Advancing Collaborative Roadmaps for Student Success
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Coming together is a beginning, staying together is progress, and working together is success.
—Henry Ford

In a January 2014 posting to AAC&U's LEAP Challenge blog, Donna Heiland, who was then vice president and special assistant to the president, Emerson College, wrote, “Why collaborate? Because it’s a way of using resources—financial, material, human—more effectively. Because it’s a way of learning from each other. Collaboration is surely the way of the future, a way of working that has the potential to integrate teaching, learning, and research across institutions even as institutions are intentionally integrating these things on their own campuses. It’s hard to do at the beginning; logistics can get in the way of starting, and working together can seem cumbersome. But the more you do it, the more the benefits emerge: costs can be contained; resources are shared; staff, faculty, and students benefit. And the world gets bigger—campuses look outward, horizons broaden.”

While establishing partnerships for student success is important for all institutions, it is key for community colleges because the academic fate of more than seven million students—nearly half of all US undergraduates—is in their keeping. These students’ pathways into and through college are often circuitous and cross many institutional boundaries. Collaboration, therefore, is absolutely essential in this sector. In this context, AAC&U’s Advancing Roadmaps for Community College Leadership to Improve Student Learning and Success project, under the leadership of Tia Brown McNair, AAC&U vice president for diversity, equity, and student success, seeks to disseminate and to advance the knowledge and insights from AAC&U’s continuing work with nineteen community colleges participating in the LEAP Developing a Community College Student Roadmap project, originally funded by MetLife Foundation. Led by a set of experienced community college leaders, Roadmap schools have applied AAC&U’s LEAP practices and principles to efforts that advance community college student learning and engagement. Advancing Roadmaps will scale these strategies to support guided learning pathways for all students and build national, regional, and state partnerships among organizations committed to improving student learning and success. The project is supported by a grant from The Kresge Foundation.

Last year, the Advancing Roadmaps project held a Community College Leadership Summit to deliberate about the increasingly critical role that two-year institutions hold in achieving our nation’s goals for equitable access to and success in higher education. In attendance were leaders from several national organizations, including the American Association of Community Colleges, Achieving the Dream, Jobs for the Future, the Aspen Institute College Excellence Program, the Community College Research Center, as well as numerous campus leaders. At that gathering, more than one hundred participants shared promising strategies and identified opportunities for collaboration in order to make excellence inclusive through cross-institutional scaling of effective practices and policies all targeted toward community college student success.

Produced in partnership with The Kresge Foundation, this issue of Peer Review features a range of collaborative efforts that support successful outcomes for all community college students. The articles portray diverse types of collaborations, written by authors in both multi-institutional and campus–community partnerships. In all instances, their narratives involve working together to set goals, share resources, and implement reforms that advance success for all students.

“Divided We Fail” was the message of one of the Community College Leadership Summit sessions. Conversely, through intentional collaboration we can make great strides toward providing successful learning outcomes for all students. By sharing the lessons learned from the Advancing Roadmaps project, including those in this journal and those soon to be available on the AAC&U website in an open source electronic resource hub to scale the use of evidence-based LEAP practices at community colleges, we hope to motivate those at two- and four-year institutions to look within and outside of their campus gates for partnerships that will benefit and guide students toward successful learning pathways.

—SHELLEY JOHNSON CAREY

ABOUT THE KRESGE FOUNDATION

The Kresge Foundation is a $3 billion private, national foundation that works to expand opportunities in America’s cities through grantmaking and social investing in arts and culture, education, environment, health, human services, community development and our place-based efforts in Detroit. Kresge’s Education Program works to promote postsecondary access and success for low-income, first generation and underrepresented students. Please visit Kresge.org or follow @kresgedu to learn more.
A Shared Vision for Student Success

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Community colleges are important providers of access and opportunity for an increasing percentage of multicultural, multigenerational, low-income, and first-generation college students (American Association of Community Colleges 2014; Juszkiewicz 2014). These institutions serve more than half of all students enrolled in public colleges and universities and more than one-third of all students enrolled in higher education (US Department of Education 2013). The academic and economic success of this new majority of nontraditional postsecondary students, largely served by the nation’s public two-year institutions, will define national well-being for decades to come (Bailey 2012).

Given this important role played by community colleges, it’s unsurprising to see numerous national and regional efforts to improve community college student success emerging. The “completion agenda”—the reform movement led by state and federal policymakers designed to increase dramatically the number of students graduating from our nation’s colleges and universities—continues to drive the development of new programs and initiatives. As Karen Stout, president and CEO of Achieving the Dream, recently reminded a group of national, regional, and statewide organizations complement and support collective action and shared goals to improve student outcomes. Efforts focused on the completion agenda have historically been siloed and disconnected. As a result, we have not reached the impact we desire. Higher education leaders must find ways to be more intentional and systematic.

In 2014, the Association of American Colleges and Universities (AAC&U) received a grant from The Kresge Foundation to expand partnership opportunities with other national organizations seeking to improve community college student success. AAC&U’s activities to strengthen partnerships with community college leaders and with organizations committed to supporting the work of community college educators included a Community College Leadership Summit, which helped kickoff AAC&U’s Centennial Year activities in January 2015.

Those conversations examined the following areas:

- How can campus leaders design guided learning pathways that clearly define expectations for students?
- How can collaborations among faculty at institutions across the country support higher levels of achievement of student learning outcomes?
How can national, regional, state, and local partners influence transfer policies and practices that recognize the growing evidence of student swirl? The overarching goal of the multiyear project is to identify actionable items that will further the shared goals of partner organizations, while supporting our individual, and often complementary, missions.

In one example of efforts to form concrete, long-term partnerships, Jobs for the Future created the Policy Leadership Trust for Student Success to inform and influence the next generation of policy conditions and state infrastructure that support community college efforts to transform in support of improved student success, with generous funding from the Bill & Melinda Gates Foundation (http://www.jff.org/initiatives/postsecondary-state-policy/policy-leadership-trust-student-success). The trust members—including more than forty college and state leaders—will seek to create a dialogue in the field about the need for change and will make bold recommendations to their peers. A panel of national advisors from partnering organizations such as AAC&U, Achieving the Dream, and CCRC support the work of the trust members, pulling these organizations together into a collaboration focused on the future of community colleges. The work of the trust centers around four key areas: building pathways to credentials, redesigning developmental education, recommending innovative new models for credit transfer between community colleges and four-year institutions, and examining outcomes-based funding policies. Representing a more on-the-ground example of partnership collaboration is AACC’s work to increase knowledge of student success programs for men of color in community colleges. In 2010, AACC launched the Minority Male Student Success database. This web-based tool highlights community college programs, initiatives, and strategic plans focusing on minority male mentoring, recruitment, persistence, and completion. More than ninety AACC member institutions have showcased their commitment to minority male student success by uploading a descriptive profile highlighting their institutional mission to help all students in securing their educational goals.

According to AACC member institutions, collecting and sharing this information has been valuable. However, low persistence among African American males in postsecondary education remains a problem, and some have described it as an epidemic. Data show that they are one of the smallest demographic to attend college, and, of those that do attend, many never complete. Negative portrayals, stereotypes, and characterizations of this group are all over the media, while success stories are few and far between. This AACC effort represents collaboration among campus-based educators seeking to address the growing equity gaps for this segment of America’s postsecondary student population.

At the heart of all of the aforementioned partnership efforts is the understanding of how our distinct but intersecting missions seek to advance critical aspects of the roadmaps, or pathways, for community college student success. It is increasingly apparent, as we strive to strengthen our partnerships, that achieving systemic, sustainable change requires a renewed level of appreciation for how our organizational missions and activities can collectively drive institutional change.

Mission Statements of the Association of American Colleges and Universities, Jobs for the Future, and the American Association of Community Colleges

Association of American Colleges and Universities
The mission of the Association of American Colleges and Universities is to make liberal education and inclusive excellence the foundation for institutional purpose and educational practice in higher education. AAC&U works to reinforce the commitment to liberal education at both the national and the local levels and to help individual colleges and universities keep the quality of student learning at the core of their work as they evolve to meet new economic and social challenges. www.aacu.org

Jobs for the Future
Jobs for the Future works to ensure that all lower-income young people and workers have the skills and credentials needed to succeed in our economy. Jobs for the Future designs and drives the adoption of innovative, scalable approaches and models—solutions that catalyze change in our education and workforce delivery systems. www.jff.org

American Association of Community Colleges
Building a Nation of Learners by Advancing America’s Community Colleges
This mission statement captures the American Association of Community College’s commitment to advance the recognition of the role of community colleges in serving society today. By providing advocacy, leadership and service for community colleges, the Association will play a key role in assisting the nation as it passes from the industrial era of the twentieth century to the new knowledge-based society of the twenty-first century. www.aacc.nche.edu
Our shared purpose centers on preparing students to be learners by providing a high-quality educational environment that will help all students, especially those traditionally underserved in higher education, succeed in a knowledge-driven workforce. Inherent in our mission statements is a commitment to Making Excellence Inclusive (MEI). For AAC&U, and for many of our partner organizations, MEI translates into advocating for and challenging the traditional practice of providing a liberal education to some students and narrow training to others, as outlined in the following AAC&U board statement on diversity, equity, and inclusive excellence (2013):

To make excellence inclusive, our society must break free of earlier views that an excellent liberal education should be reserved for the few. Instead we insist that liberal education should be an expectation for all college students. Increasing college access and degree completion for all is necessary but insufficient to foster the growth of an educated citizenry for our globally engaged democracy. We need to define student success not exclusively as degree attainment, but also as the achievement of the primary goals of liberal education: broad and in-depth knowledge, the capacity to integrate and apply learning to new situations, and the intentional and substantive opportunities that encourage and require higher levels of collaboration.

To support intentional and directed higher levels of collaboration, AAC&U will launch an electronic resource hub in 2016 to provide concise, useful research narratives, examples of campus work, and assessment instruments for community college educators. This hub will encourage collaboration among our member campuses and partner organizations to design more intentional and substantive opportunities that encourage and require higher levels of collaboration.

Also reflected in our mission statements is our shared commitment to advancing the necessary institutional and policy changes that support student success. The commonalities in our mission statements emphasize that the foundation for building partnerships and for increasing collaborations exists. But if we are truly going to move the needle on community college student success, what comes next?

As colleagues, we engage in what we describe as the first level of collaboration: we attend each other’s meetings, we coauthor articles, we inform each other of new initiatives, and we sometimes serve as formal and informal advisors. We know that while these efforts are valuable, much more needs to be done. There is a growing desire among partner organizations to design more intentional and substantive opportunities that encourage and require higher levels of collaboration.

The electronic resource hub is intended for community college faculty and academic or student affairs administrators, but it also will inform student success efforts across four-year institutions.

One project that will be featured in the electronic resource hub will be AAC&U’s Developing a Community College Student Roadmap: From Entrance to Engagement in Educational Achievement and Success—a campus-to-campus collaborative project, sponsored by Metlife Foundation—involving nineteen colleges that have worked together over five years. The approach engages students at entrance and teaches them how to become active partners in their own quest for educational success. The method requires community colleges to create robust and proactive high-impact practices (HIPs), which should be tied to expected learning outcomes and addresses critical challenges that often derail innovation, such as institutions’ tendencies to emphasize completion rates more than finding ways to improve and document the quality of student learning (Finley and McNair 2013); students’ high rates of mobility (McCormick 2003; Sturtz 2006; Wang, Yan and Pilarzyk 2009); or students’ need for coherent pathways to completion (Bailey, Jaggars, and Jenkins 2015; Scott-Clayton 2011).

Rather than offering a single programmatic intervention, the Roadmap project proposed scaffolding HIPs to affect underserved students holistically and equi-
ably. Community college students often have diverse educational experiences and pathways in and out of the classroom, but the integration of HIPs allows students to reflect on and make connections between such disparate experiences as internships, general education courses, service and community learning projects, and writing intensive courses.

A robust body of evidence supports the theory of action of the Roadmap project, ensuring that the implementation of HIPs will be effective in increasing student success.

In 2005, AAC&U and the National Survey of Student Engagement identified a set of HIPs that increase retention levels, classroom engagement, persistence, completion, and students’ self-reported learning gains (Kuh 2008; Kuh and O’Donnell 2013; Center for Community College Student Engagement 2010; Finley and McNair 2013): first-year seminars and experiences, writing-intensive courses, capstone courses and projects (Chen and Mazow 2002; Chen, Cannon, Gabrio, and Leifer 2005; Knight, Hakel, and Gromko 2008; Chen and Light 2012). When done well, all HIPs possess some combination of key features that enhance students’ engagement with their campus, peers, community, and academic subject matter in a way that improves success in terms of both learning and transfer. These features include high expectations, investment of student effort over time, meaningful interactions with faculty and peers, experiences with diversity, frequent and constructive feedback, opportunities for reflection, and public demonstration of competence (Kuh and O’Donnell 2013). These experiences engage students, create a sense of social and academic belonging, and provide an opportunity to demonstrate integrative and complex learning.

There are other promising examples of higher-level partnerships that illustrate the intentional collaboration we are seeking. AACC recently launched the Pathways project, which represents “a national partnership to build capacity for community colleges to implement a pathways approach to student success and college completion.” Partners in the project include Achieving the Dream, the Aspen Institute, the Center for Community College Student Engagement, the Community College Research Center, Jobs for the Future, the National Center for Inquiry and Improvement, and Public Agenda. (http://www.aacc.nche.edu/newsevents/pressreleases/Pages/10302015_1.aspx). We look forward to learning more from these partnership models.

Our shared goal is to provide a framework and promising strategies that will catalyze others to engage in higher levels of collaborative action to support high-quality student learning and success

This issue of Peer Review on Advancing Collaborative Roadmaps for Student Success provides examples of the varying levels of intentional collaboration among campus leaders, national organizations, and regional and state partners. We hope that the models inspire action, at both the individual and partnership levels.

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Center for Community College Student Engagement. 2010. The Heart of Student Success: Teaching, Learning, and College Completion (2010 CCCSE Findings). Austin, TX: The University of Texas at Austin, Community College Leadership Program.


Intentional Collaborations: Building a Virtual Community of Mentoring and Practice

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Donna Seagle, director, Faculty Center for Excellence and Innovation, Chattanooga State Community College

In Completing College: Rethinking Institutional Action, Vincent Tinto (2012) writes that to reach the goal of student success and retention, institutions must “invest in faculty development” for both full- and part-time personnel. He recommends faculty development activities to foster the use of “classroom assessment techniques and pedagogies of engagement.” Tinto goes on to explain, “The classroom is the building block upon which student retention must be organized. . . . If we hope to make significant gains in retention and graduation, institutions must focus on the classroom experience and student success in the classroom” (124).

In order for faculty members to change the classroom environment, they must be well versed in effective pedagogies that support student engagement and promote student success—in other words, faculty development is the key to student success. Yet at many colleges and universities, faculty development is thinly staffed by an individual, a small office, or a committee. In this context, how can those involved in this work benefit from the shared wisdom and operational knowledge of their colleagues in the professional development field? In this case study, we will discuss how the authors—a group of three faculty developers—responded to this challenge by creating a virtual community of mentoring and practice composed of teaching and learning center directors, who met regularly to share experiences and resources across institutional and geographic divides.

Our initial meetings developed into a virtual community of mentoring and practice that has sustained and encouraged each of us in our professional lives. Our community of practice began with our participation in a national grant program, the Association of American Colleges and Universities (AAC&U) Roadmap project. Two of us, Mary Carney from the University of North Georgia (UNG), and Dallas Dolan from the Community College of Baltimore County (CCBC), met in summer 2013 at the AAC&U summer institute on High-Impact Practices and Student Success. At the 2014 AAC&U Annual Meeting, we met the third member of our group, Donna Seagle from Chattanooga State Community College (ChSCC). Over lunch the three of us talked about the
joys and challenges of being faculty developers in settings with no peers. These brief face-to-face conversations and shared workshop experiences were critical in creating a rapport that allowed us to begin to talk in depth about our institutions and the work of fostering student success through faculty development. After such a rich exchange of ideas, we imagined what we might do if we worked together.

Over the next eighteen months, we met more than thirty times and built a strong supportive alliance that led to measurable improvements in faculty development at each of our institutions. We presented our work at the AAC&U annual meeting in January 2015, almost one year to the day from when our trio first met, and since that time we’ve continued to build a strong working group that has sparked new collaborative projects.

THEORETICAL UNDERPINNINGS
Early in our collaboration, Dallas Dolan shared Etienne Wenger’s conception of communities of practice, and as our group began meeting we reviewed the literature to see what it had to offer in the way of guidance. In *Cultivating Communities of Practice*, Wenger, with colleagues Richard McDermott and William Snyder (2002), describes communities of practice as “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (2). Wenger and his colleagues describe the benefits of such a community as going far beyond the solving of problems and sharing of knowledge among the group. Accordingly, a community of practice “is not merely instrumental for their work. It also accrues in the personal satisfaction of knowing colleagues who understand each other’s perspectives and of belonging to an interesting group of people.”

BENEFITS
Through our alliance, we have created a virtual community of mentoring and practice. This partnership is focused on creative collaboration in the development of programs and resources to benefit all of us, as well as our faculty colleagues at our respective institutions. For instance, while we each had materials on diversity and inclusive classrooms, CCBC's long-standing Culturally Responsive Teaching program provided materials and approaches that enhanced the work at ChSCC and UNG. Another example of creative resource sharing occurred when, over the course of several meetings, we reviewed and discussed UNG’s assessment of faculty development program materials. Each of us came away from that experience with a better understanding of how to take our assessment efforts to a new level. A final example of the benefits of our collaboration was inspired by ChSCC’s shared library subject guides, which provide annotated bibliographies, current research studies, and teaching and learning resources for faculty and campus communities. A conversation about these guides served as an impetus for CCBC and UNG to create and update library subject guides for their faculty. Our collaboration has focused on how our diverse institutions could better support full-time and part-time faculty in order to meet the needs of students. Throughout the partnership, we each...
have contributed to a shared repository of information and resources; in this way, we have multiplied the resources and knowledge around relevant topics for faculty development. Our virtual community has proven to be a low-cost way to share knowledge of effective faculty development.

Needless to say, a practiced expertise in virtual communication and resource sharing is invaluable to us as professional development officers. By using online conferencing, collaborative presentation software, and free tools such as Google docs to build and sustain a close working relationship, we have gained technological knowledge and skills, an unexpected and valuable byproduct of our collaboration. Each of us provides professional development at institutions with multiple campuses and remote locations. The tools that helped facilitate our work also have helped us to broaden our reach at our multi-campus institutions by connecting and sharing resources with full- and part-time faculty members at a distance. Leveraging the technological and logistical skills practiced in our community, we have expanded our institutional professional development to faculty members who previously could not benefit.

Building upon the success of our community of mentoring and practice, we have been inspired to engage in a long-distance action research study to investigate the extent to which faculty members apply in their classrooms what they learned from professional development. To study this issue across the three institutions, we are collaboratively developing two workshops for new faculty members. The first will focus on culturally responsive teaching methods and the second on the use of rubrics to facilitate metacognition. We plan to survey faculty members at each of our institutions immediately after the workshops and again several months later to determine the extent to which faculty members applied the new pedagogy in their classes. Through the comparisons of our survey data across institutions, we hope to better understand rates of applications and the strategies that facilitated these applications.

**IMPLICATIONS**

This cross-institutional community filled a need for each of us and bridged our three single-person programs through active face-to-face and electronic communications. Our strong alliance and virtual community have allowed us to share knowledge and tools that have enriched our professional development programs, deepened our commitment to furthering academic excellence, and advanced faculty development at each of our institutions. Our work together has enriched our ability to foster faculty talent and continuous improvement through the implementation of evidence-based practices in the college classroom.

Our case study demonstrates that forming a virtual community of mentoring and practice with colleagues from different institutions who share an interest in professional development can foster shared wisdom and operational knowledge. The many successes and benefits of our sustained virtual collaboration have demonstrated the value of forming and nurturing a community of mentoring and practice.

**REFERENCES**


Faculty and Staff Engagement: A Core Component of Student Success

Mary Harrill, senior director, higher education accreditation and program support, National Association for the Education of Young Children; former associate director of programs and policy, Achieving the Dream

Julia A. Lawton, assistant director of data, technology, and new college experience, Achieving the Dream

Jo-Carol Fabianke, vice chancellor of academic success, Alamo Colleges

At the heart of every higher education institution are the students, the faculty, and the staff. Therefore, every effort to improve students’ experiences on campus and academic outcomes must include the voices of students, as well as leadership from and intensive engagement with faculty and staff.

Over the last eleven years, Achieving the Dream (funded by the Walmart Foundation) has led a network of more than 200 community colleges working to reshape institutional cultures so that the policies, practices, and culture of community colleges are optimized to promote and support student success. Our work, like that of AAC&U’s Roadmap project, is designed to help institutions develop pathways to simplify their students’ journeys, to break down silos between departments and campuses, to use data to inform every decision, and to engage students in their own learning experience. Our experience has taught us that faculty and staff are the key to successful cultural and organizational change and that the most sustainable and impactful change comes when they are not only engaged but also are the drivers of the work.

COMMON HALLMARKS OF ACHIEVING THE DREAM COLLEGES

While each college in our network approaches its student success work differently, based on the specific contexts of their institutions and students, there are common goals and strategies among all colleges in the network. The participating colleges

- Develop and commit to a strong common vision. Leadership, faculty, and staff at all levels and across all functional areas of the college commit to a common vision for student success and a set of priorities for improving student outcomes. They work together to operationalize those priorities and maintain a focus on the students they serve.

- Align all their student success efforts under this vision. One of the greatest challenges to engagement is initiative fatigue. Great colleges know that aligning and integrating their student success strategies can help create time and resource efficiencies, reduce the likelihood of duplicated effort, and ensure all college personnel and stakeholders can see how each initiative works together to achieve the institution’s goals.

- Build a culture of evidence and inquiry that permeates their institution. They continuously examine the students’ experiences, progression, and outcomes, and these analyses inform the creation, implementation, and evaluation of their strategy to enhance the student experience and increase outcomes. Equally important, all data are disaggregated so colleges have a clear understanding of how they can better support traditionally underserved and underrepresented student populations and can closely monitor their progress along pathways.

- Create an environment that encourages and supports faculty and staff to generate solutions and lead the change process. The most successful and sustainable initiatives are often those that are driven by faculty and staff who work with the students every day.

- Understand the value and power of effective and regular communication. They use every opportunity to tell their institution’s story and the stories of their students to engage, generate buy-in, and inspire leaders across the campus.

- Support the whole student. While it’s important to address the academic barriers that impede student success, it’s also important to focus on removing the other barriers—social, financial, etc.—that prevent students from completing a postsecondary credential.
Work to make the path to completion clear and accessible. Increasingly, Achieving the Dream colleges are building guided pathways that provide clear routes for students to meet their academic and career goals. These pathways begin with preparation for college and lead to enrollment and early advising, to completion, and to the workforce or further study.

Achieving the Dream colleges track the impact of their reform efforts on student outcomes through several measures—persistence from term to term ambitious or hasty in selecting their student success efforts, and some colleges take on too many initiatives, execute poor project planning, or move forward projects that do not fit the needs and culture of the institution. This leaves faculty and staff overwhelmed and inured by the constant addition of new responsibilities and shifting priorities. Some colleges are working to alleviate the resulting “initiative fatigue” by encouraging faculty and staff to lead change initiatives, maintaining clear and regular communication, and tying strategies together into themes that relate to the college’s strategic goals.

Top-down leadership models can imply that faculty and staff input and expertise are not valued. Similarly, student success interventions are often implemented without sufficient communication to faculty and staff about how they connect to their work and why they are valuable for their students.

Budget cuts and deficits often result in faculty and staff being asked to do more with fewer resources. The pressure to meet the demands of the job leaves little room for faculty and staff to take on additional work.

The majority of faculty members are in part-time adjunct positions. This often means they have multiple jobs at different colleges and are faced with competing priorities, low pay and workplace support, and no guarantee that they will be hired at the same college the next semester. These conditions not only result in detachment from the college’s vision and priorities, they also prevent those who are eager to get involved from doing so.

The time and resources required of faculty and staff in designing and implementing student success strategies are not always recognized by or aligned within compensation, tenure, and promotion structures.

A strong faculty governance structure can help accelerate and amplify the success of a particular intervention or, on the flip side, impede the implementation of said intervention.

Silos between departments limit collaboration and the ability to build infrastructures to implement sustainable interventions.

At the core of every college that shows a significant upward trend on any or all of these measures are strong, dedicated, and empowered faculty and staff leading the charge for their students.

OBSTACLES TO BROADLY AND DEEPLY ENGAGING FACULTY AND STAFF

There are a host of challenges embedded within institutional structures and processes that can impede a college’s efforts to support and promote the true engagement of faculty and staff in efforts to improve student outcomes. Some of these challenges are outlined below.

- While the national focus on improving student success is exciting, necessary, and urgent, colleges are often overly ambitious or hasty in selecting their student success efforts, and some colleges take on too many initiatives, execute poor project planning, or move forward projects that do not fit the needs and culture of the institution. This leaves faculty and staff overwhelmed and inured by the constant addition of new responsibilities and shifting priorities. Some colleges are working to alleviate the resulting “initiative fatigue” by encouraging faculty and staff to lead change initiatives, maintaining clear and regular communication, and tying strategies together into themes that relate to the college’s strategic goals.

- Top-down leadership models can imply that faculty and staff input and expertise are not valued. Similarly, student success interventions are often implemented without sufficient communication to faculty and staff about how they connect to their work and why they are valuable for their students.

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- Silos between departments limit collaboration and the ability to build infrastructures to implement sustainable interventions.

THE PRESS FOR COMPLETION INITIATIVE

Between 2012 and 2015, Achieving the Dream worked with fifteen community colleges to better understand the challenges and barriers to deep and broad student engagement and identify effective strategies to overcome them. Through the PRESS (persistence, retention, and student success) for Completion initiative, each college identified an existing student success initiative that would be greatly enhanced by the involvement of more faculty and staff. PRESS colleges then developed, executed, and evaluated engagement strategies with significant technical assistance support from Achieving the Dream Leadership Coaches (current and former community college senior leaders) and through regular peer-learning convenings.

Over the course of the grant, PRESS colleges set baseline measures for their campuses’ faculty and staff engagement, leveraged large meetings (convocations or whole-college summits) to broadly engage faculty and staff in their student
success agendas, and created cross-college working groups to examine student outcomes, identify strategies to improve the outcomes, and evaluate the impact of the strategies.

**ALAMO COLLEGES’ FACULTY AND STAFF ENGAGEMENT STRATEGIES AND RESULTS**

The Alamo Colleges were part of the PRESS for Completion Initiative and have also participated in AAC&U’s Roadmap project, where they focused on challenges experienced in rolling out various student success initiatives under the umbrella of the MyMAP framework (the colleges’ work toward building clear academic program maps): AlamoADVISE (a comprehensive advising system), the Refresher Courses program (a redesign of the colleges’ developmental education and adult basic education programs), and AlamoINSTITUTES (the colleges have channeled all courses and programs into six career pathways). Specific to the PRESS work, the colleges revamped and built out a faculty development program for both full-time and adjunct faculty to ensure that faculty are prepared to lead and support the student success initiatives. Both the AAC&U’s Roadmap project and Achieving the Dream’s PRESS initiative have given the Alamo Colleges opportunity to work through many barriers—institutional, financial, personnel—to develop action plans that will advance the goal of engaging faculty and staff as strategic allies who commit to supporting and enhancing these initiatives. The challenge for Alamo Colleges as they have redesigned the student experience has been balancing the engagement of faculty and staff in the redesign while faculty and staff also have to function in the current academic pathways models. At times it has felt like the colleges are building the plane while moving down the runway.

Thus, Alamo Colleges’ PRESS work focused on revamping faculty job descriptions and evaluations (for both full- and part-time faculty) and creating a faculty development program that aligned to the competency areas in the job descriptions and the evaluations and to the knowledge and skills needed to execute the colleges’ student success initiatives. The updated faculty teaching descriptions reflected a much stronger focus on the competencies needed for faculty to be effective educators. Based on the competency areas laid out in the new faculty job description, the colleges are piloting a faculty evaluation tool. The expectation is that the new evaluation tool will be implemented across all the colleges in the 2015–2016 academic year.

To support faculty in meeting expectations laid out in the new job descriptions and evaluations and to increase and accelerate the execution of the colleges’ primary student success initiatives, the colleges invested in building out the faculty professional development program. Professional development planning across the colleges began in 2010 when the Texas Higher Education Coordinating Board awarded a Developmental Education (DE) Demonstration grant to the Alamo Colleges. As part of a continuing focus on increasing success in DE courses, the colleges’ Achieving the Dream director worked with the colleges’ discipline leadership to develop faculty development sessions for all math, reading, and writing faculty to address specific changes in the DE curriculum. This initiative provided professional development across the colleges and included full-time and part-time faculty for the first time. As the student success initiatives have expanded and the new job descriptions and evaluation models have been implemented, the professional development program now has a staff, including faculty, dedicated to faculty professional development.

The colleges’ investment in faculty development is paying dividends in their efforts to increase faculty leadership and engagement in its student success initiatives in the following programs:

- The AlamoPREP program is designed for adult basic education students. Faculty discussions have resulted in a focus on developing contextualized, discipline-specific courses to be offered alongside a required refresher (DE) course and career advising. Full-time and part-time faculty in these disciplines have participated in ongoing faculty professional development training sessions to learn about the Refresher program and the associated advising protocols.

- The AlamoINSTITUTES are innovative and evidence-based academic and career pathways in the colleges. All degrees and certificates have been placed in one of six academic or career pathways. Discussions with the independent school districts within the Alamo Colleges’ service area and the local four-year colleges and universities have been initiated to develop seamless pathways beginning with a student’s endorsement selection in the ninth grade in high school on through a program at the Alamo Colleges to a baccalaureate degree or directly into the workforce—all based on a career goal. Academic maps are being developed with the program requirements at the four-year institutions. Faculty teams at the colleges will develop academic maps based on the program requirements at the four-year institutions.

- Implementation of AlamoADVISE began in fall 2014 when each student was assigned a certified academic advisor from their first to final semester. Advisors case manage students and work in teams to facilitate support. Student success data analysts provide a continuous flow of key advising...
Clarify expectations and project design.

- As part of AlamoADVISE, advisors in each institute are assisting students in determining their career pathway and will be using the AlamoINSTITUTES and academic maps with potential fall 2016 entering students. A faculty mentor program is currently in development, with implementation planned in spring 2016. Faculty in disciplines and programs within each institute will work in tandem with advisors of students who have earned thirty college-level semester hours to support students’ progress through their selected Institute. Training for the faculty will be included in the faculty professional development program.

PRESS FOR COMPLETION RESULTS AND LESSONS LEARNED

As the Alamo Colleges example shows, investing in faculty and staff development leads to improved faculty and staff leadership of and participation in colleges’ student success work. Achieving the Dream tracked faculty and staff engagement across all fifteen PRESS colleges and saw a marked increase in their engagement in the colleges’ student success initiatives over the course of the grant (see table 1 below).

Below are the key lessons learned by the fifteen colleges through their participation in the Achieving the Dream PRESS for Completion initiative.

- Clarify expectations and project design up-front. Any campus discussion about beginning a new project or initiative should include faculty early on in its development and planning. This can be accomplished by developing a roadmap that outlines objectives and how they will be accomplished and should include pertinent items such as stakeholders, team members, design principles, expected outcomes, and timeline. This plan should be shared, modified, and referenced regularly to remind faculty of the desired goal.

- Make the work meaningful for faculty. Faculty and staff want to know that what is being asked of them will actually make a difference and, if so, for whom and in what way. Particularly for faculty, it is important to connect the work at the most important level—in the classroom.

- Identify champions and get support. Start by identifying faculty members who are early adopters—those who are already invested in the work to be done and can champion the work. But it is important to consider that engaging only with faculty who are motivated to lead change does not provide the depth of reform that you have when the “fence sitters” also embrace the project.

- Ensure there is two-way communication. Effective communication from the very onset of the project will make it easier for faculty and staff to support the initiative. Ensure that their voices are heard as equals among peers.

- Use and share data. Data can be a powerful tool in telling an institution’s story and documenting need for improvement.

Invest in institutional research capacity to not only collect data, but also to train faculty and staff to make meaning from the data. Set the tone for the use of data to be informative, not punitive.

- Be conscious of workloads and scheduling. When seeking widespread participation, give faculty and staff options and degrees to which they can be involved. If they see that there are different levels of commitment and the work is meaningful, they are more likely to participate. Also ensure that faculty and staff members have opportunities to participate that fit within their work schedules, and allow them the flexibility to attend.

- Offer incentives. When possible, provide participating faculty and staff with something of value for engagement and participation. Incentives such as stipends, travel funds, or release time can go a long way in building support and fostering participation.

Higher education institutions that want to significantly increase their student success outcomes must design their policies, practices, and organizational culture to promote the engagement and leadership of their faculty and staff. Colleges that invest in designing engagement and empowerment strategies that leverage the talent and dedication of faculty and staff are likely to produce more meaningful and sustainable results. As Achieving the Dream continues to lead and support community colleges in building student-centered cultures that lead to improved student outcomes, the lessons from the PRESS for Completion initiative have informed our work to support and promote faculty and staff leadership of student success efforts.

### TABLE 1. CAMPUS PARTICIPATION IN CROSS-COLLEGE GROUPS BY POSITION TYPE (DUPLICATED), 2012–2013 AND 2013–2014

<table>
<thead>
<tr>
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<th>FULL-TIME FACULTY</th>
<th>ADJUNCT FACULTY</th>
<th>STUDENT SERVICES STAFF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prior to Grant</td>
<td>Year 1</td>
<td>Year 2</td>
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<td></td>
<td>176</td>
<td>742</td>
<td>938</td>
</tr>
</tbody>
</table>

Source: Table recreated from Carrie E. Henderson and Julia Lawton (eds.) 2015. Engaging Faculty and Staff in the Student Success Agenda: Case Studies from the Walmart PRESS for Completion Grant Program. Silver Spring, MD: Achieving the Dream.

### REFERENCE

Henderson, Carrie E., and Lawton, Julia, eds. 2015. Engaging Faculty and Staff in the Student Success Agenda: Case Studies from the Walmart PRESS for Completion Grant Program. Silver Spring, MD: Achieving the Dream.
Reflective E-portfolios: One HIP to Rule Them All?

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Jason Pickavance, director of educational initiatives, Salt Lake Community College
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As colleges and universities embrace high-impact practices (HIPs), we can envision a future—as yet a fantasy world—where they become more common, anchored in curricular pathways and designed to improve the retention and graduation rates of new majority students. At the same time, we see the accelerating adoption trajectory of electronic portfolios (e-portfolios), which suggests that they might also become commonplace in our higher education system. What would the educational landscape look like in this future where HIPs and e-portfolios took prominent places in the lives of students at colleges and universities?

We’re speculating in this article about a fantasy world where HIPs predominate in higher education, so we might profit from using one of the most widely recognized metaphors from fantasy literature—that of the One Ring that rules all other rings of power in J. R. R. Tolkien’s *The Hobbit* and *The Lord of the Rings* trilogy. The One Ring in Tolkien’s universe is the physical means through which Sauron seeks to exert power in Middle Earth. The rings of power are bound together and were created by Sauron to corrupt and control men, elves, and dwarves. The metaphor can only be extended so far into higher education, but we are intrigued by the idea that the e-portfolio could be considered something akin to the One Ring—the high-impact practice that unites and connects all other HIPs. What is the current status of e-portfolios and HIPs in higher education? How will that status change in the near future? Are e-portfolios another HIP? If students experience multiple HIPs in the course of their studies, would they benefit from also showcasing and reflecting upon them in an e-portfolio? What roles do HIPs and e-portfolios play in assessing essential learning outcomes?

HIGH-IMPACT PRACTICES IN HIGHER EDUCATION

Research supports George Kuh’s contention that the following teaching practices are notably beneficial to college students: first-year seminars and experiences, common intellectual experiences, learning communities, writing-intensive courses, collaborative assignments and projects, undergraduate research, diversity/global learning, service learning/community-based learning, internships, and capstone courses or projects. In addition, research suggests that participation in HIPs may also have compensatory effects for underprepared and historically underserved students (Kuh 2008; Brownell and Swearer 2010; Finley and McNair 2013).

When done well—and we should never forget that any high-impact practice can be designed or implemented poorly—HIPs share a set of characteristics that are the ultimate sources of benefit for students. They engage students as active rather than passive learners. To take one example, students engaged in undergraduate research can be actively (re)discovering discipline knowledge instead of passively receiving that knowledge in a lecture. HIPs engage students in relationships with faculty and other students that center on substantive and relevant material. For example, students working on a collaborative project can be asked to negotiate educationally relevant content at the same time that they are negotiating the dynamics of group work. A related feature of HIPs is that students are more likely to work with a diverse set of other people. HIPs also ask students to devote extended time and effort on tasks that are intentionally designed to result in tangible and specific—but unscripted—outcomes. Because of the way they are structured, HIPs frequently provide students with feedback on how well they are understanding concepts or learning new skills. Finally, HIPs tend to ask students to integrate, apply, and synthes-
size knowledge in meaningful contexts. Think about the demands for integration, application, and synthesis inherent in service-learning courses, internships, and capstone experiences.

**E-PORTFOLIOS AS A HIGH-IMPACT PRACTICE**

While evidence grows that effective e-portfolios correlate with student success and deep learning (see Eynon, Gambino, and Török 2014), they have high impact for a few underappreciated reasons as well. Exploring these reasons reveals some of the characteristic features of high-impact practices more generally; deepening our understanding of what makes these educational practices high impact, and helps show why e-portfolios are potentially the unifying HIP.

The first thing to note about e-portfolios as a high-impact practice is that they are composed. When we say composed, we are referring to the fact that e-portfolios both include writing and are themselves written. Just the fact of writing invites us to consider how e-portfolios might share some features of one key HIP: writing-intensive courses. Writing across courses is itself a valuable activity because writing has been shown to support learning. The National Council of Teachers of English puts it succinctly in Beliefs About the Teaching of Writing (2004): “Writing is a tool for thinking.”

In using the term composed we also include the more global decisions students make when they engage in e-portfolio practice. When students compose e-portfolios, they make higher-level choices about matters of order and arrangement. They select which point to address first, second, third, and so on. They build the architecture of their ideas and make decisions about how they want to represent them hierarchically. Students make connections across various assignments and courses and, more importantly, decide how those connections ought to be displayed. We should not dismiss this work as a trivial matter of graphic design and presentation. E-portfolio work shares many of the key characteristics of HIPs as described by George Kuh (2008) in the seminal AAC&U report on HIPs, High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter. Making compositional choices requires both “time and effort” and a general understanding of how one’s work across courses fits together.

When students build their e-portfolios, they also enact a shift from being a consumer to being a producer of their own education. They become learners with agency. When we ask students to represent and reflect on their learning both within and across courses, we go beyond simply requiring another assignment. Instead, we are pushing students to demonstrate their education in ways they haven’t been traditionally asked to. In composing an e-portfolio, students do more than represent an educational experience that existed prior to their efforts to capture it. Instead, there is a sense in which students are literally composing their education as they build their e-portfolios. It is in the act of crafting their e-portfolio, in the act of making hard, thoughtful choices, that the educational experience is fully realized.

Asking students to represent their learning introduces another hidden benefit, the so-called “audience effect.” Writing in Wired magazine about the benefits of writing and social media (blogging, Twitter, Facebook), Clive Thompson (2009) points to research that shows a “shift in performance when we know people are watching.” Thompson defends social media (blogging, in particular) against those who argue that it somehow harms literacy. Literacy scholars like Deborah Brandt point to the fact that we are now a “nation of mass writers.” Say what you will about the distractions of social media, the fact is that they require people to write for an audience. Thompson’s argument can help us better understand another high-impact feature of e-portfolios: their visibility. When students publish their portfolios online, they become beneficiaries of the audience effect. By asking students to represent their work beyond the walls of the classroom, we help them wed the portfolio’s benefits of composing and reflecting with an additional set of expectations that can elevate their performance. Thompson points to work that has “found that the effort of communicating to someone else forces you to pay more attention and learn more.” The visibility of e-portfolios pushes students to up their game.

That visibility can influence faculty performance as well. When students represent their work in an e-portfolio, they provide much greater visibility into the work of faculty. E-portfolios shed light on an institution’s teaching. Through e-portfolios, entire courses now have an audience of peers. Colleagues can see more than just a syllabus and assignment; they see the most important aspects of the course as it is experienced and executed by students. This new reality should shape our own performance as faculty just as the greater visibility of e-portfolios shapes the performance of students. Work that was once
hidden behind the walls of the classroom now has a broader audience. For faculty, this can produce a kind of secondary audience effect.

**E-PORTFOLIOS FOR HIGH-IMPACT PRACTICES**

Even if, as we contend, e-portfolio pedagogy is itself a high-impact practice, a well-constructed e-portfolio initiative anchored in the curriculum has a unique and beneficial relationship to other HIPs in an academic program or across an institution. Curated electronic portfolios are ideal venues in which to showcase the work that results from student engagement with HIPs. They allow for text to be combined with multimedia representations to create shareable exhibitions that transcend time and distance. As such, they allow student work to escape the confines of a discrete educational event and formally intersect with the broader range of curricular, cocurricular, and life experiences that define what it means to be liberally educated.

Imagine a student who experiences several HIPs in their general education program—a summer bridge first-year experience, a learning community, a study abroad semester—and additional HIPs in their major, such as undergraduate research, an internship, and a capstone course. And imagine that for each of these HIPs the student placed a significant artifact—a work sample produced during the course of the activity—and a written reflection about the experience in their e-portfolio. Over time the e-portfolio would become signature work itself, as it documented the student’s engaged learning arc, growing sophistication, and emergence as a reflective practitioner. Moreover, if reflection prompts in the e-portfolio were framed in particular ways, the student could more readily grapple with questions about how the HIPs promoted essential learning outcomes, challenged assumptions about academic work, or spoke to each other across the disciplines.

Batson (2010) has argued that e-portfolios are a “profoundly disruptive” technology in higher education, and indeed they challenge traditional understandings of student–faculty interaction, student ownership of learning, and the closed nature of courses. However, in the world of HIPs, e-portfolios might actually play a unifying and organizing function. They could very well provide the scaffolding upon which HIPs are anchored at an institution and through which HIPs are connected in students’ minds. They certainly allow institutions to directly assess the signature work that students produce in high-impact experiences.

**ESTABLISHING E-PORTFOLIOS AT THE CENTER OF THE CURRICULUM**

The role we envision for e-portfolios is predicated on their placement at the center of the curriculum. Colleges and universities are figuring out how best to introduce e-portfolios into academic programs. In 2010 Salt Lake Community College (SLCC) instituted e-portfolios as a requirement in all general education courses. Students create one e-portfolio and use it to archive at least one signature assignment and reflection from each general education course. Signature assignments are the kinds of projects, papers, and presentations that are typically found in freshman and sophomore-level courses, but SLCC’s General Education Committee insists that they address at least two of the General Education program’s learning outcomes. By centering e-portfolios in general education, SLCC has ensured that they are used in its existing first-year experience, service-learning, study abroad, and writing-intensive courses. As the college strives to create curricular pathways rich with HIPs, e-portfolios are already a cultural norm that will help students make connections between those deep educational experiences. And e-portfolios are serving to provide a much-needed integrative force in SLCC’s cafeteria-style general education model.

SLCC’s approach has led to several important results. The school assesses the e-portfolios of recent graduates using internally designed rubrics, as well as AAC&U’s VALUE rubrics, resulting in annual snapshots of student performance on general education learning outcomes. By relying on e-portfolios for assessment, SLCC is able to directly assess student artifacts and reflections as they are experienced in the curriculum, rather than having to overlay an assessment regime disconnected from the curriculum. While the Northwest Commission on Colleges and Universities had concerns in 2004 about SLCC’s lack of assessment in general education, the accrediting body commended SLCC in 2014 for its assessment of general education using e-portfolios. Moreover, the e-portfolio appears to be leading an increased focus on general education learning outcomes across the curriculum. Internal surveys indicate that in the semester before e-portfolios were implemented, 27 percent of students...
said that they were introduced to general education learning outcomes in the course in which they took the survey, while in a follow-up survey in spring 2014, 63 percent of students said they had been introduced to the general education learning outcomes.

In 2012, Chattanooga State Community College (ChSCC) began its e-portfolio journey to generate assessment data for the Southern Association of Colleges and Schools—specifically for a Quality Enhancement Plan (QEP) called W.E. Succeed: Work Ethic First, centered around promoting the work ethic of ChSCC students. The W.E. Succeed initiative was also a central piece of the work ChSCC launched through AAC&U’s Giving Community College Students a Roadmap project. The college selected an e-portfolio platform that could support the diverse academic divisions, student support services, and extracurricular programs in addition to the W.E. Succeed initiative. The college developed a student template, named the Roadmap Template, to serve the dual purpose of introducing each new student to the various campus resources and opportunities for engagement, as well as encouraging the student to practice reflection and self-discovery to impact work ethic and career readiness. Surprisingly, many ChSCC faculty requested the tenure and promotion process be modernized within the e-portfolio platform. This resulted in truly campus-wide e-portfolio development, which encompasses a fully developed student template, a tenure and promotion template for faculty, and a template for staff to showcase their work with potential to support annual review as well. By spring 2015, all 180 full-time faculty were completing their annual reviews digitally, and more than 2,500 students from diverse areas of campus were developing their own personal e-portfolios.

The initial goal of the Roadmap student e-portfolio template was to build support for the W.E. Succeed work ethic QEP, but it has evolved into a robust template that has allowed students to much more easily envision their entire educational journey. With the assistance of customized forms within the e-portfolio platform, ChSCC annually combines and analyzes all student reflections with NVivo software. The resulting analysis identifies key themes and allows the college to document gains in work ethic learning as well as the other student learning outcomes. Below are some of the key work ethic themes that emerged in 2014:

- College is hard work, in many cases harder work than expected.
- It’s important to learn to balance life among school, work, family, and leisure.
- Success in courses and programs is preparation for success in future careers, especially in the areas of working well with others and working diligently.
- Working well with others means open communication and high levels of commitment from individual team members.

Overwhelmingly, students are connecting their actions and attitudes with their resulting academic success. Many directly credit specific learning activities with improved self-confidence and engagement in the learning process. Reflective writing is helping students naturally make connections between courses, HIPs, advising, student learning outcomes, and career goals, while at the same time providing excellent authentic assessment data to support institutional needs.

**CONCLUSION**

In a future world where high-impact practices are strategically located throughout curricular pathways, a well-designed e-portfolio requirement could be the one HIP that serves all the others. By asking students to be the curators and narrators of their education, reflective e-portfolio pedagogy showcases signature work in HIPs, allows institutions to authentically assess student learning artifacts, and ties HIPs together into a whole that is greater than the individual pieces.

Both SLCC and ChSCC have implemented e-portfolios strategically at the core of the student experience, positioning both institutions to use e-portfolio as a scaffold on which to anchor a growing list of HIPs. Both institutions hope to open up and link classrooms in high-impact ways that lead to student ownership of their learning. As SLCC student Matthew Curtis said, when speaking about his experience with e-portfolio, “If our knowledge stays in the classroom, it is useless. But if it travels class to class and to our homes it isn’t useless anymore. It becomes alive and effective in our lives.”

**REFERENCES**


Like other community colleges, Lansing Community College (LCC) has experienced many challenges in its efforts to increase completion rates for students pursuing credentials and degrees. In its good-faith efforts to address these challenges, LCC has learned that piecemeal, isolated approaches, though helpful in many ways, will not ameliorate the larger, systemic problems that prevent the maximizing of student success.

With this understanding in mind, LCC has enthusiastically embarked on a bold, comprehensive, culture-changing initiative aimed at ensuring success for all students wishing to obtain certificates and degrees or transfer to a four-year school. Entitled “Operation 100%: Achieving Excellence in Student Learning and Success at Lansing Community College,” this initiative sets as its goal 100 percent completion for students in degree, certificate, or transfer pathways. Central to the successful implementation of Operation 100% is an understanding that its goal is more an attitude than a measure, more a commitment to expected institutional behavior supporting student learning and success than an aim for perfection. To this end, we have initiated many new measures and processes to advance our own internal work as well as our work with both a state-based and a national student success pilot program.

INSTITUTING NEW CAMPUS STUDENT SUCCESS MEASURES

Operation 100% involves several major redesigns. For example, understanding the crucial importance of advising to the completion agenda, and recognizing the often burdensome caseloads for advisors, LCC is in the process of automating its registration system to ensure that students stay on track in their programs and that automated, real-time alerts are provided to faculty and advisors when students experience difficulty. This automation will enable advisors to have regular contact with students during the semester so that they can offer students just-in-time, personalized, ongoing, high-level support that will help ensure that students either remain on track and receive immediate, relevant intervention when necessary or change tracks appropriately.

To help ensure college readiness, LCC is developing advising protocols for connecting advisors with students before the students enter the college. In addition, the college has radically redesigned its application for prospective students; the new application is populated with predictive analytic questions aimed at helping the college understand from the start a student’s strengths and challenges prior to the student’s beginning to take classes. LCC is also undertaking a major overhaul of its intake, orientation, and student support processes (orientations will be ongoing, and support will be provided to students even prior to their taking classes). By the end of the 2015–2016 academic year, all new students will have education plans, that will be regularly reviewed and updated and that will both contain realistic timeframes for completion and establish the criteria for accurate tracking of student progress. Given the importance of support networks to a student’s success, LCC is also creating a model for support teams that will include peers, mentors, faculty, advisors, and when appropriate, family and community members.

Space does not permit a full accounting of all Operation 100% major projects (such as, for example, the redesign of the college’s website, the increased use of contextualized instruction within programs and within linked and team-taught course sections, and the redesign of general education into a nondistributive, integrated learning model). Nevertheless, as promising as all of these initiatives are, LCC has realized two essential undertakings pertaining to the success of Operation 100%. First, because many students—especially those from historically underrepresented groups or those with otherwise underprivileged backgrounds—struggle to succeed in
gateway courses, LCC has committed to ensuring that all students succeed in these courses. Second, the college recognizes that, per the seemingly popular notion, students “do not do options well.” However, rather than blame the victim by holding the student responsible for not understanding how to navigate our often mystifying paths to completion, LCC has committed to offering students only well-conceived, highly structured academic programs containing only those options that will lead to student success.

Rather than blame the victim by holding the student responsible for not understanding how to navigate our often mystifying paths to completion, LCC has committed to offering students only well-conceived, highly structured academic programs containing only those options that will lead to student success.

ENGAGING WITH PARTNERS FOR STUDENT SUCCESS
To these ends, LCC is engaged in two major pilots, one national and one statewide. In its ongoing effort to ameliorate the completion impediment caused by high rates of attrition in gateway courses, LCC is among a handful of colleges participating in the Gateways to Completion (G2C) national pilot project undertaken by the nonprofit John N. Gardner Institute for Excellence in Undergraduate Education (the Gardner Institute). LCC was the first community college accepted to participate in the G2C pilot and is one of only three community colleges in the nation taking part in the Gardner Institute’s inaugural cohort of thirteen G2C institutions. Similarly, as part of its ongoing work to construct guided program pathways for all of its academic programs, LCC is among the first cohort of twelve community colleges in Michigan to participate in the Michigan Center for Student Success’ statewide “Michigan Guided Pathways Institute.”

GATEWAYS TO COMPLETION
The G2C program is a comprehensive course transformation pilot process that mobilizes institutions—particularly faculty at the institutions—to substantially improve student learning and success in historically challenging gateway courses. The Gardner Institute launched G2C in response to lessons learned from its previous work, as well as from national research that correlates lack of success in gateway courses with higherattrition andlower completion rates (Adelman 2006).

For purposes of the G2C effort, the Gardner Institute has defined gateway courses as credit-bearing and/or remedial education courses that have both high rates of failure (as measured by rates of D [drop], F [fail], W [withdraw], and I [incomplete] grades—DFWI rates) and high enrollment within or across sections. Developmental education courses are included in this definition because, in effect, they serve as gateways to the gateway courses. The selection process was thorough, involving collaborative, cross-functional efforts by, among others, faculty from many disciplines, divisional administrative leaders, and persons working in the college’s Center for Data Science. All of these efforts were guided by the G2C Steering Committee, and the project, initiated by faculty, has been faculty-led from the start.

The five selected courses are Principles of Accounting I, Biological Foundation for Physiology, US History: 1877 to Present, Intermediate Algebra, and Composition I. To date, four of the five courses have seen overall decreases in DFWI, and several
courses have seen some decreases in DFWI rates among students of color. Faculty have used the G2C process and concomitant analyses of data to engage in important revisions of course learning outcomes (for example, Composition I faculty developed information literacy and collaboration and discussion learning outcomes for the course); faculty have begun having “Promising Practices” meetings to facilitate information sharing; in their regular department meetings, faculty have now begun sharing information about high-impact practices; faculty have been engaged in cross-disciplinary aligning of learning outcomes; both teaching and non-teaching faculty have worked to increase access to tutoring and supplemental instruction; and so on. In short, the G2C initiative has been transformative for the college, allowing faculty to engage in exciting, data-informed course revision marked by engaged, cross-divisional collaboration. It is now common-place at the college for faculty to discuss both why the college needs to and how it can most effectively implement or augment student-learning-focused continuous improvement efforts.

Considered a leader among leaders in the national G2C work, LCC has presented at various regional and national meetings, including discipline-specific meetings (in accounting and history). Entering the third year of the pilot, LCC is focusing its G2C work on achieving even greater success for students taking the five chosen gateway courses and on applying G2C-developed best practices to strengthen other courses at the college. In addition, because the G2C work has resulted in data-informed best practices, the college is integrating this work into the program-level work undertaken in the Guided Program Pathways initiative (see below). Important correlations discovered in measuring student success—for example, that students who successfully completed Composition I succeeded in US History: 1877 to Present at a higher rate than did students who did not take Composition I first—have yielded valuable information that is being used as faculty construct course sequences in Guided Program Pathways. And, since both the G2C and the Guided Program Pathways projects involve many faculty (including many of the same faculty), the integrated work for these two projects approaches an ideal level of collaboration and seamlessness.

GUIDED PROGRAM PATHWAYS

As key as gateway or other individual courses are to a student’s successfully completing a degree or certificate or transferring successfully to a four-year school, ultimately, completion and transfer goals are best met when the student follows a well-conceived, well-designed, carefully constructed program of study that contains only relevant courses, a high degree of integrated learning, and clear pathways through these experiences. LCC’s Guided Program Pathways project, a key part of Operation 100%, is being implemented in collaboration with the Michigan Guided Pathways Institute (GPI).

GPI, funded by The Kresge Foundation, is a three-year initiative of the Michigan Center for Student Success (MCSS) to build awareness of and capacity for guided pathways among Michigan’s twenty-eight community colleges. With evidence increasingly pointing to structural problems at institutions as a fundamental contributor to the low completion rates, the overwhelming number of programmatic choices, coupled with poorly aligned support systems, presents significant challenges to students as they attempt to get on (and stay on) a clear path toward a credential. Leveraging the pioneering work of several national initiatives that have sought to tackle these institution-wide structural issues, GPI is designed to create a sustained community of practice among participating colleges, with substantial technical assistance from leading experts at the Community College Research Center, Jobs for the Future, the National Center for Inquiry and Improvement, and Public Agenda.

To be a part of a GPI cohort, colleges must commit to fully and actively participate in a series of in-person and virtual convenings; to identify a GPI lead (or co-leads) who will be supported to ensure that the project remains on track; and to designate a cross-functional steering team including representatives from faculty, advisors, academic and student services administrators, and other stakeholders as needed.

Institutions begin their participation with GPI by mapping programs, defining default course sequences, and prescribing appropriate general education and elective options. They will complete this process for all of their campus programs in broad strokes, proceeding to more detailed scenarios, including sequences for full- and part-time students and the incorporation of developmental instruction where required. The expectation for the first cohort of colleges (including LCC) is to have implemented guided pathways and make them available for new students registering in fall 2016. Each pathway will include the following design principles, which are adapted from Davis Jenkins’ work at the Community College Research Center:

- clearly specified further education and employment goals for every program;
- a full-program curriculum map with a default semester-by-semester sequence of courses to complete the program;
- exploratory or “meta-majors” to help entering students choose a program of study;
- identification of critical courses and other milestones students are expected to attain in each semester;
- program learning outcomes aligned with the requirements for success in further education and employment, with necessary assessment strategies in place;
• policies for intentional advising at intake to assist students in selecting a program; and
• policies and procedures to provide timely feedback to students when they meet benchmarks or get “off track” in their selected program.

Once an initial pathways “system” is implemented, the first cohort of colleges are expected to continue to refine and sustain their efforts and to commit to sharing data and lessons learned with other Michigan colleges and with MCSS.

The first group of LCC academic programs to be created within a Guided Program Pathways model includes the electrical technology program and the fashion technology program, which will serve as guided program pathway models for programs in the college’s Technical Careers Division, and most of the programs from the college’s Health and Human Services Division (for example, child development, surgical technology, and diagnostic medical sonography), which are already fairly well structured. The college will continue developing Guided Program Pathways throughout the 2015–2016 academic year, and both students and advisors will use Ellucian’s “Degree Works” to ensure that students remain on track in their Guided Program Pathways.

A faculty member coordinates both the college’s Guided Program Pathways project and the work of the project’s steering committee. The steering committee, in turn, has established eight work groups, each of which is charged with making recommendations for best practices in creating the following key components of all program pathways: program mapping; career communities (e.g., exploratory, meta-majors); accurate tracking of students’ progress and timely support for students; predictable semester- and program-level schedules; contextualized instruction opportunities; bridges to college for high school students and adult learners; seamless transfer opportunities; and dual admission/guaranteed transfer agreement opportunities for students wishing to pursue baccalaureate degrees.

A set of key principles underlies and guides the work of the Guided Program Pathways project: (1) pathways will be developed and reviewed with a focus on quality assurance and transfer/career relevance; (2) students will not need permission to register for a course along the path but will need to consult with an advisor if they wish to register for a course not on the path or if they are having trouble staying on track; (3) career communities will be created so that students can explore more general areas of study without losing time or taking unnecessary courses; (4) all courses within a career community will also be on the specific program pathway (in that community) that a student eventually chooses to follow; (5) to the extent possible, required math and writing courses will be program-specific, and general education courses will align with technical coursework; and (6) faculty will continue to develop ways to minimize students’ time in so-called developmental education courses without also compromising these students’ chances of succeeding in their college-level courses.

Throughout its history, LCC has engaged in many important endeavors to help students succeed. Our work with the Guided Program Pathways project has already proved to be one of the most significant initiatives ever undertaken by the college. A strongly collaborative effort, it involves the active participation of faculty and staff from across the college. Most important, time and again students have vocally expressed their gratitude that the college is involved in this work and their wish that the pathways were already in place.

CONCLUSION

The completion problem nationally is both urgent and demanding. It calls for nothing short of bold, culture-changing solutions. Although many of us at community colleges have known for quite some time that large numbers of students fail to complete the certificate or degree that they had hoped to achieve, until relatively recently comprehensive remedy options have not been readily available to us. Such is no longer the case. In the interest of our students and citizenry, there is no time to lose in drawing from the effective models of systemic change—such as G2C and Guided Program Pathways—that advance the cause of success for all students.

LCC’s Operation 100% substantively engages this imperative. The stakes are too high and both the risks and the benefits—to students, families, communities, and the nation—are too great for us to do otherwise. We welcome and embrace the opportunity to act, and we are working with all deliberate speed to effect the desired ends.

ACKNOWLEDGMENTS

The authors acknowledge and thank Martine Rife and Christine Conner not only for their leadership of the G2C (Martine) and Guided Program Pathways (Christine) initiatives, but also for their invaluable assistance with relevant aspects of this article. We also thank Khallai Taylor for helping with the initial phases of our Guided Program Pathways work and for offering suggestions for this article.

REFERENCES


Male Student Success Initiative: Creating Alignment Across College Communities

For many years, the Community College of Baltimore County (CCBC) has engaged in efforts to improve the retention and academic success of minority males, as our institution experienced a dramatic increase in enrollment of students of color at a time when the economy was struggling and the new financial aid regulations had not been enacted. In 1990, CCBC created an all-African American male orientation course to support the needs of this population. This course, Student Development for African American Males, was the first step in what has become a purposeful effort to address the persistence and success of African American men at CCBC.

WORKING TOWARD AFRICAN AMERICAN MALE STUDENT SUCCESS THROUGH TWO PROGRAMS

In 2009, CCBC joined Achieving the Dream, a national reform network between the private sector and community colleges that promotes best practices for improving student retention and achievement. At this time we began to look more closely at one of our own strategic retention strands, the freshman orientation course Academic Development: Transitioning to College (ACDV 101), with particular focus on the all-African American male sections. From the inception of this course, we understood that offering an engaging course taught by an African American instructor was vitally important because many of these students would not have the opportunity to study under another African American instructor during the remainder of their time at CCBC. From that vantage point we knew that scaling up the course to more than twenty sections per academic year would positively impact these students’ academic success, and eventually we created enough sections to reach 200–300 African American males each semester. This was particularly important because in this course students experienced multiple high-impact practices simultaneously. For example, instructors were assigned as mentors and advisors, students were provided contextualized learning that addressed important issues facing this population, and content was delivered through culturally responsive teaching principles taught directly to students.

In 2011, after analyzing the academic success rates in courses beyond the orientation course, we found that there was a need to design a program that supported the needs of students who had exited the course. Up until that time, many of the ACDV 101 instructors were faculty or staff of color who volunteered their time so as to have a presence on campus. This presence became “the program”—an unstructured, unofficial, and unfunded way to main-

It was important to see if there were ways in which we could further understand the whole student—beyond test scores and deficit thinking.
tain a level of engagement with these young men. During that time, we continued to refine and add new content to the course, to recruit and train additional instructors, and to design the foundations of a program for men of color.

As CCBC’s membership in Achieving the Dream continued, in 2013 the college joined another strategic academic support initiative, the Association of American Colleges and Universities’ Roadmap project. Through the synergy of our work with the Achieving the Dream and the Roadmap programs, we began building momentum toward putting substance to our conceptualized ideas of how we could increase the retention and academic success of minority males. We believed that one of the important factors in creating a program was to be able to assess African American male perception of campus climate. It was important to see if there were ways in which we could further understand the whole student—beyond test scores and deficit thinking. In addition, we needed to find a way to improve and further address their concerns while incorporating reform strategies into the course and the eventual program.

**CREATING THE MALE STUDENT SUCCESS INITIATIVE**

The CCBC team, as members of the Roadmap project, spent a week attending AAC&U’s Institute on High-Impact Practices and Student Success. From that experience, we designed our own Roadmap campus initiative to engage, support, and prepare African American male students. For our initiative to be successful, we needed internal stakeholders to extend our work into their instructional disciplines. In addition, we needed to partner with external scholars to find other theoretical and methodological means to support these students’ academic and career success. Participation in the Roadmap and Achieving the Dream projects informed the program we ultimately created: the Male Student Success Initiative (MSSI).

To support MSSI, CCBC applied for and received a College Access Challenge grant from the Maryland Higher Education Commission (MHEC). In fall 2013, CCBC labeled our grant initiative All In: Making the Grades, Defying the Odds. For this program, targeted to minority males, we recruited first-year male college students who needed no more than one developmental course and who registered for the orientation course specifically for men. To be a participant, students also had to sign a contract that would allow case managers to monitor and regulate such things as registration, drop/add, and schedule adjustments. From the outset we believed that a full-day orientation in the summer was necessary for these students to begin engaging with peers, mentors, and faculty, as well as to develop comfort with the college environment. We also felt that developing some level of cohort learning in an orientation setting would be an effective way to begin affiliation with the program.

The MHEC grant began in fall 2014, and preliminary results from the MSSI are promising. Seventy-five percent of the original thirty-seven students enrolled in the program persisted to the spring 2015 semester, and approximately 50 percent of the original cohort has registered for the fall 2015 semester. However, because of the limited number of males who were eligible for the program, we were not able to formally support many students who were interested. As a next step, we hope to expand the program to include students who placed into more than one developmental-level course. Another future goal is to expand the program into the disciplines. These learning experiences would further anchor the program and might increase students’ persistence as they move through developmental coursework.

During this initial pilot program, we were able to identify other successful practices at CCBC that would provide this student population with additional support to help them progress through developmental coursework. CCBC piloted acceleration in English and reading and implemented financial literacy intervention during our membership in Achieving the Dream. Program leaders believed that incorporating these elements into the program requirements would enhance student success. At the same time, MSSI staff engaged English faculty to consider contextualizing accelerated courses. This resulted in the design of contextualized acceleration in English and reading for African American males. These courses allowed students to move through developmental English and reading in one semester.

**SHARING INFORMATION ACROSS CAMPUSES**

To better capture data on the target population, during fall 2013 CCBC
began working with an instrument designed by the Minority Male Community College Collaborative (M2C3)—a group led by John Luke Wood, associate professor of community college leadership from San Diego State University, and Frank Harris, associate professor of postsecondary education at San Diego State University. This instrument, the Community College Survey of Men (CCSM), was designed to gather data on factors contributing to minority male student focus and effort in college in order to identify the most salient predictors of success. CCBC was the last participating community college to help validate the instrument in the third and final pilot phase. Prior to the distribution, the CCSM had been subjected to rigorous validation testing over a two-year, three-phase process that included more than twenty community colleges. Every community college that participated in the three pilot phases of the survey became college partners with the M2C3 network.

Maurice Johnson, a doctoral candidate in Community College Leadership at Morgan State University, administered the survey across the entire CCBC campus. The two hundred survey respondents were drawn from men of color enrolled in a required academic development course, which fosters the development of decision-making skills and learning strategies. These students completed the thirty-minute CCSM instrument, which comprised thirty-two block questions.

The findings showed that black men at CCBC place greater effort and focus in their academic studies when the following conditions exist:

- Campus services are easy to access and available when needed.
- Campus services are effective in helping them to address their concerns with accurate information.
- Men perceive that they have a sense of control over their academic futures (i.e., internal locus of control).
- Men have greater levels of confidence in their academic abilities (i.e., self-efficacy).
- Men have an authentic interest in course content and learning (i.e., intrinsic interest).
- Men believe that school is a domain equally suited for both men and women.

The foundation of this program has been high-impact practices that support the achievement and academic success of minority males. Based on our work in the first year of the grant, the Male Student Success Initiative has been awarded a second MHEC grant to scale the number of students reached through the program to more than 100 men of color. We recently added the subtitle Network of Scholars to our program name after participating in M2C3’s webinars on men of color—some of the findings presented in one webinar suggest that the name of a college-wide male initiative should be inclusive. The webinar was especially relevant to a trend we were already experiencing. As word spread of MSSS services, such as academic advising, tutoring, promotional events, and standing mentoring availability, males not formally enrolled in the program began showing up on an ad hoc basis. We welcomed this interest both as a recruiting opportunity but also as an opportunity to project a campus ethos that encouraged students to engage and that provided effective campus resources with MSSS staff who served as validating agents for students. Such a welcoming ethos could also be effective in introducing high school students to CCBC, as the MSSS par-
ticipated in dual enrollment programs already in place at the college.

**NEXT STEPS**

We plan to extend the services to other males who expressed interest in additional support. We also intend to extend an invitation to those schools that many of our African American male students come from to partner with CCBC. The design and implementation stage of the second iteration of program, begun early in January, has new eligibility criteria that provide additional case manager supports, extends that program college-wide, and engages feeder high schools.

The Male Student Success Initiative: Network of Scholars will integrate a number of high-impact practices within this program design that are informed by empirical research and evidence-based practices from other instruments from the national consortiums. Project director Mark Williams and program coordinator Maurice Johnson participated in the National Consortium Working Group in summer 2015 with other community college advisors across the United States to further gain insight on upcoming webinar topics, theories, and new instrument usage. The MSSI program plans to utilize an array of assessment and evaluation tools that support institutions in advancing outcomes for historically underrepresented and underserved students, particularly men of color. Some of the instruments under consideration for future use are the Community College Student Survey Inventory, an institutional-level needs assessment tool for identifying factors influencing the success of college men of color, and the Male Program Assessment for College Excellence, an outcomes-based assessment tool for programs and initiatives serving men of color.

New to the program is the infusion of service learning in the form of partnerships with local elementary, middle, and high schools. We will continue developing contextualized learning communities beyond developmental courses and provide culturally responsive training for students. In addition, faculty who teach the accelerated developmental courses in English for African American males have formed a black male “think tank” to gather input in the design of content relevant to this population. It’s also important to provide a semester-long orientation program beyond the course. This semester-long engagement includes career workshops, leadership training, and academic planning.

CCBC is excited to ease the main challenges that men of color experience by helping these students secure financial stability, balance work and school obligations, and navigate other life stressors. We look forward to the labor-intensive work of implementing a range of strategic support initiatives for the 2015–2016 academic year. It is our hope that CCBC students will benefit from these programs, as well as other interventions, such as mentoring and intrusive advising, that will guide them to successful academic pathways and eventually to realized careers.
Embedding Undergraduate Research in the Community College Curriculum

Nancy H. Hensel, president, New American Colleges and Universities, former executive officer, the Council on Undergraduate Research
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Several years ago, one of the authors (Nancy Hensel) became aware that students transferring from community colleges to four-year colleges or universities often needed an extra year to complete their science degree because they had missed having an undergraduate research experience. To address this issue, the Council on Undergraduate Research (CUR) and the National Council of Instructional Administrators (NCIA), an affiliate of the American Association of Community Colleges, agreed to collaborate on a project to increase undergraduate research in community colleges.

LAUNCHING CONVERSATIONS ABOUT COMMUNITY COLLEGE UNDERGRADUATE RESEARCH
CUR and NCIA initially applied for and received an Advanced Technological Education grant from the National Science Foundation. The grant provided funds to host six regional conversations with community college faculty and representatives from government, business, and industry to explore undergraduate research at community colleges. Conversations were held in Illinois, Massachusetts, Washington, California, Georgia, and Oklahoma and asked three broad questions:

- What is currently happening regarding undergraduate research at community colleges?
- In what kind of research activities would community colleges like to involve undergraduates?
- How could CUR and NCIA help community colleges realize their goals for students’ participation in undergraduate research?

We found great interest in undergraduate research with community colleges developing their own ways of engaging students in research. Research was viewed primarily as a teaching strategy for students to develop skills and abilities for transfer to a four-year college or to enhance their work skills. We also found that undergraduate research was almost always the result of individual effort or possibly a small group rather than an institutionalized program across the campus.

Participation in undergraduate research has been found to be an effective method for developing students’ problem-solving skills and work habits, connecting classroom experiences to the world of work, and improving student retention. Community colleges play a significant role in preparing America’s workforce. The skills students develop through undergraduate research—such as the ability to work in teams, communicate effectively, and solve problems—are skills that are needed in any job (Hart Research Associates 2015). As more and more students are completing the first two years of their education at community colleges, providing undergraduate research opportunities at community colleges becomes increasingly important.

TAILORING UNDERGRADUATE RESEARCH TO COMMUNITY COLLEGES
Based on the findings of the conversations at the six regional meetings, we applied for and received a second National Science Foundation grant in the Transforming Undergraduate Education (TUES) program. The goals of the second grant were to (1) develop a workshop curriculum to implement undergraduate research tailored to the needs of community colleges, (2) provide workshops for community colleges considering undergraduate research programs, and (3) develop an undergraduate research mentoring network of community college faculty. A total of 104 community colleges across the country and more than 400 faculty members have received support from the TUES program.
members were involved in three-day regional workshops. While we found community college faculty to be highly enthusiastic about engaging their students in undergraduate research, logistically, the heavy teaching loads of community college faculty, the lack of facilities dedicated to research, and the limited funds available to support research provide challenges to initiating undergraduate research programs. From the institutional perspective, there is a sense on the part of some that the community college mission of teaching is incompatible with research, even when students are engaged in the research as a teaching pedagogy.

Community college faculty have been inventive in developing research projects that take advantage of local resources and address local concerns, thus pointing to the benefit of undergraduate research as a means to demonstrate the community component of the community college.

The workshop curriculum emphasized embedding research projects into courses to ensure that the greatest numbers of students have the opportunity to participate in research. Community college faculty have been inventive in developing research projects that take advantage of local resources and address local concerns, thus pointing to the benefit of undergraduate research as a means to demonstrate the community component of the community college. At the workshop, faculty members created plans that demonstrate a hierarchy of skills that can be woven through the curriculum.

Our goal was to develop an approach to undergraduate research that was cost effective and developmentally appropriate for community college students. While our intention was to encourage faculty members to engage first-year students in research activities at their own campus rather than sending their students to a four-year campus, many of the activities could easily be applied to four-year colleges that are engaging first- and second-year students in research. We found that community colleges’ strong commitment to student development resulted in a high level of support for students’ first experience with undergraduate research. This is especially important to the population of first-generation, low-income students who often attend community colleges while also working and possibly raising a family.

Research projects for community college students need to take into account students’ time constraints; limited institutional resources, such as a lack of sophisticated lab equipment; limited faculty time; and student perceptions about the difficulty of research. During the course of the workshop, teams from the respective community colleges developed an action plan to take back to their campus and share with colleagues to solicit additional ideas, after which they could begin the process of developing an undergraduate research program that extends beyond a few committed professors. Developing campus-wide undergraduate research programs often takes several years, and we tried to set realistic expectations so participants would not become discouraged and give up.

Our follow-up with participants at one year and two years after the workshops indicated that many campuses were on the way to fully implementing their action plans. Nidhi Gadura, of Queensborough Community College, reported that,

We have a lot of research happening across multiple disciplines on campus now. We made a small Faculty Inquiry Group last year and have since then recruited several faculty members to start incorporating authentic research experiences in their curriculum. All these efforts and attending your workshops have made a big difference for us. I have since then partnered with Cold Spring Harbor Lab and incorporated their DNA Barcoding experiments in my Genetics course. I will be presenting that at the American Society for Microbiology Conference for Undergraduate Educators conference in May. We now have faculty on board from chemistry, math, sociology, and physics departments as well (Personal communication, March 6, 2015).

South Georgia State College, a community college that offers two baccalaureate degrees, began its undergraduate research program after faculty from the institution attended one of our workshops. Six courses at South Georgia State have made a big difference for us. We have a lot of research happening across multiple disciplines on campus. A faculty member from chemistry, math, sociology, and physics departments as well (Personal communication, March 6, 2015).

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and 2, to engage students in research on two courses, Black Bear Management 1 and Conservation. John Van Niel proposed New York Department of Environmental Resources to work with the faculty there because they were aware that the bear population was increasing dramatically. The first challenge he encountered was that the curriculum committee did not want to approve a class with a limit of twelve students. It is difficult to engage a large number of students in a field research project, and yet it is important that students have this kind of opportunity. Once the class was approved, it became very popular and frequently had a waiting list. Van Niel began offering the course on Friday afternoon to ensure that the students who enrolled were truly committed to the course. He found that even though students who enroll in the course come from various disciplines and a wide range of abilities, they become engaged in the course and are able to see the contribution their work makes to bear management.

At Mesa Community College, biology student Andy Bridges found a readily available and possibly dangerous research subject—the rattlesnakes that sometimes appeared on the Arizona campus. Bridges decided that tracking the rattlesnakes would make an excellent undergraduate research project. Students track the snakes by a transmitter and can identify the range of snake movement, the habitat they choose, what they eat, how often they hunt, when they mate, and how many offspring they produce (http://imakinations.com/upclose/Rattlesnakes.pdf). Students in Andy Baldwin’s biology class examine samples of snake scales and identify DNA that helps them track where the snakes move to mate. The project encourages student questions and develops their curiosity. Many students want to continue studying the snakes (https://vimeo.com/40019242) after the course ends.

Other colleges have found local organizations to be a source of opportunities for undergraduate research. The historical society can be a resource for original local history research and students can begin to learn the methodology of historical research. The Chamber of Commerce may have projects that students can undertake to assist small businesses. Nonprofit agencies often need assistance in data collection and analysis that can provide interesting experiences for students. Studying how people use community parks can help city planners design new recreation areas. Community college faculty need to be observant about the needs of their community and be open to the possibilities for student research.

WORKING WITH COMMUNITY PARTNERS

We encouraged workshop participants to look to their communities for possible cost-effective research projects. Finger Lakes Community College is located in an area of abundant wildlife, and faculty there became aware that the bear population was increasing dramatically. They initiated a partnership with the New York Department of Environmental Conservation. John Van Niel proposed two courses, Black Bear Management 1 and 2, to engage students in research on the bear population. The first challenge he encountered was that the curriculum committee did not want to approve a class with a limit of twelve students. It is difficult to engage a large number of students in a field research project, and yet it is important that students have this kind of opportunity. Once the class was approved, it became very popular and frequently had a waiting list. Van Niel began offering the course on Friday afternoon to ensure that the students who enrolled were truly committed to the course. He found that even though students who enroll in the course come from various disciplines and a wide range of abilities, they become engaged in the course and are able to see the contribution their work makes to bear management.

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OBTAINING ON- AND OFF-CAMPUS SUPPORT FOR UNDERGRADUATE RESEARCH PROGRAMS

The benefits of undergraduate research at four-year colleges have been well documented (Lopatto 2003; Russell et al. 2007; Seymour et al. 2004), and the benefits are likely to be similar for community college students. To further develop undergraduate research programs, community college faculty will need the support of trustees and administrators who recognize that undergraduate research is a powerful pedagogy for underrepresented students, has the potential to increase retention and transfer to a four-year program, and can help students develop skills necessary for a qualified twenty-first-century workforce. Some trustees and administrators hold that research is not part of the community college mission, as they do not fully appreciate the concept of undergraduate research as a teaching tool. Therefore it is important to provide information to community college trustees and leaders demonstrating the long-term value and educational outcomes resulting from student participation in undergraduate research initiatives.

Community colleges will also need to develop an infrastructure to support research initiatives. System and state offices will need to support the curricular modifications needed to include student research. Collective bargaining units also will need to review contracts to eliminate sections that preclude or make
difficult engagement in student/faculty collaborative research. A grants officer or an individual to provide assistance with grant writing will be very important to facilitate success in securing external funding. Students and faculty members will need appropriate training in responsible conduct of research. Projects may require an institutional review board to review studies involving animal or human subjects. Laboratory technicians will need professional development to understand their role in student research and manage the necessary changes.

With nearly 50 percent of students beginning their college experience at a community college, it is important that community colleges provide undergraduate research experiences. This is especially important not only for retaining students in STEM (science, technology, engineering, and mathematics) but also in teacher education, because many future elementary teachers receive their math and science education at community colleges.

Moreover, there is evidence that community college students who have participated in research are as successful at conducting research as their four-year peers. A student from Del Mar College won the grand prize at the third annual Science and Energy Research Challenge hosted by Argonne National Laboratory. Three students from Volunteer State Community College were awarded the top prize in the organic chemistry poster competition at the Southeastern Regional Meeting of the American Chemical Society in fall 2014. Truckee Meadows Community College was one of three postsecondary institutions recognized in the 2014 Energy Department Geothermal Student Competition. In the previous seven years a number of community colleges (Delaware Technical Community College, Ivy Tech Community College of Indiana, Kapiolani Community College, Massbay Community College, North Seattle Community College, and Southwestern College) have been selected through a competitive process to represent student research accomplishments at the Council on Undergraduate Research Posters on the Hill event in Washington, DC. Similar success stories can be found in many of the respective state Posters on the Hill competitions.

It is our contention that all students, no matter what their future profession, will benefit from the learning that is part of the undergraduate research experience. It is our further belief that undergraduate research helps to develop more competent professionals and engaged citizens. It has been our privilege to work with our community college students to promote student success.

REFERENCES
Transfer has a long history as a key part of higher education, but today it’s in the spotlight as never before. Facing questions about why many fewer students transfer than aspire to do so—and concerns about the effectiveness of the transfer process, particularly for underserved student populations—two-year and four-year colleges and universities are taking a closer look at how transfer is working.

Starting in the early twentieth century, “junior colleges” offered opportunities for students to matriculate from two-year to four-year institutions. General education was an important part of the course offerings of most junior colleges, and agreements were created to ensure that students who sought to transfer credits between institutions could progress to obtain their baccalaureate degrees. Given this long history, the transfer process between community colleges and their baccalaureate partners seemingly would be perfected, but this has not happened.

Credit loss in the transfer process, even when students move between institutions with articulation agreements, is a serious problem. Moreover, poor advising sometimes results in students taking courses that don’t count toward the major or don’t transfer at all, resulting in substantial loss of time and money. When credit loss happens and students are forced to remain enrolled for longer periods than expected, they are at risk of losing financial aid. Without these funds, students are often unable to pursue their baccalaureate degree. Low-income, racially diverse, and first-generation students are especially at risk.

Another transfer issue involves many students’ needs to take courses at times that fit their lives rather than altering their lives to fit college. One initiative created to address this concern is called Credit When It’s Due (CWID), a sixteen-state initiative funded by multiple foundations that is assisting states, higher education systems, and two-year and four-year institutions to reform policies and practices to enable students who transfer without first receiving their associate’s degree to get this credential after they transfer to the baccalaureate level. An initiative like CWID may be important to addressing not only credit loss but credential loss, as the vast majority of transfers do not attain the associate’s degree prior to matriculating to the four-year level. CWID attempts to disrupt traditional thinking about the transfer process to create policies and practices that are more relevant and responsive to today’s transfer students’ needs.

Other transfer reforms include dual enrollment policies that admit students simultaneously to associate- and baccalaureate-degree programs, and structured pathway models that confer associate’s degrees en route to the baccalaureate degrees. This is an approach that the Loyola University of Chicago is adopting, capitalizing on its historic authority to award associate’s degrees. Through its new two-year institution, Arrupe College, Loyola intends to offer an “associate’s degree program for motivated students with limited financial resources and an interest in attending a four-year institution after graduation.” Pending final approval to open by the Higher Learning Commission of the North Central Association, Arrupe College will focus on student success for underserved populations, particularly low-income students in the Chicago metropolitan area. The new school promises to offer a summer pre-enrollment orientation, small class sizes and academic and social supports, one-on-one contact with specialized faculty, an associate’s degree that is fully transferable throughout the state, and possibly most important, a financial strategy that permits low-income students to fully finance the cost of instruction without accumulating debt that will extend beyond completion of their associate’s degree.

Looking to the future, it will be important to examine how Arrupe College’s program unfolds. Research that identifies the extent to which this model improves the transfer function is needed, including research on the extent to which underserved student populations are supported in attaining the college credentials they aspire to attain.

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