

High-Impact Practices: Applying the Learning Outcomes Literature to the Development of Successful Campus Programs

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In AAC&U's 2007 report, *College Learning for the New Global Century*, the National Leadership Council for Liberal Education and America's Promise (LEAP) identified a number of innovative, "high-impact" practices gaining attention in higher education. In a subsequent AAC&U report, Kuh (2008) describes strong positive effects of participating in high-impact activities as measured by the National Survey of Student Engagement (NSSE). Specifically, first-year students and seniors who participated in learning communities, service learning, study abroad, student-faculty research, and senior culminating experiences reported greater gains in learning and personal development. These gains included "deep approaches" to learning, which encompass integrating ideas and diverse perspectives, discussing ideas with faculty and peers outside of class, analyzing and synthesizing ideas, applying theories, judging the value of information as well as one's own views, and trying to understand others' perspectives. According to Kuh, "Deep approaches to learning are important because students who use these approaches tend to earn higher grades and retain, integrate, and transfer information at higher rates" (14).

In discussing the evidence for the success of these practices, Gonyea, Kinzie, Kuh, and Laird (2008) recommend that all students in higher education participate in at least two high-impact practices, one in their first year and another in their academic major. Yet this recommendation is far from the current reality in higher education. A majority of college students do not have the opportunity to participate in high-impact activities, and, as Kuh notes, underrepresented students—such as first-generation college students and African American students—are far less likely to participate.

Kuh's (2008) findings about the outcomes of high-impact practices provide colleges with strong reasons to continue the development of these practices on college campuses. They also raise the question of what else we know about the proven outcomes of these practices. In 2008, the authors of this article completed a literature review for AAC&U, researching the proven outcomes of five "high-impact" activities: first-year seminars, learning communities, service learning, undergraduate research, and capstone experiences. We found substantial support for the value of these programs for students in general, and more specifically, for underserved students (underrepresented minority, low-income, and first-generation students). Each practice leads to a range of positive outcomes for students, and for colleges and universities as well. However, it is also clear that the impact could potentially be greater when colleges and faculty take the time to design these experiences carefully, paying attention to each piece of planning and implementation. Designing these activities with an eye to each campus's own culture and goals will increase the likelihood of strong educational outcomes for all students.

Of the five practices reviewed, much has been written about four of them. For first-year seminars, learning communities, undergraduate research and service learning, there are many published descriptive and prescriptive pieces talking about program elements, advocating for the development of these experiences as a response to current criticisms and challenges in higher education, or providing advice for implementing the activities. There are also many articles and books describing case studies of successful programs. Unfortunately, there has been little attention paid to capstone experiences in the past decade, and almost none of that literature



looks at student outcomes, including student learning (however, it is worth noting that capstone experiences may fall under the rubric of undergraduate research at many colleges and universities). Therefore, this article will focus on the other four practices reviewed: first-year seminars, learning communities, service learning, and undergraduate research. [For the full literature review, please visit www.aacu.org/inclusive_excellence/Research.cfm.]

OUTCOMES OF HIGH-IMPACT PRACTICES

The most common outcome studied across all four practices is student persistence in a given institution, followed closely by academic performance, usually defined as grade point average. For both of these measures the result is positive: students who participate in these activities consistently persist at a higher rate than those who do not. While the impact on grades is more modest, these activities either have a positive impact on student performance, or at worst a neutral impact. No studies were identified in which participation led to lower persistence or grades when groups of participants were compared to nonparticipants.

Beyond these two indicators, researchers have studied a wide range of behavioral, attitudinal, and learning outcomes. For example, all four practices have been shown to lead to higher rates of faculty and peer interaction. Three of the four lead to increases in critical thinking and writing skills, greater appreciation of diversity and diverse viewpoints, and higher levels of engagement, both in and out of the classroom. Some additional specific outcomes are worth highlighting:

- Participants in *first-year seminars* are more likely to report that their campus is a supportive environment. They are more knowledgeable about campus resources than nonparticipants and have a greater ability to manage their time.

- *Learning communities* help ease the transition to college. Several studies of underserved students have shown that these communities help students build their identities as learners and give them a sense of belonging on campus. Learning communities have also been linked to a host of liberal education outcomes, including intellectual development, integrative thinking, civic engagement, and the development of values and ethics.
- *Service-learning* participants demonstrate gains in moral reasoning, in their sense of social and civic responsibility,

Second, not enough studies move beyond grades and persistence to look at student learning. In *Challenging and Supporting the First-Year Student: A Handbook for Improving the First Year of College*, Upcraft, Gardner, and Barefoot (2005) challenge colleges to broaden their definition of student success to include a wide range of outcomes, including developing intellectual and academic competence, exploring identity, developing career goals, clarifying their values and beliefs, developing multicultural awareness, and developing a sense of civic responsibility. While some authors have taken on this

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in the development of a social justice orientation, and in an increased commitment to pursuing a service-oriented career. They are also more able to apply class learning to real-world situations.

- Students who participate in *undergraduate research* are more likely to continue on to graduate school, are more satisfied with their overall educational experience, and demonstrate greater problem-solving and research skills.

ASSESSMENT OF THE OUTCOMES LITERATURE

While the evidence reviewed shows a clear pattern of the success of these initiatives, there were several problems identified with the current body of literature. First, most studies involve single institutions, programs, or classes. Since each of the high-impact activities varies widely in practice, it is often impossible to generalize research findings, or to identify which program component leads to a particular outcome.

challenge, there are too few studies in these areas to confidently conclude that these are consistent outcomes of participation.

Third, many studies pose methodological issues, such as a lack of comparison groups, the use of convenience samples, and exclusive reliance on self-report measures. Further, as most studies look at student performance over a very short span of time (typically from the first to the second semester, or from the first year of college to the sophomore year), there is a troubling lack of longitudinal data on high-impact activities.

Finally, one of the primary purposes of the literature review was to determine whether there was a differential outcome for participants in underserved student groups. We found that there is little research that looks at learning outcomes for specific populations of students, and particularly underrepresented minority, low-income, and first-generation students. Even where demographic data is avail-

able for a study, it is more often used in describing the sample than in analyzing or discussing findings. Therefore, much of what we know about the outcomes for these groups has to be inferred from reading about institutions or specific programs that predominantly serve students from one of these groups, such as community colleges.

APPLYING THE OUTCOMES LITERATURE TO CAMPUS PRACTICE

Given these concerns, how can the current literature be useful to campuses who want to improve their practices? While the literature often didn't permit generalizing findings, this project allowed us to see the wide range of design options available for each campus to consider. No two campuses are the same, so the same practices on different campuses are likely to lead to different results; every program design must take into account the unique culture and goals for the individual campus. So while we cannot say that a four-course learning community always leads to greater positive outcomes than a two-course community, we can point out the importance of considering those options in one's own program design. This section will highlight the choices that each campus should consider for three high-impact practices: first-year seminars, learning communities, and service learning.

First-Year Seminars

The term "first-year seminar" is used to describe a range of class types. The National Resource Center for the First-Year Experience and Students in Transition at the University of South Carolina uses a scheme originally designed by Barefoot (1992) to classify these seminars. First-year seminars can be:

- *Extended orientation seminars*, whose primary goal is to assist students in their transition to college. They typically introduce students to the purpose

of higher education, teach students about campus resources, develop study skills, discuss academic and career planning, and address health and wellness issues.

- *Academic seminars with uniform content across courses*, which address the intellectual transition to college over the personal transition. They may address academic skill-building such as writing or critical thinking, but within the context of an interdisciplinary or theme-oriented academic course designed for first-year students.



- *Academic seminars with variable content*, which are similar to the academic seminars above, but are more likely based in a single discipline rather than interdisciplinary.
- *Preprofessional or discipline-linked seminars*, generally taken by students intending to enter a particular discipline or field, and meant to introduce students to and prepare them for the demands of that discipline or profession.
- *Basic study skills seminars*, usually targeting underprepared students and focused on college-level skill development.

While hybrid courses that mix multiple models are becoming more common, extended orientation seminars are still the most common type on college campuses (Swing 2002).

The success of the seminar selected may, logically, be related to the seminar's ability to meet the needs of the students of a given campus. For example, institutions with many first-generation college students might place priority on teaching their students how to navigate the college environment and will find the extended orientation content most useful. Colleges that have many pre-professional majors might find it more important to offer a seminar that would help new students learn about the expectations and demands of those fields from the start.

In his study of more than 30,000 students and seminar coordinators at sixty-two four-year institutions, Swing (2002) found that not only do different seminar types lead to different outcomes, but also the number of credits the seminar carries affects outcomes. While he found that one credit/contact hour courses were as effective as courses with greater contact at introducing students to institutional policies and practices:

If the course goals also include increased knowledge of campus services, improvement in time management and other study skills, increasing student/student and student/faculty connections, and increased out-of-class engagement, then at least 2 contact hours per week are more effective in producing these learning outcomes. If the course goals also include gains in academic skills and critical thinking, then a three-contact hour course is more likely to produce the desired learning outcomes (Swing 2002).

In addition to number of credits or contact hours, other factors associated with the success of seminars include: (1) the use of instructional teams, bringing faculty, aca-



demic advisers, librarians, and computing specialists together to support students; (2) the use of engaging pedagogies; and (3) connecting first-year seminars to other high-impact practices, such as learning communities or service learning.

Learning Communities

Learning communities also take on many different forms in practice. At their most basic, a learning community links together two classes on a common theme. However, a learning community can link enough courses to make up a student's full-term schedule. They can include an extended orientation seminar, or a seminar intended to help students discuss the theme and integrate knowledge across classes. Another option is to make a community residentially based to form a living-learning community. The option that is right for a particular campus should again be linked directly to the culture and goals of the college for this community. Faculty availability, classroom size and availability, residential options, and host of other practical factors are a necessary part of any conversation about the structure of learning communities.

In the introductory chapter to *Diversity, Educational Equity, and Learning Communities*, Lardner (2005) describes the importance of intentionality in creating effective learning communities. Citing Malnarich's (2003) earlier work, Lardner emphasizes that learning communities can be used to target the problematic parts of the curriculum—those gateway courses and “graveyard” courses that act as gatekeepers for student progress. By creating learning communities that lend support to students in the classes where there is a higher risk of failure, rather than creating communities based solely on faculty's personal interests in collaborative teaching, institutions can address issues of equity and access.

Beyond these practical aspects of learning community design, the faculty's approach in the classroom is key to the success of learning communities. From a study of multiple learning communities on one campus, Lichtenstein (2005) found classroom environment to be a crucial factor in the success of learning communities. Specifically, Lichtenstein identified three types of classroom environments:

1. Positive classroom environments (PCEs) had clear linkages between

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classes, including shared syllabi and linked assignments, and clear, visible communication between faculty. They used active and collaborative learning methods and out-of-class group experiences such as service-learning projects. Faculty created a sense of community in the classroom and an environment of respect for students. They also helped students build skills, such as writing and study skills, which students would need to be successful in their future studies.

2. Negative classroom environments (NCEs) were characterized as having no subject matter linkages between classes. Faculty either didn't interact or were in clear conflict with each other, and the syllabi, grading and assignments were not coordinated. These faculty did not work to prepare students for the academic skills they would need in the future, and were unsuccessful at creating a sense of community among students.
3. Mixed classroom environments (MCEs) had mostly positive classroom

experiences, but weak or no linkages between the content of the two courses or between grading protocols. There was an emphasis on community building above skill building.

Student outcomes were found to vary between classroom environment types. Students in the PCEs had higher persistence and grades than students in NCEs, MCEs or in no learning community at all. In fact, nonparticipants had higher persistence rates than those in NCEs.

This study points to the importance of the quality of the learning community experience, and its potential impact on its achieving desired outcomes for students. Therefore, best practices in developing learning communities will necessarily include faculty development; in particular, faculty should be allowed time and resources to create collaborative communities that focus on active and collaborative learning, integrative learning, community development, and skill building. The use of instructional teams, described above for first-year seminars, could also be beneficial in learning communities.

Service Learning

The most important aspect of service learning design is ensuring that students' service experiences are linked directly to classroom learning. This linkage not only differentiates service learning from volunteerism, but also enables students to apply classroom learning in out-of-class settings and vice versa. Structured reflection opportunities are repeatedly cited as

a means to achieve this integration, with faculty helping students to make connections between theory and practice. In addition, there are several factors to consider when developing a quality service-learning experience:

- To be effective, students must have meaningful service experiences, interacting directly with clients rather than simply doing office work.
- The quality of supervision offered at the site is of key importance, and should include regular feedback to students regarding their progress.
- The duration of the experience should be long enough to be meaningful and to allow the development of relationships between students and clients.

Service learning is an ideal activity to pair with other high-impact activities to lead to even greater gains for students, because it is a powerful integrative tool. Eaton, MacGregor, and Schoem (2003) point out that learning communities can provide sustained time and space both to conduct service-learning work and to reflect on that work, and can provide “multiple lenses to examine issues” raised in service learning (4). At the same time, service learning brings experiential learning to the learning community experience. It focuses students on “real” world (unscripted) problems and issues, and broadens students’ thinking about what it means to be a part of a community beyond the campus.

CONCLUSION

The literature review conducted by Swaner and Brownell found that “high-impact activities” live up to their name, leading to a range of positive outcomes for students. The project also showed that with the range of options available for each of these activities, it is advisable for colleges and universities to design programs that fit their own culture and goals.

In implementing these programs, however, institutions also have the opportunity to improve our knowledge about student outcomes by building assessment into their design. Our understanding of outcomes would be enhanced by: (1) the use of more longitudinal approaches and comparison groups; (2) studies moving beyond student persistence to student learning; (3) a mixture of both qualitative and quantitative research methods; (4) clearer descriptions about program components; (5) more attention to outcomes for underserved student populations; and (6) more multi-institution studies, which could be attained through institutional collaboration and consortia. Each of these improvements would increase our effectiveness at designing quality initiatives for our students. ■

Editor’s Note: An article on high-impact practices by these authors also appears in the spring 2009 issue of *Diversity and Democracy*. www.diversityweb.org/DiversityDemocracy/index.cfm.

REFERENCES

Barefoot, B. O. 1992. *Helping first-year college students climb the academic ladder: Report of a national survey of freshman seminar programming in American higher education*. PhD diss., College of William and Mary.

Eaton, M., J. MacGregor, and D. Schoem. 1993. Introduction: The educational promise of service-learning communities. In *Integrating learning communities with service-learning*, ed. J. MacGregor, 1-8. National Learning Communities Project Monograph Series. Olympia, WA: The Evergreen State College, Washington Center for Improving the Quality of Undergraduate Education.

Gonyea, R.M., J. Kinzie, G.D. Kuh, and T.N. Laird. 2008. *High-impact activities: What they are, why they work, and who benefits*. Presentation at the Annual Meeting of the Association of American Colleges and Universities (AAC&U), Washington, DC.

Kuh, G.D. 2008. *High-impact educational practices: What they are, who has access to them, and why they matter*. Washington, DC: Association of American Colleges and Universities.

Lardner, E., ed. 2005. *Diversity, educational equity, and learning communities*. Olympia, WA: The Evergreen State College, Washington Center for Improving the Quality of Undergraduate Education.

Lichtenstein, M. 2005. The importance of classroom environments in the assessment of learning community outcomes. *Journal of College Student Development* 46 (4): 341-356.

Malnarich, G., with P. Dusenberry, B. Sloan, J. Swinton, and P. van Slyck. 2003. *The pedagogy of possibilities: Developmental education, college-level studies, and learning communities*. Olympia, WA: The Evergreen State College, Washington Center for Improving the Quality of Undergraduate Education, in cooperation with the American Association of Community Colleges.

Swaner, L. E., and J. E. Brownell. 2009. *Outcomes of high impact practices for underserved students: A review of the literature* (preliminary draft). Washington, DC: Association of American Colleges and Universities. www.aacu.org/inclusive_excellence/documents/DRAFTProjectUSALiteratureReview.pdf

Swing, R. L. 2002. *Series of essays on the first-year initiative benchmarking study*. www.sc.edu/fye/resources/assessment/essays/Swing-8.28.02.html (accessed August 8, 2008).

Ucraft, M. L., J. N. Gardner, and B. O. Barefoot. 2005. *Challenging and supporting the first-year student: A handbook for improving the first year of college*. San Francisco: Jossey-Bass.

HIGH-IMPACT EDUCATIONAL PRACTICES: What They Are, Who Has Access to Them, and Why They Matter

By George D. Kuh

This publication defines a set of educational practices that research has demonstrated have a significant impact on student success. Author George Kuh presents data from the National Survey of Student Engagement about these practices and explains why they benefit all students, but also seem to benefit underserved students even more than their more advantaged peers. The report also presents data that show definitively that underserved students are the least likely students, on average, to have access to these practices.

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