LEARNING COMMUNITIES:
EXAMINING POSITIVE OUTCOMES

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ABSTRACT
Learning communities, designed primarily to increase student persistence and academic achievement, are a common first-year initiative on university campuses. Assessments of learning communities frequently examine indicators that are easily quantifiable such as student persistence and academic achievement, but also examine factors thought to affect these outcomes such as student involvement and satisfaction. This article reviews published studies to determine the degree to which learning communities successfully affect involvement, satisfaction, achievement, and persistence, and attempts to identify the characteristics that produce positive results. The review concludes that first, learning communities do attain positive outcomes, but second, that it is difficult to determine which characteristics of learning communities (i.e., integrated course content, coordinated assignments, academic skills training, mentoring) account for their success due to the small number of studies, the heterogeneity of programs, and self-selection effects.

INTRODUCTION
The first year of college is a transitional year that sets a foundation for subsequent years (Gardner, 2001). Students must face a new environment and learn to be independent (Pancer, Hunsberger, Pratt, & Alisat, 2000). Some of the tasks confronting first-year students as they adjust to college life include choosing a major, developing study strategies and time management skills in order to establish a good grade point average, forming relationships with peers and faculty, and deciding whether to stay at the institution or transfer (Gardner, 2001). The transition is influenced by various psychosocial factors such as social support
structures (Gall, Evans, & Bellerose, 2000; Martin, Swartz-Kulstad, & Madson, 1999), faculty-student interaction, academic self-concept and motivation (Cokley, 2000; Martin et al., 1999), and personality traits (Halamandaris & Power, 1999).

Numerous persistence theories and models, such as those of Astin (1984), Tinto (1987), Bean (1990), and Nora and Cabrera (1996), have been developed to explain the transition process and its relation to persistence. In response to these findings and theories, institutions have designed first-year programs to promote adjustment and academic success, and to improve retention. Common objectives include increasing student involvement, academic engagement, and academic expectations, improving social integration, linking the curriculum and co-curriculum, and assisting less prepared students (Barefoot, 2000). Various types of programs have been designed to meet these objectives such as first-year seminars, learning communities, orientation, student development interventions, and course support initiatives.

Research examining the effectiveness of first-year programs is limited. However, a few reviews of institutional assessment data and/or studies measuring program success have been published. One of these concludes that first-year seminars result in increased retention and graduation rates, higher grade point averages, greater student satisfaction, and more positive attitudes toward faculty for participants (Barefoot, Warnock, Dickinson, Richardson, & Roberts, 1998). Another reports that learning communities result in strengthened student persistence and academic achievement, and that both student and faculty participants are satisfied with their learning community experiences (Taylor, Moore, MacGregor, & Lindblad, 2003). Other publications have focused on descriptive rather than analytic reviews. For example, Hammer (2003) briefly describes nine award-winning retention programs and Reyes (1997) highlights six successful retention programs for minority students.

One particularly significant study examined National Survey of Student Engagement (NSSE) data from over 80,000 students at 365 four-year institutions (Zhao & Kuh, 2004). Results support previous research that learning community participation leads to strong academic performance, engagement in valuable educational activities such as collaborative learning and interaction with faculty, and satisfaction with the university experience. Limitations of the study acknowledged by the researchers include self-reported data and the fact that the survey did not distinguish between students who had actually participated in a learning community and those who were only planning to participate. Also, after controlling for potentially confounding variables, results indicated that only grades for seniors, not freshmen, were higher than grades for non-learning community participants.

In addition, the NSSE measures the behavioral manifestations of involvement (i.e., collaborative learning, interaction with faculty, participation in co-curricular educational programs and activities), which are the hallmarks of most learning communities. Logically, learning community participants would score higher than
non-participants on this survey. The NSSE does not measure psychological manifestations of involvement or students’ feelings about their involvement. Also unknown is whether or not these students demonstrated higher levels of persistence or greater gains in learning. The results do seem to indicate, however, that learning communities are doing what they purport to do in terms of engagement.

A search for empirical studies on first-year programs at four-year institutions reveals that although institutions may be assessing their initiatives, they are not publishing the results in peer-reviewed journals, or, as Gardner (2001) argues, that most campuses have little research-based data on their first year. Approximately 30 studies, published between the years 1996-2005, were identified. Slightly more than half of these studies described learning communities, or the linking of two or more academic courses which enroll the same group of students (Barefoot, 2000). Other programs included orientation, student development programming, seminar courses, contract agreements for conditionally accepted students, and course support interventions.

In sum, much research has focused on student adjustment and persistence. In addition, a few comprehensive reviews of first-year interventions have been conducted including those which incorporate institutional documents. The findings of these reviews were summarized earlier, but it is beyond the scope of this study to include information from institutional assessment reports. Also, as noted by Barefoot (2004), these “studies often lack experimental rigor” (p. 12). The focus of this review is on one type of first-year intervention, learning communities. The review examines in detail a limited number of empirical studies, those that have been subject to peer review and published in journals, to identify specific features that lead to positive results. Although the review is based on a limited number of studies, it complements the few existing reviews on learning communities and is unique in that it specifically examines the effects of structural components on outcomes.

AN ANALYSIS OF LEARNING COMMUNITY OUTCOMES

A learning community is defined as a type of block scheduling with the same group of students enrolled together in two or more courses (Tinto, 1997). Learning communities typically consist of groups of 20-25 students. Although in some cases students may attend lectures with larger numbers of students, they meet together in small discussion sections, often led by a peer mentor (Tinto, 1999). The linked courses are commonly organized around a theme with shared and connected learning as curriculum goals (Tinto, 1997). Shared learning refers to students working collaboratively to learn material while connected learning refers to the integration of knowledge from different disciplines (Franklin, 2000). Freshman seminars providing academic assistance and a service learning component are also characteristic (Tinto, 1999). Students may be assigned to a reserved
section of the same residence hall, thereby creating living-learning communities (Barefoot, 2000; Tinto, 1999). Learning communities seek to increase student learning and persistence (Tinto, 1999).

As noted, learning communities share a variety of features. However, implementation of these features varies widely. Institutions have adapted the learning community model to fit their own students and learning objectives. From institution to institution, learning communities vary in structure, participants, curriculum, pedagogy, and co-curricular involvements (Taylor et al., 2003). Means of assessment are similarly variable. Because learning communities are non-parallel, a traditional statistical analysis, such as a meta-analysis, is not possible (Taylor et al., 2003). The current review approaches this problem by selecting the four most common objectives of learning communities, persistence, academic achievement, involvement/support, and satisfaction, to identify the specific features that result in success.

Before turning to the analysis, a word of explanation is needed about some of the studies. In two cases, the same learning community was written about by two different sets of authors. Pike, Schroeder, and Berry (1997) and Schroeder, Minor, and Tarkow (1999) both wrote about Freshman Interest Groups at the University of Missouri–Columbia, and Borden and Rooney (1998) and Evenbeck and Williams (1998) both wrote about learning communities at Indiana University–Purdue University Indianapolis (IUPUI). In these cases, authors are referenced according to the source from which the specific information being referred to was obtained. Johnson (2001) provided information about a number of retention programs at the University of Southern Maine, two of which are reviewed in this work: the Russell Scholars Program (RSP) and the First Year Alternative Experience (FYAE). The first focuses on students with strong academic backgrounds and the second on students who are conditionally admitted due to weak academic backgrounds. Similarly, Stassen (2003) writes about three different programs: the Residential Academic Program (RAP) for students in general, the Talent Achievement Program (TAP) for selected students in specific majors, and the Honors College Learning Community (Honors) for honors program students. Information about the learning communities referenced in this analysis is summarized in a chart in the Appendix. I now proceed with the analysis.

**Persistence**

The majority of the learning communities identified persistence as an objective. Persistence was variably measured at one semester, one-year, and two-year intervals. Only one of the 12 studies that measured persistence did not report a positive result (Note: three studies did not report any persistence results.) However, in two of the studies with positive results persistence increases for participants disappeared after controlling for other predictors such as credit load, high school
rank, and placement in remedial classes (Borden & Rooney, 1998), and ACT scores and father’s education (Gordon, Young, & Kalianov, 2001).

Learning communities that were successful in improving student persistence were diverse in terms of participants, but shared commonalities in curricular design and pedagogy. Some programs (25%) primarily targeted students at-risk in terms of academic preparation (Baker & Pomerantz, 2000; Johnson, 2001; Yockey & George, 1998) while others (57%) attracted students with average to high levels of academic preparation as based on standardized admission test scores and high school grades (Borden & Rooney, 1998; Johnson, 2001; Logan, Salisbury-Glennon, & Spence, 2000; Pike et al., 1997; Stassen, 2003). In every case but one, participants were self-selected, demonstrating that students from a variety of academic backgrounds felt that learning community membership offered some advantages. Interestingly, the one study reporting no improvement in persistence was one in which students were randomly assigned to a learning community or a control group (Goldberg & Finkelstein, 2002).

By definition, a learning community consists of two or more linked courses. Those that recognized gains in persistence varied from two to four linked courses. In the majority of cases (69%), one of the courses was a seminar focusing on topics such as study skills, library skills, technology use, campus resources, career planning, and/or social adjustment. An alternative approach was to cover these topics, particularly academic skills, within the context of the linked courses. The linked courses were general courses, major courses, or a combination of the two with no particular arrangement being dominant. One learning community involved developmental courses (Johnson, 2001) and one involved honors general education courses (Stassen, 2003). The majority of learning communities with gains in persistence (69%) were characterized by peer mentoring, group tutorials, and/or faculty mentoring to assist participants with their course work. Similarly, most learning communities (63%) recognizing improved persistence consisted of faculty collaboration regarding course content and assignments. In some instances, learning community participants lived in the same residence hall (Johnson, 2001; Logan et al., 2000; Pike et al., 1997; Stassen, 2003).

The above analysis indicates that learning communities are effective in improving persistence and that they can be equally successful in improving persistence for both academically prepared and less prepared students. Neither the number of linked courses nor the types of courses (i.e., general or major) in a learning community appear to have much impact on persistence. A seminar component addressing academic skills, whether a separate course or integrated into the assignments and content of the learning community courses, is one characteristic that most programs recognizing gains in persistence have in common as is integrated course work and some type of supplemental peer or faculty assistance with course content. However, it is not clear whether these structural components explain persistence gains or whether improved persistence is the result of the academic and social engagement inherent in the learning community.
Self-selection of the participants may also affect gains as participants may be predisposed toward involvement behaviors and have a strong desire to excel.

**Academic Achievement**

In the learning community studies, academic achievement was typically measured by course grades, semester and/or cumulative grade point average (GPA), credit hours completed, academic status, or student self-reports of learning. Most of the studies (88%) reported some type of gain in achievement. Two studies measured academic achievement but did not report gains (Goldberg & Finkelstein, 2002; Logan et al., 2000). In one of these cases (Goldberg & Finkelstein, 2002), students were randomly assigned to a learning community or a control group, and in the other (Logan et al., 2000), participants in a six-week summer learning community did not achieve higher course grades in the two linked courses than non-participants.

Seven programs reported gains in student grade point average that were attributed to learning community participation. Three of the seven shared commonalities in curriculum design and pedagogy with linked courses, a seminar component, integrated content, and peer or faculty tutoring (Borden & Rooney, 1998; Schroeder et al., 1999; Yockey & George, 1998). Two additional programs shared mentoring/tutoring and a residence hall component with one of these also having a seminar course (Stassen, 2003). The other program consisted of linked courses and an orientation component, but did not share the other features (Baker & Pomerantz, 2000). A factor that was not taken into account in any of these studies is the possibility that grades for the seminar course could have positively affected the grade point averages of the learning community participants. Three authors made no mention of their orientation/seminar courses being letter-graded or credit-bearing (Baker & Pomerantz, 2000; Borden & Rooney, 1998; Stassen, 2003), one mentioned that the seminar component was graded as pass/fail but did not indicate if it was credit-bearing (Schroeder et al., 1999), and one indicated that the seminar component was a 2-credit, graded course (Yockey et al., 1998). Students in all of the programs with increases in grade point average were self-selected. One learning community focused primarily on at-risk students (Yockey & George, 1998), two involved students on commuter campuses (Baker & Pomerantz, 2000; Evenbeck & Williams, 1998), one was for honors students (Stassen, 2003), and the other reported that participants in the study were primarily White with high ACT scores (Pike et al., 1997). The latter finding demonstrates that learning communities are successful in a variety of institutional settings with a variety of types of students.

Two studies measured academic achievement through student focus groups or reflective journals, thereby offering unique insights due to the qualitative data. The academic achievement outcome in these studies was not based on grades but on students’ insights into their learning experiences. In one of these learning
communities, students felt that connected learning, in which they recognized links among academic disciplines, helped them understand complex topics in each of the three linked courses, learn new material, and study more effectively (Franklin, 2000). However, they felt that shared learning characterized by peer networking, collaboration, and instruction was more beneficial than connected learning (Franklin, 2000). In the other learning community, participants reported that they had improved their oral speaking, critical thinking, and writing skills (Crissman, 2001). They also experienced stronger bonds with classmates than did non-participants. These two programs shared the following features: participants were self-selected and academically prepared. One program included a seminar component (Crissman, 2001), and the other featured both faculty mentoring and integrated content (Franklin, 2000). The programs varied in the number of courses linked. In both cases, peer and faculty support seemed to be a key factor to students’ learning. Most notable perhaps is the understanding gained in the Franklin (2000) study that it was the collaboration among students, not the integration of course content, that was the most valuable.

One study measured academic achievement by determining if students had successfully made the connections that were emphasized in two linked courses, logic and computing (Scharff & Brown, 2004). E-portfolios that included reflective logs demonstrated the success of this outcome. In comparison, juniors and seniors who were computer science majors were unable to make the same links between the two subject areas. In addition, a mid-semester and end of semester self-report survey demonstrated that students showed improved perceptions in their ability to recognize connections between the two courses. A critical thinking test administered at the beginning and end of the semester was also used to measure academic achievement but demonstrated no significant improvements. This particular learning community was characterized by courses that were closely linked. The faculty involved collaborated on the syllabus and even attended each other’s lectures. Three of the learning community assignments were linked and designed to strengthen connections between concepts taught in the courses. Also, every first-year student at the university was required to take a learning community although a number of different course pairings were offered.

Five other programs reported positive results in academic achievement. These included a greater accumulation of credits (Johnson, 2001), higher grade point averages compared to participants in another retention program (Johnson, 2001), increases in grade point average that were partially attributed to learning community participation (Gordon et al., 2001), an increase in students maintaining acceptable academic status with grade point averages above 2.0 in the first through fourth semesters (Soldner, Lee, & Duby, 1999), and gains in motivation and learning strategies (Stefanou & Salisbury-Glennon, 2002). All of these learning communities were characterized by two or more of the following features: a seminar, peer/faculty mentoring, and integration of course content. Although the seminar course in the Soldner et al. (1999) study was identified as letter-graded
and credit-bearing, the possibility that the seminar course grade could have positively affected participants’ grade point averages was not taken into account. In the other cases that measured grade point average or credit gains (Gordon et al., 2001; Johnson, 2001), no information was included regarding grading or credit for the seminar course.

Generally, gains in academic achievement for learning community participants were recognized for programs that included a seminar component addressing academic skills, integrated the content and assignments for the linked courses, and/or offered supplemental peer/faculty tutoring. However, the possibility that in some cases grades for the seminar courses could have positively skewed grade point averages was not considered. Also notable is that programs with these key features achieved learning gains for a variety of learners at a variety of types of institutions. The two qualitative studies (Crissman, 2001; Franklin, 2000) offer important insights in that they demonstrated that collaborative learning was a central factor in students’ perceptions of their learning gains. Another commonality in improving academic achievement is that students were self-selected in all cases but two. Program features such as academic skill training and tutoring seem logically related to improved academic achievement. The integration of course content and assignments is unique to learning communities, however, and appears to be a structural component that positively affects achievement, particularly when collaborative learning is an accompanying element. Self-selection effects must also be considered as a factor in achievement gains as students who choose to participate may be those who are highly motivated to do well and/or whose learning styles best match the learning community model. In fact, in one study participants indicated they had a strong preference for collaborative work prior to joining the learning community (Franklin, 2000).

Involvement

The previous two outcomes discussed, persistence and academic achievement, can be considered student success outcomes as opposed to the next outcome, involvement, which is an experiential outcome (Stassen, 2003). In keeping with Astin’s theory of student involvement (1984), learning communities aim to increase students’ involvement with faculty, peers, and academics. This focus was evident in reviewing the published studies. Seventy-six percent measured involvement and all of them reported positive gains. Most studies measured involvement through self-report surveys administered to participants and a matched control group. Three studies incorporated focus groups (Baker & Pomerantz, 2000; Crissman, 2001; Soldner et al., 1999). Involvement was defined variously as peer support, the ability to make friends and form networks, team work, exhibiting positive academic behaviors, having positive academic experiences, access to faculty in and out of the classroom, confidence in approaching
faculty, faculty-student interaction, getting help from faculty, feeling academically connected, and participating in extracurricular activities.

The specific features of learning communities that contribute to feelings of involvement are built into the learning community model. Learning communities co-enroll small groups of students in two to four courses. All of the programs reviewed shared this feature. Involvement with faculty, made possible through smaller class sizes, contributes to students’ views that faculty are approachable and available to help. In some cases, students had a faculty mentor (Johnson, 2001), or the seminar course featured a faculty member who provided supplemental instruction related to the content class (Yockey & George, 1998). In one program, students had additional exposure to faculty as the faculty attended each other’s lectures (Scharff & Brown, 2004). Some programs made specific mention of personal faculty contact being a goal of the learning community (Evenbeck et al., 1998; Franklin, 2000; Johnson, 2001; Soldner et al., 1999; Stefanou & Salisbury-Glennon, 2002). For three programs, however, those reported on by Stassen (2003), participants did not experience more faculty interaction than non-participants. No explanation is reported for this finding; however, students in these groups did show strong positive outcomes on other academic engagement measures (peer interaction, academic behaviors, and academic climate).

The qualitative data provided by focus groups in the Baker and Pomerantz (2000) and the Crissman (2001) studies particularly emphasized the important role of faculty. In the Baker and Pomerantz (2000) study, students noted that having an instructor who motivated them, cared about them, and respected them was critical. They were willing to take more risks related to class participation because they felt comfortable in the learning community classes. They were also willing to ask for help from both faculty and peers. Results from the focus groups in the Crissman (2001) study demonstrated that learning community students felt more comfortable talking with faculty, had more positive interactions in and outside of class with faculty, and viewed faculty as more approachable than did non-participants.

Involvement with peers is another natural outcome of the learning community model. Being enrolled in the same courses with the same students encourages familiarity and interaction even if organized contact is not a specific feature of the learning community. For example, one learning community consisted simply of blocked classes with no integration of course content or peer mentoring (Baker & Pomerantz, 2000). Similarly, three other programs did not include integration of course content but all included a residence hall component, two involved faculty or peer mentoring/tutoring, and one had a seminar (Stassen, 2003). Five programs reporting positive involvement outcomes specifically mentioned peer tutoring (Evenbeck & Williams, 1998; Logan et al., 2000; Pike et al., 1997; Soldner et al., 1999), and one mentioned group tutorials (Johnson, 2001). In all of these cases, surveys and/or focus groups indicated that students experienced involvement and support. Findings of the focus groups in the Crissman (2001) and Soldner et al.
Studies indicated that students were academically and socially integrated overall, felt a close connection with peers, faculty, and the university, and had formed academic networks of support for obtaining help and social networks for attending campus activities.

Results also indicated that students felt academically connected. Some programs required students to collaborate on assignments (Stefanou & Salisbury-Glennon, 2002) while other studies indicated that course content was integrated and assignments coordinated among the learning community courses (Evenbeck & Williams, 1998; Franklin, 2000; Goldberg & Finkelstein, 2002; Gordon et al., 2001; Johnson, 2001, Logan et al., 2000, Pike et al., 1997; Scharff & Brown, 2004; Soldner et al., 1999; Stefanou & Salisbury-Glennon, 2002; Yockey & George, 1998). In this way, connected learning and shared learning are components of learning communities. This academic integration was most specifically identified in the focus groups and reflective journals mentioned in the Franklin (2000) study in which students recognized the benefits of peer instruction and mentoring and developed the ability to make connections among academic disciplines. One notable exception to these commonalities is the three learning communities discussed by Stassen (2003). Although students realized gains on academic behaviors and academic climate measures, the communities were not characterized by integrated course work or faculty collaboration.

Another component of learning communities conducive to involvement is related to co-curricular activities. Six learning communities in this review extended the community beyond the classroom to residence life, housing participants in the same residence halls (Johnson, 2001; Logan et al., 2000; Pike et al., 1997; Stassen, 2003). Two studies mentioned additional co-curricular components (Pike et al., 1997; Soldner et al., 1999). These included service learning, field trips, guest lecturers, and cultural events.

Although the learning communities in this review have some unique features, all of them by definition share characteristics that result in academic and social integration, which has been posited by Tinto (1997) to lead to institutional commitment and persistence. While the results of the learning communities reviewed in this study are not sufficient to support Tinto’s model, in every case, involvement was an outcome of the learning community model regardless of student or institutional demographics. Not enough data was included in the studies to judge whether some learning community features result in greater involvement than others; however, the data does strongly indicate that involvement is a key outcome of the model regardless of minor variations in design.

Satisfaction

Student satisfaction, either with the learning community experience itself or with the institution as a whole, was also a commonly measured outcome in the reviewed studies. Nearly half (47%) measured satisfaction, utilizing surveys or
focus groups. All but one reported positive results. The one exception involved a situation in which all students were required to take a learning community (Scharff & Brown, 2004). A mid-semester and end of semester survey indicated no change in the percentage of students who would register for another learning community, recommend a learning community to a friend, or take another course in one of the subject areas.

Studies that reported student satisfaction with the university as a whole measured satisfaction with support services such as academic advising, financial aid, and tutoring as well as campus climate, access to faculty, academic involvement with peers, and fulfillment of expectations (Baker & Pomerantz, 2000; Johnson, 2001), or having an overall positive first-year experience with strong peer and faculty relationships and improved academic skills (Crissman, 2001). Other survey findings indicated satisfaction with specific features of the learning community such as block scheduling, team work, and networking (Soldner et al., 1999), academic support and classroom experiences (Logan et al., 2000), endorsement of the learning community model and/or recommending participation to others (Goldberg & Finkelstein, 2002; Logan et al., 2000).

Qualitative data from focus groups in the Crissman (2001), Baker and Pomerantz (2000), and Soldner et al. (1999) studies offered specific noteworthy insights. Students enjoyed the innovative nature of the learning community and felt the learning community helped them understand the expectations of college work (Crissman, 2001). Some noted that the learning community made college more fun, made the transition to college easier, made the institution seem smaller, and helped them feel more comfortable in class (Baker & Pomerantz, 2000). Finally, students in the Soldner et al. (1999) study valued the beneficial scheduling of the learning community and the resulting team spirit and connectedness.

Programs reporting student satisfaction with their overall university experience varied in design. One offered block scheduling of three courses and an orientation course with little faculty collaboration of course content and no intentional peer or faculty mentoring (Baker & Pomerantz, 2000). This program was at a commuter institution with a large number of first generation college students and/or students employed off campus. Another program reporting positive findings for satisfaction included a seminar class, but made no mention of peer tutoring or course integration (Crissman, 2001). Participants were predominantly White and had high grade point averages. Two additional programs reporting student satisfaction with the university were at the same institution (Johnson, 2001). One program was designed for academically underprepared students (FYAE) and the other for students with strong academic backgrounds (RSP). The first program included a seminar component and group tutorials while the second featured peer mentoring and a common residence hall for participants.

These programs vary. However, the majority offered some type of seminar or orientation course. One program that did not include a seminar featured faculty mentoring and extended the learning community to the residence hall (Johnson,
Seminar courses generally familiarize students with campus resources and support services, thus participants would likely be comfortable with how to access these services. Similarly, the support offered through faculty mentoring and a cohort of peers attending the same classes and living in the same residence hall would provide participants with needed information for a positive first-year experience. Notably, participant satisfaction was equally strong regardless of type of institution or student. Similar results were reported from commuter and residential institutions and for academically prepared and underprepared students.

Studies measuring satisfaction with the learning community itself included one or more of the following features: integrated content, peer tutoring, a seminar component or academic skills taught in the context of the linked courses, and/or personal contact with faculty (Crissman, 2001; Goldberg & Finkelstein, 2002; Logan et al., 2000; Soldner et al., 1999). Although specific features of the programs varied somewhat, their objective was to provide academic and social support. Findings indicate that participants responded positively to their learning community experiences. Qualitative data in particular indicates that the conditions that produced feelings of satisfaction for participants were inherent in the learning community model—the opportunity for close connections among students and among students and faculty. Even participants who indicated they would not recommend a learning community to a friend or re-enroll in a learning community, indicated more positive feelings toward peer collaboration and visiting with faculty as the result of their learning community experience (Scharff & Brown, 2004). Again, participants varied with regards to academic backgrounds.

All but one learning community study measuring satisfaction reported positive findings. Overall, the primary features characteristic of learning communities, specifically linked and/or integrated courses, development of academic skills and familiarization with campus resources through seminar or orientation courses, and involvement with peers and faculty result in satisfaction for a variety of participants. Although not all of these characteristics were found in all of the learning communities, the programs were based on the same principle and had the same overriding objectives. The one program that did not realize positive outcomes in satisfaction had integrated course content and assignments but participation was required (although students did have a choice of learning community pairings). These findings suggest that it is the principle of connecting the learning experience in a meaningful way in a supportive environment that makes learning communities successful rather than the specific way the learning community concept is applied from institution to institution. However, the self-selection effect once again seems to have a critical effect on outcomes.

CONCLUSIONS AND IMPLICATIONS

In summary, this review analyzed four primary outcomes of learning communities—persistence, academic achievement, involvement, and satisfaction—to
determine commonalities among successful learning communities. While all learning communities are based on common principles (i.e., shared and connected learning, supportive learning environments), and share common goals (i.e., improved learning, academic and social integration, persistence), the implementation of the learning community model can vary significantly among institutions. The non-parallel nature of learning communities reported in the literature makes it difficult to identify specific features that contribute to positive outcomes. This being said, however, some critical conclusions can be drawn.

The single, foundational feature shared by all learning communities is the linking of two or more courses in which a small cohort of students is enrolled. Beyond that feature, integration of course content and coordination of assignments, a seminar component, and peer or faculty mentoring were characteristics that were most common and that frequently resulted in positive outcomes. However, some learning communities recognized positive outcomes with only one of these features. This can be explained by the fact that the foundational linking feature of a single cohort of students enrolled in the same courses naturally results in students making academic and social connections to a certain extent without additional interventions. Although some have questioned whether or not less complex learning communities (i.e., those not linked by content or themes) truly constitute learning communities (Stassen, 2003), evidence suggests that even those that incorporate blocked scheduling alone (e.g., Baker & Pomerantz, 2000) or have no subject area linking (Stassen, 2003) recognize outcomes similar to more elaborate models.

Program features that did not appear to affect outcomes included the number of courses that were linked or the type of courses linked (i.e., general, major, honors, or developmental). Similarly, while most learning communities take place over the course of a single semester, the two programs that spanned a full academic year (Gordon et al., 2001; Johnson, 2001) did not recognize greater gains than semester-long programs. Another component of learning communities that did not appear to influence outcomes was organized co-curricular experiences. Only six programs reported extending the learning community into the residence halls (Johnson, 2001; Logan et al., 2000; Pike et al., 1997; Stassen, 2003). This feature did not result in more positive outcomes. In fact, participants in two of these studies did not recognize an increase in course grades or grade point averages (Johnson, 2001; Logan et al., 2000).

Only one program in the review selected participants randomly (Goldberg & Finkelstein, 2002). This program did not recognize gains in either persistence or academic achievement although participants gave it strong reviews for involvement and satisfaction. Only two learning communities required students to enroll (Johnson, 2001; Scharff & Brown, 2004). One of these focused on at-risk students who were conditionally admitted (Johnson, 2001). It reported positive results for all four outcomes. The other required learning community resulted in academic achievement and involvement gains, but no significant change in feelings of
satisfaction toward learning communities in general (Scharff & Brown, 2004). In contrast, in the remainder of the learning communities students were self-selected. All of these learning community studies reported positive results for the outcomes measured. In general, self-selection appears to be a strong contributing factor in learning community success.

The self-selection factor needs further examination, however. It is difficult to separate program effects from self-selection effects, thus it is not entirely clear whether positive outcomes are due to the structure of the learning community or to self-selection. Students who choose to participate in a learning community may be disposed toward involvement, seeking academic excellence, and/or have learning styles that fit the pedagogical structure of a learning community, and thus benefit most from the model. The fact that students who were randomly assigned to a learning community (Goldberg & Finkelstein, 2002) did not recognize gains in persistence or academic achievement underscores this possibility.

To minimize the effects of the self-selection variable, more institutions need to design studies in which students are randomly assigned to a learning community and to a control group. In spite of objections that this is unethical in that students desiring or needing additional support may not have it available (at least through the learning community model), this is one way to determine if the learning community model is successful on its own merits and not due to the predispositions of participants. This would provide a much clearer picture of the effectiveness of the model. It would also be helpful to study more cases in which the learning community model is required for certain groups of students such as those characterized as at-risk to determine if the model is appropriate for students who need support rather than just for those who choose the support on their own.

The strongest outcomes for learning communities were involvement and satisfaction. Learning community studies measuring these outcomes nearly all reported positive findings. The results of self-report surveys and focus groups used to measure involvement and satisfaction generally indicate that students considered themselves academically and socially integrated, factors thought to influence persistence (Tinto, 1987). The fact that the majority of learning communities also recognized increases in student persistence lends some support to this theory. One contradiction to this, however, is that although the students randomly assigned to a learning community rated it positively in terms of involvement and satisfaction, they did not recognize gains in persistence or academic achievement.

Another notable finding of this analysis is that learning communities can be equally successful for a variety of types of institutions and for students of different backgrounds. Although not all institutions were identified as a specific type in the studies, two described themselves as metropolitan (Borden & Rooney, 1998; Franklin, 2000), one as a commuter campus (Baker & Pomerantz, 2000), and one as a technical college offering both two- and four-year programs (Goldberg & Finkelstein, 2002). Similarly, student demographics were not consistently
reported, but the studies including this information demonstrate some variety in learning community participants. Learning communities variously included students considered at-risk or academically underprepared (Baker & Pomerantz, 2000; Goldberg & Finkelstein, 2002; Johnson, 2001; Yockey & George, 1998) as well as students categorized as high achievers or academically prepared (Crissman, 2001; Evenbeck & Williams, 1998; Franklin, 2000, Johnson, 2001; Logan et al., 2000; Pike et al., 1997; Stassen, 2003; Stefanou & Salisbury-Glennon, 2002).

Implications of this learning community analysis for higher education are that regardless of institutional type or student profile, learning communities have demonstrated positive results in persistence, academic achievement, involvement, and satisfaction. Administrators, faculty, and support staff must be aware that no magic formula to this success is apparent. The specific features of curriculum design and pedagogy vary widely among institutions. However, key features that contribute most frequently to success are an integrated curriculum, a component familiarizing participants with campus resources and the development of academic skills, and peer or faculty mentoring. Evident from this review is that institutions are adapting the learning community model to fit their needs. However, as institutions continue to implement and improve the model on their campuses, they must be more active in reporting what they have learned in sources beyond institutional assessment documents.

Specific kinds of data are critically needed in order to make more informed decisions about learning community implementation and/or continuing support for existing programs. We need to accurately identify specific features of the model that result in positive outcomes and for different populations of students. Few studies have made comparisons among programs in order to isolate and examine the effects of structural components. For example, are programs with a seminar component more effective at improving academic achievement than those without? Do learning communities in which faculty collaborate on course content result in deeper levels of learning for students? Are learning communities more effective for certain populations of students than others? If so, which components of learning communities seem to make a difference and for which groups of students? Some preliminary conclusions regarding program structure and outcomes have been made in this article, but few studies have actually examined the effects of structural components on desired outcomes. Work in this area could be facilitated by multi-institutional studies as researchers could draw from a variety of configurations of learning communities.

Also, current studies rely heavily on quantitative data, such as grade point average, to measure learning. Qualitative feedback from faculty and students is needed to obtain a more complete picture of the depth of learning resulting from learning community participation. Some assessment is already moving in this direction (e.g., see Crissman, 2001; Franklin, 2000; Scharff & Brown, 2004). The variety and extent of learning communities in place across the country
demonstrates the appeal of the model. Learning communities are being implemented at different types of institutions and for different types of students. The ability to effectively assess learning communities is also developing. While quantitative measures such as grade point average and persistence are common, this review indicates that more information is needed regarding the effects of specific program factors on learning outcomes and for specific populations of students, that the self-selection variable must be addressed, and that qualitative data is needed to measure depth of learning.
## APPENDIX: Program Summary

<table>
<thead>
<tr>
<th>Key</th>
<th>Outcome</th>
<th>Participants</th>
<th>Curriculum Design</th>
<th>Pedagogy</th>
<th>Co-curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>NM = Outcome not measured</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Reference

- Baker
- Borden/Evenbeck
- Crissman
- Franklin
- Goldberg
- Gordon
- Johnson (FYAE)
- Johnson (RSP)
- Logan
- Pike/Schroeder
- Scharff
- Soldner
- Stassen (RAP)
- Stassen (TAP)
- Stassen (Honors)
- Stefanou
- Yockey

Note: NM = Not measured
REFERENCES


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