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# A Process Evaluation of a Learning Community Program: Implemented as Designed?

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Abstract: Learning communities can be useful to counter some of the challenges encountered by first-semester students as they transition to college. This 2-year process evaluation examines the launch of a campus-wide learning community initiative for developmental reading students at a community college in the USA. Students, instructors, and administrators were interviewed about the implementation of the program, and program-related materials were reviewed. Findings suggested ways to enhance the effectiveness of learning communities of the linked-course variety through program implementation that is more faithful to key design aspects. Suggestions include (1) implement team-teaching across linked courses; (2) carry out an integrated curriculum across courses; (3) provide in-depth and continued instructor training as well as specialized resources; (4) expand support services available to students and require them to use at least some; and (5) create tools/methods for instructors and administrators to regularly assess processual aspects rather than just program outcomes.

**Keywords:** learning community; community college; developmental reading; student persistence; first-year students; transition



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## 1. Introduction

Learning communities can be useful to counter some of the challenges encountered by first-semester students as they transition to college life [1,2]. For the purposes of this study, we consider a learning community to be "A curricular model that links two or more classes together for a cohort of students" [3]. Often labeled a "high-impact" practice [4,5], learning communities can impact how students experience college and forge meaningful experiences, via people, places, and/or programs, and are thus important levers for student success in college [6-8]. Specifically, learning communities may help students transition more effectively from high school by increasing recognition and access to important on-campus resources and study skills, as well as enhancing social integration of students on campus [9]. Social integration leads to greater student persistence [7,8,10,11], and Nancy Shapiro and Jodi Levine [12] also report that learning community students enjoy "... higher levels of involvement with peers and the campus, and express greater overall satisfaction with the college experience". A higher level of collegiate satisfaction operates as another pathway to student persistence [13]. Further, effective learning communities can both demonstrate to students that expectations are quite different in college than high school and help students to cultivate adaptive habits and new goals in a supportive social environment [14]. While benefits of learning communities have been routinely touted over the past two decades, research shows that they are not always associated with beneficial effects—or uniform effect sizes—at different colleges [4,15] or for different groups of students [16]. Some argue that sometimes disparate outcomes reported for learning communities may be due, in considerable part, to their varying degrees of successful implementation [4,17].

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Further, surprisingly few studies provide practical suggestions—gleaned from data as well as theory—on how to implement learning communities for student success; even carefully planned learning communities will experience difficulties if implemented in clumsy, inappropriate, or less than thorough ways. To better understand how implementation of a learning community program can shape its success, our study provides evidence from a 2-year process evaluation that may help would-be program designers, administrators, and instructors to implement more effective learning communities during students' first semester of college, a critical juncture in both their transition to—and ultimate trajectory within—college.

# Current Study

This study examines a learning community program newly implemented in 2015 for developmental reading students at a two-year public college in the USA. The college chose to implement learning communities because, in prior years, less than 20 percent of students in developmental reading earned six or more college-level credits, and this percentage was lower than those for students in other developmental courses such as math and English [18]. Accordingly, short-term goals of the program included increasing retention in the developmental reading course (RDG), improving reading skills, developing study strategies, boosting academic self-confidence, enhancing attitudes about reading, and heightening a sense of community. An intermediate goal was to increase student persistence in college-level courses beyond students' first semester (including introductory English, which followed in the second semester).

The learning communities were designed to be of the linked-course type; students were concurrently enrolled in RDG and a first-semester experiences course (FSE) that introduced students to general study skills and strategies; goal setting; how to cope with competing demands of school, work, and/or family; as well as support offices and resources available on campus and beyond. Learning communities were implemented for first-semester, developmental reading students at the college during spring and fall 2015, thus there were two cohorts of learning community students under study. The duration of each learning community was for a single semester, which is typical for most learning communities [3], and class sizes were capped at 24. Each learning community was taught by two instructors (one for RDG and another for FSE), and these same instructors volunteered to teach both cohorts studied. Instructors had previously taught their respective courses in semesters prior to the introduction of the program. Students could enroll in the program if they scored between 38 and 42 on the Computer-adapted Placement Assessment and Support Services (COMPASS) placement exam for reading level; they could only enroll in six credit hours for that semester (RDG and FSE). If there was an open seat in one of the two concurrent learning communities and the student met the COMPASS exam criterion, advisors encouraged the student to register during their first-semester orientation, although students were not required to join a learning community.

This study does not aim to evaluate the effectiveness of the learning communities on student outcomes per se (however, see [19] for a qualitative analysis of students' perceived outcomes from the program). Rather this study centers on a process evaluation that gauges the degree to which learning communities were implemented as designed, and if not, what implications might have arisen for program stakeholders, including students. Process evaluations can distinguish between interventions that were fundamentally faulty and interventions that were merely poorly implemented [20] and thus may shed light on how to ultimately improve both the operational and effectiveness aspects of learning communities. For this study, interviews were conducted with students, instructors, and administrators (both program and institutional) during spring and fall 2016, and a content review was conducted of program-related documents, both publicly available and internal to the college. Based on empirical data collected from these various sources, we share various lessons learned by stakeholders and also analyze qualitative data for key themes regarding both positive and negative aspects of the implementation processes. Finally,

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we offer suggestions toward more effective strategies for the design, implementation, and assessment of learning communities; policymakers, stakeholders, and researchers alike may find use in our conclusions.

#### 2. Materials and Methods

In order to collect rich processual information about the learning community program's design and implementation, in-depth and semi-structured interviews were relied upon for data collection. In total, 13 one-on-one interviews were conducted in person and on campus near the end of both the spring and fall 2016 semesters; seven students, two instructors, and four learning community program or institutional administrators were interviewed. By interviewing various types of stakeholders, we sought to capture their viewpoints on various aspects of implementation, and to triangulate information when appropriate. In general, there was a high degree of concordance across the student, instructor, and administrator interviews on the vast majority of issues discussed. The mean interview length was 43 min with a standard deviation of 16 min, and interviews were audio-recorded and transcribed for analysis.

Interview invitations were sent to college email addresses of 20 randomly selected students from those who took part in a learning community during 2015 and were still enrolled at the college in 2016. Students were thus two or three semesters removed from learning community involvement when they were interviewed for the study. As an incentive to be interviewed, students were offered a \$20 Visa card. While both women and men students were invited for interviews, only women responded to the request. Students were asked about (1) their reading and study habits, (2) the degree to which they had achieved their goals at the college, (3) their learning and grades, and (4) whether/how the learning community contributed to their collegiate experiences. Students were also asked about enrollment in the program, their likes and/or dislikes, their experiences, and if their ideas or person was changed because of the learning community.

All program administrators and instructors associated with the program participated in this study. Administrators were asked about why learning communities were initiated; perceptions of the learning communities on campus; design and operation of the program; strengths, weaknesses, and surprises regarding the program; and modifications to the program throughout the two years it had been implemented. Administrators, particularly those in broader institutional roles, were also asked about the extent to which they were connected to the program. Instructors were asked similar questions but were also queried about their teaching practices and interactions with students and administrators.

For the content review, internal and publicly available materials were collected during spring and summer 2016. Materials consisted of three types: documents relating to an action plan (16 total) from 2015, training documents for learning community instructors (20 total), and course syllabi (three). Internal materials were provided by program administrators and instructors, and all internal materials were requested in an attempt to reduce selection bias. Publicly available materials included training documents from other colleges or organizations that were used by the instructors and/or administrators in this program.

Based on a pilot study from fall 2014 [21], these sensitizing concepts guided the interviews as well as their analysis: program goals for developmental reading, program design, "high impact practices", perceptions of the program by stakeholders, administrator involvement, program training and resources, team teaching, integration of linked course content, student support, and assessment of implementation processes. A sensitizing concept "... gives the user a general sense of reference and guidance in approaching empirical instances... directions along which to look" [22]. Line-by-line coding was used, with responses categorized by question. Memoing was carried out throughout the analysis to make sense of the nascent codes and potential linkages between them. Thematic analysis was used for both the interview data and the content review; thematic analysis was used to both describe and interpret data. Themes were identified using the constant comparison

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method [23]. This method "involves searching for similarities and differences by making systematic comparisons across units of data" [24].

## 3. Results

## 3.1. Program Design and Implementation

Based on instructor and administrator interviews, as well as the content review of materials, there were numerous identifiable components within the program's design. During the process evaluation, however, five design components took on particular importance with respect to how they were actually carried out within the learning communities: (1) team teaching across linked RDG and FSE courses; (2) integration of learning themes, other content, and assignments between linked courses; (3) comprehensive and continued training for instructors, as well as access to specialized resources; and (4) introduction of students to support offices, services, and related resources available on campus that have been consistently linked to student success.

Instructors reported a fair amount of collaborative communication regarding their linked courses. However, team teaching wherein instructors were concurrently present in the classroom was not commonly practiced. Team teaching reportedly occurred only a few times throughout the first semester the learning communities were introduced. As one teacher put it, "We would do some team teaching within the classroom. We would both be in the class together at certain periods throughout the semester, and we called these workshops. And we would do three workshops a semester". The fact that instructors received credit for teaching only one of the courses—not both—appeared to serve as a disincentive toward team teaching since "true" team teaching was seen as requiring considerably more time than for a single course. Thus, the actual implementation of team teaching appeared to fall short of what the program designers intended.

Although the learning community instructors did not consistently team teach, they wanted to do so more frequently and expressed positive views about its effectiveness, both for students' learning and their own professional development. As a teacher opined:

"From a personal growth standpoint, that is another really big strength of the program is that ... I learned so much about teaching and different strategies and how to relate to students. And just having that connection with [my team teacher] and that resource to be able to go to [my team teacher] all the time, it was just invaluable to me". Students also enjoyed instances of team teaching when it occurred. One student stated, "They [instructors] worked together so ... we were working on kind of the same thing at like the same time ... it made it easier". Another expounded on this notion, "Every so often we would have a day where both teachers were in there at the same time, and we would like bring in together what we were learning in both classes ... Those days were actually my favorite days".

Second, the program's design specified strategic integration of content and assignments across linked courses; this goal of course integration was to be supported with comprehensive training for instructors who volunteered for the program. Instructors reported little formal training on learning communities prior to and during their first semester in the program, i.e., training primarily consisted of attending a professional conference. Yet their level of training appeared to have increased during later semesters. Due to their increased amount of training and expanded experiences with learning communities over the semesters, both instructors and administrators grew to feel confident about instructors' knowledge of—and ability to carry out—learning communities. For instance, as an instructor stated:

They [administrators] were great about sending us to conferences to learn a whole lot more because locally we didn't really know. We knew the research and we knew what we were trying to do with the learning communities, but as far as implementing everything that we needed to do—administration knew that we needed to go somewhere else to kind of learn a little bit more about best practices and what other colleges were doing. So [my fellow linked course instructor] and I

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have attended a ... learning communities conference for the last couple of years, and that has been very, very helpful. Learning about different course pairings and different things to do in the classroom.

Due to the cumulative effects of training and day-to-day experiences with the program, learning community instructors increased the level of integration between RDG and FSE over subsequent semesters. As one administrator recounted "The first semester ... they had a few overlapping assignments. But as each semester progressed, they have kind of been folding in more and more commonalities". Students also liked when they detected topical linkages across the linked courses. For instance, one student noted: "It was just kind of cool how they brought everything together and ... made it one whole class of two subjects". Students in this study were able to identify several other content areas that were covered in both courses. RDG was a course that could feature virtually any topic, and instructors appeared to take advantage of this to build topical linkages between RDG and FSE. For instance, another student recalled learning about music during RDG: "[RDG instructor would] . . . get on YouTube and we'd listen to music because we were in a music—the chapter in our book—for like 3 weeks of music. Jazz and hip hop, how hip hop got here". Other topics that appeared in both courses were personal finance, community service, diversity, culture, politics, history, math, English, and health. As the student put it: "We did everything ... in [FSE]. There was one girl that always had trouble with her history and she would ask [FSE instructor]. So we would have like a 30 min history lesson". Students also mentioned that studying strategies and goal setting—important components to FSE—were treated in assignments required for RDG.

A common feature of learning communities is for instructors to incorporate prominent and recurring learning themes to foster integration and deeper learning within paired courses. In the present study, learning themes were present across both linked courses for the duration of the semester. Instructors used two primary themes in their courses: (1) healthful living inspired via a book common to RDG and FSE, and (2) motivational materials/lessons that highlighted how visualization of a goal and dedicated work toward it can result in its attainment. Some learning themes were pre-planned during the design stage of the program, especially those that originated from the book-in-common. As an instructor recalled:

We really decided that [book] was going to be one of the main themes in our learning communities. That our students were—both classes—our students were going to read those books and we were going to use the themes within those books to kind of merge the content as far as reading strategies and then also the goal setting, and the themes, whatever it is, in that book for that semester.

Rather than being designed a priori, the theme of motivation emerged more spontaneously during the learning communities.

The importance of learning themes surrounding the book-in-common and motivation were echoed in interviews with students. For instance, students in one learning community initiated a campus health fair because the book-in-common focused on healthful living. One instructor described how the learning community students organized and held the health fair for the college after reading the book. Another student mentioned career-themed writing assignments as an example of an important theme; students' careers goals were a major thematic focus of the learning communities:

We had to do career-themed papers, which helped me a whole lot discover if I was truly interested in the career I was going for. Which I'm still kind of iffy on it but ... I like being able to write the paper about it that helped me get in touch more with the career I was wanting to do.

One instructor also suggested that successful attainment of career goals was likely a theme in her classes: "The teachers that we had ... they just were all about being successful ... So maybe success was it [a theme]". One student seemed to share a similar perspective about motivation: "A theme ... study. Do your work on time. Be punctual. It's just like

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having a job". Although only a few students explicitly used the word "success" when asked about a theme across their courses, students often mentioned their instructors being "all about success". In addition, the chosen book every semester centered around an inspiring story of a person overcoming difficulties to attain their goals. Thus, the overarching goals of the learning community were designed around the notion of helping academically underprepared students to persist and succeed, and it appeared that students sensed this purpose and its related learning theme.

## 3.2. Administrator Involvement and Support

Successful implementation of a learning community often hinges on the degree of involvement and/or support provided by administrators, student advisors, and other key staff on campus. Accordingly, we sought to understand the amount and nature of administrator involvement and support with the program. Interviews revealed that all administrators felt connected to the program, but the degree to which the administrators were involved varied by their roles. One administrator offered:

Very much [connected to the program] ... I may not be in the classroom day in and day out with the students and faculty. But from the very beginning of this thing, from the research standpoint to really the decision-making standpoint to making sure that people across the college—faculty and staff—knew what this thing was.

Administrators expressed that they valued and supported the learning community program. "We will support our faculty. They are not just out there on an island by themselves trying to enforce something that is a good practice," voiced an administrator. In turn, learning community instructors felt that the program was supported by the administration. Both instructors mentioned that administrators were eager to fund their professional developmental for teaching in the learning communities. They described moral support as well as material support:

They [administrators] were super, super excited and supportive of us doing the health fair ... They actually came in to visit the booths and ask our students questions ... We have a learning community conference that we go to [regularly], so they're always eager to sign for us to go ... other changes we can make to boost the communities ... See what else other schools are doing. They are very supportive as far as professional development. If we do any kind of activity, they always make sure that they are there to support the students ... they really jump in 100 percent.

Learning community instructors reported satisfaction with the level of involvement from administrators. They described administrators as being primarily facilitative and supportive rather than directly managing or assessing them. Indeed, one instructor appreciated the freedom to teach their course within the learning communities in the manner that instructors deemed appropriate:

They are involved just the perfect amount. [Laughter.] They have given us direction, and they have given us resources . . . asking us what we need for those learning communities. I know they are looking at the data and want to see the effectiveness of it. And they're looking at, of course, our evaluations. But they really give us freedom within those classes, and I think that is really important.

Administrative support and enthusiasm for learning communities was also evident by the fact that all administrators were in favor of expanding learning community opportunities for students at the college, e.g., for other paired developmental courses, paired courses for college-ready students, and to train other instructors in methods that were seen to be widely beneficial for student engagement. One administrator suggested "For me, learning communities being improved would mean—not necessarily improve in the way our current faculty teach in learning communities—but exposing more faculty to it". Another noted

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the many possible subjects amenable to learning communities: "The learning community concept could be expanded to other areas . . . the faculty have discussed—are there other opportunities for learning communities? . . . I mean there could be all kinds of different pairings out there".

# 3.3. Training Materials

Training materials primarily consisted of exemplars or "good practices" for learning communities. These materials were juxtaposed with how learning communities were actually implemented at the college. Training documents consisted of materials that instructors received from two conferences on learning communities during fall 2014 and fall 2015. Many presentations at a conference on learning communities focused on best practices for learning communities, conveying what has worked at their institutions. Most of the learning communities discussed were of the linked-course variety and a substantial number focused on academically underprepared students. Linking two or three courses was most common, although there were a few cases where four classes were linked; in the current study, instructors believed that adding a third linked course would enhance the program. Finally, a majority of these presentations were to inform instructors on how to integrate content areas between linked courses. While learning community instructors in the present study enhanced their level of integration between RDG and FSE as the program evolved, the courses were never commingled under a single unifying curriculum.

As an example of a specific conference paper, Huot and Palm [25] reported that Georgia State University implemented a learning community program that began in the summer and ended the following spring. This learning community consisted of three courses: New Student Orientation, English 101, and a Social Science. The program, called "Success Academy", had four major components: Summer Bridge Program, Mentorship, Academic Support, and Personal & Professional Development. Students were required to engage in student services (a feature that learning community instructors in the present study wished was a component of their program). Further, students had to attend meetings with a peer mentor and met three times per semester with their academic coaches and academic advisers. If students did not meet GPA requirements during the summer, they were involved in an academy recovery plan. This plan required meetings with instructors, attending workshops, identifying barriers (academic and personal) to their success in college, planning how to remove these barriers, and calling students to reflect on their goals for college. Some key features of this program, such as mandating student services and meetings with peer mentors, instructors, and advisers, may have dramatic effects on student performance and persistence. Note that all these elements included increasing involvement for students, which is consistent with Astin's [26] student involvement theory. Additionally, through involvement, students experience academic and social integration according to Tinto's [27] student departure theory. Involvement is important for students in gaining Bourdieu's [28] forms of cultural and social capital that are prevalent in the institution. Instructors in the present study believed that students should be required to go to tutoring, counseling, etc. In some cases, services were available (such as tutoring), but many students did not attend because it was not required under the program. Additionally, a counselor was unavailable for learning community students at the time of this study.

Another study was presented by Baham and Finley [29] that highlighted what they believed to be "best practices" of learning communities: " ... fostering partnerships with student services, including advising, media, marketing, institutional research, and administration". In addition, Gebauer [30] identified student engagement, academic affairs, and enrollment management as pivotal to the success of learning communities. As such, buy-in for learning communities is important and the effectiveness of learning communities is contingent on multiple services provided by the college. In the current study, advising and administrative support proved to be program strengths. However, other student services and marketing for the program were limited and thus constituted areas of weakness

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for the program. In-depth interviews with instructors revealed that students were largely unaware of the program if they did not directly participate.

## 4. Discussion

This process evaluation identified several important design components that were not fully implemented in practice, or not implemented as the designers intended. At most postsecondary institutions, more attention is likely devoted to the design and assessment of outcomes for learning communities than for the specifics of their implementation. Yet how the design is enacted should be of great concern since implementation mediates learning and other program outcomes. To increase the probability that the design is readily implementable, we concur with Fosnacht and Graham [4] that instructors and those from teaching and learning centers should be consulted or actually brought onto the design team. Those most deeply involved with learning communities on a regular basis also may offer insights as to the specificity of design goals, and how these may be operationalized to ultimately measure success, whether it be with respect to implementation or student outcomes. Bringing in learning community instructors early in the program would also permit them a "big picture" vantagepoint, as well as a better understanding of exactly how their teaching efforts may contribute to program effects.

In this study, there was mention of outcomes assessment by instructors and administrators, but little monitoring of processual aspects was discussed, e.g., team teaching and integration of content across linked courses. While instructors and administrators appeared knowledgeable about the intended design, it would seem prudent for the parties to revisit the original design aspects on a regular basis to ensure alignment of implementation questions and nuances as they arise, i.e., to assess consistency across implementation and design. Alternately, when decisions are necessitated concerning processes not expressly laid out in the design, at least these extemporaneous "mini-design" decisions could be documented as discretionary, and rationales noted. To our knowledge, this sort of process assessment was not conducted in a formal and routinized fashion for this program. A regular assessment schedule with respect to processes—as well as specialized tools and/or procedures—would likely prove useful for guiding implementation. Instructors might chafe at this form of compliance given that they reportedly enjoyed considerable freedom from oversight of administrators, yet they might ultimately appreciate the structure and feedback inherent in the process, especially if instructors took the lead in carrying out assessment themselves. Through more intensive program monitoring, program strengths and weakness could be noted, and adaptations could be made in response to changes in demand from students as well as the college. It should be noted that the learning community coordinator's reported duties included professional development; updating progress to the college; marketing the program; budgeting; forming and facilitating the related college committee; as well as design, implementation, and assessment—in addition to responsibilities for other college reform initiatives. As evident from this list of responsibilities, this position may approach a full-time workload, and thus having a full-time coordinator or two co-coordinators may be warranted, especially if additional assessment of implementation processes were to be included.

Initial instructor training with respect to the learning communities in this study appeared to stem mainly from attending conference sessions on learning communities and studying associated conference papers from a single conference. Ongoing mentorship or additional resources to assist with unfolding questions or problems that arose during the first semester were not reported by instructors or administers. Yet instructors felt more confident and equipped as they gained more training—primarily through attending a yearly conference—and experience over subsequent semesters. More thorough and varied training, especially for instructors new to the program, would likely enhance the effectiveness of the learning communities at their inception. Further, it became apparent from the interviews that there was interest at the college with respect to implementing additional learning communities, such as in history and English. Given the high interest

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level, the formation of an informal professional learning community might result in more pooled training resources for the instructors. Such a professional learning community might result in increased "word of mouth" for the student learning communities on campus and could diminish pressure on instructors to quickly become de facto local experts on learning communities.

Team teaching, where both instructors teach together for the duration of both classes, occurred only a few times throughout each semester. Ideally, learning communities should be team taught during a majority of classes or more for the entire semester: "The daily practice of team teaching creates an environment of continuous learning for everyone and for acculturating new members of the community" [31]. However, team teaching in this form may be impractical due to both instructors' time and college budgetary constraints. When instructors did team teach, students described these days as their "favorite days". On these days, the methodologies of learning communities were in full effect with a variety of active learning opportunities that allowed for frequent instructor-instructor interaction, student-student interaction, and student-faculty interaction. As such, a full implementation of team teaching into the learning communities would likely enhance the effectiveness of the program, including potentially facilitating more integration of course content, primarily via common themes. Even though there was increased integration of content as the program evolved, there was not anything approaching a comprehensive curriculum between the two courses, which represented a missed opportunity in these learning communities.

Last, as evident from the literature, many learning communities require students to partake in a variety of student services [9,32]. For the program at this college, student services were voluntary, but mandating students to attend weekly or bi-weekly meetings with their instructors, tutors, and advisers could be particularly beneficial for academically underprepared students. In fact, findings from this study revealed the importance of student services. In-depth interviews with learning community students revealed that they primarily learned about student services from inside the program. These services included a learning center, where tutors were available in various subjects, and a writing center. Increasing students' confidence to seek help, and the subsequent involvement with student services, instructors, and peers, are key steps in helping academically underprepared students to succeed in college [9,19]. The present study suggests that more intensive models of learning communities, equipped with tutors, counselors, and other student support services, may be needed for optimal learning communities, especially with respect to developmental education.

As an implication for the future, our study points to the need for more widespread use of process evaluations when others are considering future learning community programs. Locally conducted process evaluations would permit stakeholders to detect potential problems or areas for improvement "on the fly" before program outcomes have crystalized. Further, process evaluations could pinpoint variables or processes idiosyncratic to each institution that may serve as powerful mediators of program success, e.g., student or instructor characteristics, institutional culture(s) and resources, relations with the external community, and so forth.

Like all studies, this one has its limitations. First, the process evaluation examined a program implemented for academically underprepared students in reading at a two-year, public college. While our findings may or may not be generalizable to other groups of students, other types of institutions, or even other two-year colleges, there is little reason to believe apriori that they would *not* apply to many other learning communities elsewhere. Second, while all instructors and administrators in the program participated in the study, student attrition occurred over the two-year study. For instance, students who participated in a learning community but dropped out of the college were not available to be interviewed, and it is possible that those who left might have provided different perspectives than those who remained. Further, there was the potential for nonrespondent bias in terms of those who declined to be interviewed. Third, data for this study were collected over 2015 and 2016. Since then, the COVID-19 pandemic has ushered in more widespread use of—and

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innovation in—remote and hybrid learning opportunities. Concomitantly, there has been increased interest in online-based learning communities, e.g., in terms of how they can foster a sense of community when conditions occur that constrain physical proximity, or can reduce digital inequality for those students living in rural areas [16]. That said, our primary findings and conclusions appear quite relevant in the contemporary educational landscape. In fact, the challenges to learning communities that we identified on the campus, such as more comprehensive instructor training, fully realized team teaching, and providing student support services may prove even more challenging remotely than in person, particularly given the technological and coordination demands that must be surmounted.

#### 5. Conclusions

More careful implementation of learning communities may result in greater program success for students. Based on this process evaluation of a linked-course learning community for developmental reading students, we offer the following suggestions for implementation (1) define specific goals that are, in fact, easily implementable; (2) fully implement team-teaching across linked courses; (2) implement an integrative curriculum; (3) provide in-depth and ongoing instructor training, along with specialized resources; (4) expand support services available to students and require them to use at least some as part of the learning community experience; and (5) create tools/methods for instructors and administrators to assess processual aspects rather than just program outcomes.

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