



Leading the Way Access. Success. Impact.



Leading the Way **Impact.**

2013-18 Master Plan

- ▶ *With the combined support of her faculty mentor, professional academic advisor, and various support staff throughout the institution, Dana was able to complete her degree in biology in four and half years. She had overcome both her initial developmental education coursework and prerequisite courses within the general education curriculum. Once Dana met her academic mentor and socially engaged with a group of peers with her same major, she excelled in her degree program.*

As a junior, Dana had the opportunity to work with one of her faculty members on a research project for the West Virginia Department of Natural Resources. The project resulted in an internship offer the following summer. The experience shifted her career interests away from becoming a veterinarian to working as a state biologist. The internship, as well as continued academic and co-curricular support, proved helpful in Dana securing a job with the WV-DNR after graduation.

Dana was a high school student who was unsure if college was right for her. Despite some initial struggles, she was able to enter the degree program of her choosing and find success. Although Dana was determined, it took the care and support of faculty, staff, and peers to help her achieve her academic and career goals. Although fictional, Dana's experience is a composite of the challenges that many of the system's at-risk students face throughout their academic lives before, during, and after college in West Virginia.

Introduction

This is the third and final paper in the Commission's series concerning the major areas of the Commission's new master plan and compact process. Each paper elaborates on a particular theme sharing additional best practices and insights. It is the intention of the Commission that these additional resources assist in fostering discourse among institutional administrators, faculty, staff and students, enabling them to develop a common understanding of the challenges, goals, and the mechanisms necessary to meet them.

Highlights

- Improving degree completion rates results in positive outcomes for students, institutions, local communities, and the state
- West Virginia's public four-year institutions play a vital role in advancing the state's economy by recruiting and supporting students who major in STEM fields
- Campus-community partnerships help institutions, organizations, and communities make progress toward individual and shared goals
- Higher education stakeholders continue to have increased expectations on the role of institutions to prepare and assist students with their transition to successful careers

Defining Postsecondary Impact in West Virginia

Public colleges and universities throughout West Virginia provide the intellectual infrastructure required to create and maintain both an educated citizenry and a skilled workforce. Postsecondary graduates also have a profound civic, social, and economic impact on their local communities and the state at-large. Moreover, the state's four-year institutions of higher education actively contribute to the economic, cultural and social vitality of their respective regions. Although these impacts are naturally occurring products of well-functioning higher education institutions, they can be enhanced through the efforts of faculty, staff and institutional leadership to cultivate deeper partnerships with the schools, businesses, government agencies, and civic and faith-based organizations in their communities. Developing and strengthening these partnerships can increase and improve the impact of West Virginia's public higher education institutions as well as the economic, social and cultural well-being of our state and our citizens.

West Virginia's four-year public colleges and universities serve three core functions: teaching, research, and service with relative focus to the different components varying by institution mission. Their impact on the state is also tri-partite and includes: 1) providing graduates that are educated citizens, problem solvers, and skilled workers, 2) conducting service and inculcating civic and social responsibility, and 3) conducting research and developing innovations that create new knowledge and encourage further investment in research, development, and innovation to West Virginia.

West Virginia Impact Data Trends

West Virginia's public higher education institutions have a positive impact on the state in a variety of ways. One of the most important roles that all institutions play is producing educated and skilled graduates. Between 2008 and 2012, the number of degrees awarded by Commission institutions increased from 12,047 in 2008-09 to 12,927 in 2012-13, a growth of 7.3 percent. During that time, the number of degrees awarded in science, technology, engineering, and mathematics (STEM) fields increased, but STEM degrees as a share of all degrees declined slightly from 21.8 percent in 2008 to 21.2 percent in 2012. STEM degrees are in high demand throughout the state.

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In addition to graduates trained in STEM fields, West Virginia also needs more STEM educators to ensure that students in K-12 have access to teachers with deep STEM knowledge. From 2008 to 2011 academic year, Commission institutions graduated an average of 94 STEM educators each year. West Virginia also has a pressing need for highly skilled graduates in the health sciences field. There continues to be growth in this area, but not enough to meet future demands. From 2008 to 2012, health related bachelor's degree graduates increased from 634 to 754, while associate's degrees granted by Commission institutions declined to a low of 268 in 2008 and rose to a five year high of 320 in 2012. The state's aging population, high rates of chronic disease, and substance abuse challenges, in addition to changes to federal policy, necessitate sustained attention to this field of occupations.

Public Colleges and Universities for the Public Good

Some of the most important benefits public higher education institutions bring to the state are the hardest to measure. Developing critical thinking skills and instilling values of service and civic responsibility in their students are both incredibly valuable for students and the state as a whole. Another important impact of the state's higher education institutions is the bonds of community they create with other organizations in their region. Creating stronger institutional bonds with the surrounding community benefits all parties involved: the university, students, and local businesses and organizations. These relationships can also bring economic benefits to individual students and the community as a whole. When degree programs and workforce needs align, it becomes easier for students to begin their careers while still enrolled in coursework through internships, research apprenticeships, and other career shadowing opportunities. These relationships can then extend into local job opportunities shortly after graduation. Newly hired graduates help spur the local economy through additional spending at local merchants, purchasing property, and paying taxes that fund local public utilities, schools, and social services. Beyond workforce and economic outcomes, new graduates fulfill their commitment as educated citizens by increased participation in community volunteerism and public service. For local communities coping with difficult civic and economic realities, postsecondary degree holders represent a net gain in both financial and human capital.

Best Practices

Commission institutions continue to engage in an ongoing cycle of planning and implementation of initiatives surrounding college success. Below is a list of best practices concerning postsecondary impact garnered from the most recent research in the field. It is the Commission's hope that institutions will consider these practices as they continue to plan for future efforts:

- **Increasing the Number of Degrees Awarded**

Increasing the number of bachelor's and graduate degrees is not only an area of national concern, but is also vital to West Virginia as it continues to diversify its economy. Between 2008 and 2012 the number of bachelor's degrees awarded in West Virginia increased by only 7.1 percent, from 8,251 to 8,839. All levels of graduate degrees during the same period increased by 8 percent, from 3,272 to 3,537.* To meet current workforce projections, the state will require at least 20,000 additional certificate or degree holders by 2018 (Carnevale, Smith, and Strohl, 2010). In West Virginia, this civic and economic goal cannot be achieved through limiting postsecondary access, but expanding it.

- *Public four-year institutions in West Virginia will have to tackle a number of challenges simultaneously, which include changing student demographics, providing enhanced co-curricular student support initiatives, and ensuring that the logistical foundation exists to provide academic courses that correspond with student and programmatic demand.*

To contribute to this goal, public four-year institutions in West Virginia will have to tackle a number of challenges simultaneously, which include changing student demographics, providing enhanced co-curricular student support initiatives, and ensuring that the logistical foundation exists to provide academic courses that correspond with student and programmatic demand. A continued decline in West Virginia secondary school graduates will require increased recruitment efforts among the shrinking pool of potential higher education students. This will necessitate reaching more adult, low-income, underrepresented minority, and first-generation students. The growth of these student populations will require institutions to expand and reconceptualize the ways in which they support students as campus communities, in order to maintain and improve student retention and timely completion. As increasing numbers of students are successfully retained, institutions will need to be prepared for meeting increased academic demand through providing additional course section offerings. Ensuring timely completion will require a significant level of coordination and analysis to maximize campus space and staffing and respond to the times that specific groups of students can and will enroll in courses. Finally, increasing attention must be paid to the programmatic demands of both potential students and the economy as other less traditional, and often more expensive, institutions quickly move to meet these demands.

Both the Access and Success white papers outlined issues and best practices concerning college access outreach, financial aid, student retention, utilizing institutional level data, and other efforts focused on improving student outcomes. Ultimately, it is the Commission's hope the Compact strategies and plans institutions choose to employ contribute to additional West Virginians completing their degrees in a timely manner.

STRATEGIES IN ACTION

Project Win-Win was a Lumina Foundation funded project facilitated by the Institute for Higher Education Policy (IHEP) that began in 2009. 61 two- and four-year institutions committed to the task of identifying former students who had not completed their degree program. The project sought to contact and credential students who either had completed a program of study or were within 12 credit hours of completing a program. 47,710 students were analyzed through degree audits and 6,733 were found to be eligible for a degree. By the conclusion of the project 4,550 students were awarded degrees and 1,668 students returned to coursework in order to graduate (IHEP, 2013).

As part of Lumina's *DegreeNow* initiative, the Commission has been providing support for the Regents Bachelor of Arts (RBA). Between 2009 to 2012, RBA enrollment grew by 12.5 percent, from 2,002 to 2,252 students. In addition to RBA program support, the Commission has provided information sessions for prospective students through WVROCKS (West Virginia's Remote Online Collaborative Knowledge System), offered "train-the-trainers" workshops for campus staff who work directly with adult students, and partnered with NASPA (Student Affairs Professionals in Higher Education) to develop the guide book *Building a Culture of Evidence in Student Affairs: A Guide for Leaders and Practitioners*.

* These figures include First Professional degrees for the 2008 year, prior to the degree category being designated *Doctoral Professional Practice* in 2009.

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- **Increasing STEM degrees**

Additional STEM degree holders will improve West Virginia's opportunities to compete at a national and global level for future jobs and industries. The Georgetown Center on Education and the Workforce (2011) estimates that STEM jobs will makeup 3.1 percent of West Virginia's workforce by 2018, the second lowest STEM rate in the SREB. The 3.1 percent represents just under 25,000 professionals, with 20,400 (82 percent) requiring a postsecondary credential. Over half of these jobs (12,500) will be from students earning a bachelor's degree or above. This is a challenge in West Virginia, since STEM degrees, as a share of completed degrees, is declining. Public universities will play a key role in not only promoting STEM majors, but also recruiting and retaining STEM students through graduation.

STEM related programs and activities around the state, such as the first West Virginia Science and Art Fair, have shown that K-12 students show a great deal of interest in science related careers and degrees. The challenge is that many of these students do not matriculate, lose interest, or face significant academic challenges once enrolled that preclude them from entering a STEM program. Early outreach, summer camps, and dual enrollment opportunities have shown promise in recruiting potential STEM majors. Special programs of study, boot camps, and specialized advising have helped at-risk students to overcome programmatic hurdles such as prerequisite and milestone courses. The Commission's Division of Science and Research already partners with system institutions on initiatives to recruit and retain STEM students. By enhancing these existing outreach and support efforts, there is ample opportunity to help students enter into and successfully compete degree programs in STEM fields.

STRATEGIES IN ACTION

James Madison University offers a STEM skills focused dual enrollment course to local high school students. The course focuses on solving local community issues through use of geospatial technology. Students are not only exposed to the rigor of a college-level STEM course, but also develop relationships with university faculty that help bridge the gap between high school and college.

The Leland Scholars program at Stanford University focuses on 60 STEM students in each freshmen cohort that are deemed at-risk for not completing their STEM degree. Even a highly-selective institution like Stanford faces STEM attrition issues, with only 50 percent of initial STEM majors completing their degree. Participants in the program commit to a special chemistry course over the summer that ties directly to the course they will enroll in the following fall. Also, students are required to live on-campus and participate in special seminars and activities with faculty (Chiang, 2013).

- **Integrating career development throughout campus**

The Great Recession has proved to be a challenging environment for recent graduates to find that first job. Although difficult, the value of a bachelor's degree and its subsequent benefits far outweigh the alternatives of not enrolling in college at all or stopping-out (Baum, Ma, & Payea, 2013). As a result of recent graduates' transition to the workforce, parents and higher education stakeholders have developed increased expectations of an institution's role for supporting students' through the job search process, both prior to and after their graduation.

- *The continued integration of academic competencies into programs of study will allow faculty to play a more intentional role in working with students to monitor and develop important communication, critical thinking, and quantitative skills that are highly valued by employers. The refinement of these skills, along with content mastery in their program, will allow students to articulate not only their knowledge of their subject area, but also their true strengths as young professionals.*

Career development professionals have been working with students for decades to identify careers that relate to their degree, develop applicant skills, and develop ties with prospective employers. With more current students and recent graduates depending on this one office (or sometimes one staff member at smaller institutions) to support them, it has become clear that meeting these expectations will require additional support from offices and staff from across campus. Connecting career exploration and selection assistance to degree programs or degree program pathways is an obvious solution. The continued integration of academic competencies into programs of study will allow faculty to play a more intentional role in working with students to monitor and develop important communication, critical thinking, and quantitative skills that are highly valued by employers. The refinement of these skills, along with content mastery in their program, will allow students to articulate not only their knowledge of their subject area, but also their true strengths as young professionals.

Stronger relationships with the local community and region also play a vital role in the career development process. Both for-profit and non-profit organizations expect students to have paraprofessional experiences while enrolled as a student. Employers look for graduates to tie these experiences to their degree program and skills set in meaningful ways that help define them as unique candidates and demonstrate their ability to incorporate those concepts in a new work environment. The challenge that many institutions face is finding and facilitating internship and service opportunities for all of their students. Developing stronger relationships with alumni, businesses, nonprofit organizations, and government agencies can help to support greater paraprofessional and employment opportunities. However, the responsibility of creating and maintaining these relationships cannot fall to one office or individual on campus and will require the strategic cooperation of offices and staff across campus and across the system.

STRATEGIES IN ACTION

Marshall University has been participating in the Lumina Foundation's *Degree Qualifications Profile* (DQP) initiative, which has required the institution to integrate and evaluate academic competencies within the curriculum at both the general education and department levels. As the DQP process moves forward, the institution plans to connect competencies to co-curricular activities and services on-campus, with career development being a priority.

The University of Massachusetts at Boston integrated career development and community partnerships in its current master plan. The objective was to maximize the relationships between the university and its community partners. The planning process resulted in the development of a partnership typology and articulating which institutional offices shared responsibility for those partnerships. As a result, academic departments and support offices avoided competing with one another for career, research, and service partners. Between 2012-2014, two years into the new master planning cycle, the institution was able to grow internship placements by 52 percent (Kenyon, 2014).

- ▶ *Campus-community partnerships can also help to strengthen the institution's regional and state role through influencing civic and economic development. Public four-year colleges and universities in West Virginia are poised to help West Virginia diversify its economy, while providing a more educated and engaged citizenry.*

- **Reimagining community partnerships**

As discussed above, campus-community partnerships have the ability to improve current students and graduates' opportunities for paraprofessional experiences and employment. However, partnerships with local and regional businesses and organizations go beyond internships. Campus-community partnerships can also help to strengthen the institution's regional and state role through influencing civic and economic development. Public four-year colleges and universities in West Virginia are poised to help West Virginia diversify its economy, while providing a more educated and engaged citizenry. Partnerships can address a range of issues from poverty to economic development. Campus Compact, a national organization committed to developing civic engagement through higher education, is hosted in West Virginia through a partnership between the Commission and WVU. A recent white paper from the organization, *Engaged Learning Economies: Aligning Civic Engagement and Economic Development in Community- Campus Partnerships* (2012), provides guidance for building partnership capacity.

Institutions can leverage their intellectual and human capital to address important issues in the surrounding community. Access to routine healthcare, nutritious food, and technology are just a few examples of what institutions could bring their influence and resources to bear on. Often, coordinated partnerships can serve multiple purposes. Planning and clearly defining objectives can allow organizations to gain research and technological support from a university, while the institution gains academic research, internship, and service opportunities for its faculty and students. This is especially true concerning college access outreach activities. Partnering with local school districts and nonprofit organizations allows an institution to make its initial contact with students much earlier, enabling the institution to offer academic and college-going support in tandem with its partners efforts (Cress et al., 2010). Since many West Virginia high school graduates attend their closest public college, access partnerships help to improve student recruitment and academic success once enrolled.

STRATEGIES IN ACTION

Dream It, Do It Southeast Indiana is a coalition of nine rural counties that makeup Indiana's Region 9 Workforce Board. The partnership is only the fifth of its kind in the nation and incorporates 23 high schools, 10 learning centers, 4 community colleges, 3 colleges and universities, and over 100 employers. The focus of the program is to meet the needs of a growing STEM related skills gap that affects local manufacturer's potential growth and the economic vitality of surrounding communities.

Rowan Boulevard is an example of a private-public partnership in New Jersey. Rowan University, the town of Glassboro, and a private development firm recently joined forces to develop a one-third-of-a-mile area linking the main campus with the downtown area of Glassboro. The \$300 million development featured a student housing complex, a 129 room hotel and conference center, a parking garage, restaurants, and a new Barnes and Noble bookstore. The university gained additional housing capacity, the developer earns revenue from the property leases, and the city collects much needed revenues from all the properties, including the university. The project is expected to boost the local economy by \$48 million and create 700 permanent jobs (Klein, 2014).

WVU Institute of Technology recently held one of its largest professional development programs on campus. The *Computer Science for High School (CSHS)* workshop was funded by a grant from Google. The goal of the workshop was to connect educators with skills and resources to teach computer science. The workshop has created an ongoing collaboration among 14 high schools stretching across nine counties.

- **Reducing loan default**

During the 2012-13 academic year students and their parents borrowed almost \$400 million in federal subsidized and unsubsidized loans to attend West Virginia public universities. The Commission's Office of Financial Aid and Outreach Services reports that as of the 2012 academic year the average student loan balance in West Virginia was \$22,920, with 24.4 percent of all current borrowers being delinquent in their loan payments. Changes to federal regulations concerning the implementation of three-year cohort default rates and the possible institutional loss of federal financial aid have called new attention to the problem. The most recent available cohort data is for students who completed their degrees or left their institutions without a degree in 2010. The national public four-year institution default rate was 9.3 percent, for Commission institutions the rate was 13.2 percent. The 2010 cohort default rate was a 2.8 percent increase over the 2009 rate of 10.4 percentage points, while the national average only increased by 1.4 percentage points from 7.9 percent over the same period. Beyond the institutional implications, under current federal bankruptcy laws, students who default on their federal student loans can face financial consequences that will affect them for the rest of their lives.

The Commission encourages institutions to address student loan through a more inclusive, campus-wide approach. The causes of student loan default go well beyond the responsibility of the institution's financial aid office. However, increasing student retention, decreasing time to graduation, implementing a financial literacy program, and helping students who have stopped-out to return to coursework or find employment are all ways that institutions can decrease their default rate, if not eliminate it altogether.

STRATEGIES IN ACTION

The Commission recently contracted with two third party default management firms. These firms utilize multiple forms of communication to find and contact students who are in default. Once the firm has made contact with the students, they assist them with entering loan deferment, agreeing to income-based repayment plan, and discuss the possibility of reenrollment.

- **Research and development**

Producing research that helps expand understanding of the world and leads to new solutions for society's challenges is another important function of higher education institutions. Between 2008 and 2012, the state's four-year public institutions received over \$921 million in external research funds. The largest single year was 2009, with over \$243 million in external funds for research. These grants not only help to sustain and create new jobs, but also help to develop the state's research infrastructure through new equipment and facilities. As innovation and knowledge-based industries become more important for West Virginia's economy, transferring the fruits of university research to the market is taking on increasing importance as well.

- *Increasing student retention, decreasing time to graduation, implementing a financial literacy program, and helping students who have stopped-out to return to coursework or find employment are all ways that institutions can decrease their default rate, if not eliminate it altogether.*

► ...we know now that there are best practices that can improve student academic success and completion. This series of Commission white papers has endeavored to introduce some of these practices to the system in order to spur internal and external discourse as each campus develops their strategies and comprehensive plans ahead of Leading the Way's first Compact reporting cycle in the November of 2014.

STRATEGIES IN ACTION

Dr. David Lederman is the principal investigator of the RCG awarded for A Center for Energy Efficient Electronics (CEEE) at West Virginia University and Marshall University. A Small Business Technology Transfer (STTR) proposal to NSF was submitted in June 2013 by Lederman in collaboration with Neocera, LLC (Beltsville, MD) for development of an x-ray fluorescence system that performs structure and stoichiometry analysis using electron beams during thin film sample growth. This is based on a patent submitted by Lederman in 2012. STTR is a program that expands funding opportunities in the federal innovation research and development arena. Central to the program is expansion of the public/private sector partnership to include the joint venture opportunities for small businesses and nonprofit research institutions.

The Research Trust Fund program has spawned fifteen endowments at Marshall University to fund allowed research-related activity. These endowments span research areas from Engineering to Clinical and Translational Research and specify uses from direct research support to student research stipends. During fiscal year 2013, the full \$15 million in gifts and pledges was raised. Earnings up to June 30, 2013 are \$430,000 on \$9.7 million of private gifts and pledges received, and \$715,000 on the \$15 million of state match received.

Access, Success, and Impact: A Concluding Remark

Almost half of the students who enroll at one of the Commission's four-year institutions leave the campus without completing a degree. Many of the students who do not complete come from some of the poorest families in the state and hold considerable debt for the rest of their lives. There are situations that affect these students that are outside of an institution's control. However, due to the current national degree completion agenda, improved institutional data, an infusion of programmatic and research funding, and increased attention by a variety of postsecondary stakeholders, we know now that there are best practices that can improve student academic success and completion. This series of Commission white papers has endeavored to introduce some of these practices to the system in order to spur internal and external discourse as each campus develops their strategies and comprehensive plans ahead of *Leading the Way's* first Compact reporting cycle in the November of 2014. The series has also worked to encourage members of each institutional community to consider their role on campus and the ways in which they can collaborate both within and outside the institution to improve student success. Finally, this series has encouraged institutions to consider the "life of the student" in their planning. Continuity is critical for the success of many of our students. Connecting pre-enrollment experiences with timely degree completion and a smooth transition into career requires strategic planning and cooperation across the campus community. It is only through these efforts that each institution, and the system as a whole, will reach its 2018 goals.

Questions and Continued Support

The staff of the Commission's Division of Policy and Planning are eager to answer any questions you or your campus teams might have concerning any aspect of master plan and compact process. The Commission offers a range of expertise and programs that are the disposal of our institutions. In addition to providing support through existing programs, the Commission can provide additional contacts and information to aid institutions in developing and supporting success initiatives.

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