in Challenging Circumstances." *AACC Journal* (Feb/Mar): 26-29.
- Tinto, V. 1987. *Leaving College: Rethinking the Causes and Cures of Student Attrition*. Chicago: The University of Chicago Press.
- Western Interstate Commission on Higher Education (WICHE). 2003. *Knocking at the College Door: Projections of High School Graduates by State, Income, and Race/Ethnicity, 1998 to 2018*. Boulder, CO: Author.