

# General Education Transformed

*How We Can, Why We Must*

BY PAUL L. GASTON



**GEMs**

General Education Maps & Markers





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*Association  
of American  
Colleges and  
Universities*

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# Foreword

By Carol Geary Schneider, president of the Association of American Colleges and Universities

As president of the Association of American Colleges and Universities (AAC&U), I am very pleased to share with you this important publication on transformative change in general education, part of a project known as General Education Maps and Markers (GEMs).

General education is the nation's largest educational program—the part of the curriculum deliberately designed to prepare all students for life, work, and citizenship by fostering their knowledge of the wider world (science, cultures, histories, societies, values) and by preparing them to think analytically and learn collaboratively. General education is viewed, in the United States and abroad, as an American hallmark—a key to creativity in the economy as well as to participatory citizenship. When done well, it both expresses and guides the US commitment to broad and multidisciplinary education—liberal education—that other countries now are seeking to import.

General education, invented to help college students gain the knowledge and collaborative capacities they need to navigate a complex world, is today and should remain an essential part of a high-quality college education.

And yet, in practice, general education programs too often underperform. When general education is organized mainly as an à la carte menu of disconnected survey courses, and when it is taught in huge lectures that emphasize content delivery over critical inquiry while neglecting students' own active participation in their learning, it falls far short of its intended horizon-expanding purposes. Instead of developing big-picture understanding of the wider world through a purposeful immersion in the liberal arts and sciences, students too often find that their broad or general learning is fragmented, incoherent, and frustrating. Advising practices show all too clearly the troubled state of general education: both advisors and other students frequently urge learners to “get their gen eds out of the way.” This is hardly an invitation to powerful learning.

The call for general education reform presented in these pages directly addresses this long-standing disconnect between the crucial goals American colleges and universities have set for general education and the outdated practices that too often stand in the way. Along with the principles and guidelines outlined in a companion document, *General Education Maps and Markers: Designing Meaningful Pathways to Student Achievement* (AAC&U 2015a), this report invites the transformative redesign of general education that higher education needs and that our students deserve.

Written for faculty members, academic leaders, and policy makers, *General Education Transformed: How We Can, Why We Must* suggests a clear course of action to ensure that general education fosters Essential Learning Outcomes or proficiencies, enriches students' learning in the major, and prepares college students to successfully tackle the kinds of complex problems they will inevitably confront in work, civil society, and their own lives.

The vision presented in these pages repositions general education, in sum, not as a series of irrelevant barriers to student progress, but rather as a cumulative and integrative context for students' most important accomplishments in college—accomplishments that, by design, prompt students to integrate their broad learning in the liberal arts and sciences with the specialized learning of their major fields.

*General education, invented to help college students gain the knowledge and collaborative capacities they need to navigate a complex world ... should remain an essential part of a high-quality college education.*

## Making General Education a Guided Pathway to Integrative and Empowering Learning

This publication offers a call to action prompting colleges and universities to redesign general education as a set of guided learning pathways—within and across institutions—that purposefully build students’ preparation for citizenship, for an innovation-fueled economy, and for their own lives. Envisioning general education as intensely focused on teaching students to apply their learning to significant and unscripted problems, author Paul L. Gaston calls on colleges and universities to organize general education as a catalyst for integrative and applied learning from the first to the final year of college, and to conceive of students’ studies as deliberately connected to the complexities of the world beyond college.

In *General Education Transformed*, Gaston connects this vision to the goals of the competency-based learning movement. Informed by Lumina Foundation’s Degree Qualifications Profile (DQP), which describes college degrees in terms of proficiencies every student should acquire, *General Education Transformed* embraces the DQP as offering momentum and motivation for framing the purpose and design of general education programs in connection with the major or specialized learning programs. It promotes a version of higher education that will serve returning adult learners as well as traditional-age learners.

*General Education Transformed* is intended both for public and private postsecondary institutions and for the numerous state systems whose policies largely control what counts and what does not count as general education in public higher education and, increasingly, in transfer agreements.

This publication should be seen as a call to vigorous action by institutions, state systems, and accreditors to rewrite their general education requirements—not as a set of course categories to be completed in the first two years, but rather as a set of guidelines for helping students achieve Essential Learning Outcomes and produce meaningful educational projects, from the first to the final year of college, wherever the students enroll, and wherever they ultimately graduate.

*All students need and deserve multiple experiences of applying their learning to real-world challenges and meaningful responsibilities.*

*General Education Transformed: How We Can, Why We Must* should be read in tandem with *General Education Maps and Markers: Designing Meaningful Pathways to Student Achievement*, a recently published GEMs publication that offers principles and guidelines for general education reform. Together, these publications directly challenge the outdated practice of tracking students’ educational progress or “success” exclusively in terms of the credit hours students accumulate—often quite chaotically—in an approved set of course categories. Recognizing that America’s future depends directly on the development of trained intelligence and social imagination, Gaston points

to various barriers to and markers of progress on the multiple possible pathways between the general education we have today and the general education we need.

In *General Education Transformed*, Gaston also recognizes the value and power of experiential and applied learning in preparing students for a complex world. He insists that all students need and deserve multiple experiences of applying their learning to real-world challenges and meaningful responsibilities. In concert with *General Education Maps and Markers*, this publication suggests multiple routes toward creating general education programs that scaffold these experiences across the curriculum, whatever unique and individualized pathways students take through higher education on the way toward completing their degrees.

## GEMs and the LEAP Challenge

Thanks to support from the Bill & Melinda Gates Foundation for the design phase of GEMs, AAC&U has been able to tap the experience of a truly diverse array of institutions and scholars (including those named on pages xi–xii) in developing the reinvented designs and practices of general education advocated in these pages and outlined in *General Education Maps and Markers*. Going forward, GEMs reforms will be the centerpiece of a family of projects AAC&U collectively terms “the LEAP Challenge.” The LEAP Challenge is the next frontier in AAC&U’s ongoing educational change initiative, Liberal Education and America’s Promise, or LEAP.

*The LEAP Challenge calls for all college students, not just the most fortunate college students, to integrate and apply their learning to complex problems and projects that are important to the student and to society.*

Developed in the context of AAC&U’s Centennial Year, the LEAP Challenge signals AAC&U’s “second century” determination to make liberal education—including general education—more purposeful, more equitably inclusive, more digitally inventive, and more transparently engaged with the world’s most pressing issues—global, societal, civic, ethical, and economic. (To learn more about the entire LEAP framework for student learning in college, see the appendix, pages 35–37.)

Focusing intensively on the larger meanings of “student success,” the LEAP Challenge is designed to ensure that LEAP-framed reforms, including the redesign of general education, work at peak for all college students, whatever their backgrounds, educational goals, and intended careers. With major support from philanthropy, and in partnership with a broad array of two- and four-year institutions, the LEAP Challenge will advance

- guided institutional and inter-institutional pathways to create equitable access to excellence for all students, with a special focus on underserved students;
- purposeful, integrative, and proficiency-framed redesigns of general education;
- proficiency-fostering approaches to digital learning;
- students’ active engagement in producing their own projects—termed “Signature Work”—that integrate knowledge, essential proficiencies, and evidence-based reasoning related to a significant problem or question;
- the use of faculty-designed VALUE rubrics for widely endorsed proficiencies to assess student accomplishment, including Signature Work projects;
- a strong focus on diversity, equity, and inclusive excellence across the curriculum, including in high-opportunity fields such as science, technology, engineering, and mathematics.

Across all these initiatives, including GEMs, AAC&U will continue to work with its members and with policy leaders to affirm and renew civic, global, and intercultural learning as an integral part of college study, and to connect students’ specific interests to public questions and the responsibilities of democratic citizenship.

## From Breadth, Depth, and Credit Hours to GEMs Pathways and Students’ Signature Work

The LEAP Challenge described above is AAC&U’s Centennial effort to ensure that LEAP reforms work well for today’s students—fostering needed proficiencies and preparing students for complexity, diversity, and change. Informed by the important evidence that engaged or “high-impact” practices foster both deeper learning and increased persistence, the LEAP Challenge calls for all college students, not just the most fortunate college students, to integrate and apply their learning to complex problems and projects that are important to the student and to society. The projects may address

contemporary problems—such as literacy or health or energy—or they may address enduring questions—such as freedom, integrity, human dignity, or justice.

Whatever the topic, such deliberately integrative projects become an opportunity for students to take the lead, with faculty guidance, in determining the question, developing the analytic and creative strategy, and producing work that represents the students' own integration of knowledge, skill, evidence-based reasoning, and personal or social responsibility.

*GEMs also articulates ... a contemporary purpose for general education that breaks free at last of the old "breadth–depth" model.*

Students' work on complex projects in college will prepare them to work on similar challenges in their careers, their communities, and their own lives. AAC&U calls the resulting achievement students' Signature Work.

The GEMs learning pathways advocated in these pages and described in *General Education Maps and Markers: Designing Meaningful Pathways to Student Achievement*—rich in proficiency- and project-based integrative learning—are intended to help students practice, prepare for, and accomplish meaningful Signature Work.

In calling for students to develop proficiencies through integrative learning projects, GEMs also articulates—to everyone's benefit—a contemporary purpose for general education that breaks free at last of the old "breadth–depth" model that was first introduced for general education some one hundred years ago.

The "breadth–depth" curricular division of labor—taken for granted in virtually all policy approaches to student success and transfer articulation—in fact originated in the age of the assembly line. Tattered and bedraggled, it neither suits nor serves today's diverse and swirling students who need a very different approach—personalized, customized, results oriented—to make the most of their college studies. GEMs will help higher education reinvent this outdated and underperforming design for college learning, general education, and liberal education.

While broad and specialized learning will certainly remain features of college for today's students, GEMs affirms that the ultimate goal for both breadth and depth is integrative and applied learning—made visible in students' research, practicums, service learning, creative work, and e-portfolios. In preparing students to integrate and apply their learning in projects and Signature Work, general education will complement and contextualize specialized learning. Core intellectual skills will be practiced and integrated continuously—and at increasingly more challenging levels—across general education and the major. Proficiencies and projects will be central to both courses and programs, not afterthoughts to content and credit hours. Projects and practicums will provide opportunities for students to practice these essential integrations of knowledge, skill, and applications and will show how well they are achieving the proficiencies important to their lives beyond college.

Signature Work provides a practical context for fostering students' integrative learning, from first to final year. By introducing the idea of Signature Work the day students apply to college, and by providing a kind of dress rehearsal for integrative student projects no later than the second year, colleges, universities, and community colleges can instantiate their expectation that learning is supposed to be integrative and cumulative, not fragmented and incoherent. They can ensure that students' general education is in fact empowering and horizon expanding, the kind of learning that makes more of students' futures.

## **AAC&U's Next Era of Work on LEAP and GEMs**

Going forward, AAC&U will promote the GEMs approach to general and liberal education across the entirety of its work—its ongoing programs of summer institutes and working conferences, and its extensive family of LEAP-framed grant-funded projects. GEMs premises also will set the standard to ensure that the digital revolution is used to facilitate students' inquiry-based learning and projects, not to further immerse students in content and concepts they never learn how to actually use.

And AAC&U will continue to press policy leaders—state, accreditation, philanthropic, and federal—to focus on the most empowering forms of learning and make quality of learning, not ancillary metrics, the guiding compass for quality and equity as this global century progresses.

In 2015, in the context of its Centennial Year, AAC&U will select a set of institutions—public and private, two-year and four-year—that want to remap their own curricular pathways to ensure that all their students are ready to apply their broad and specialized learning to Signature Work projects of many kinds.

These LEAP Challenge institutions will become partners with AAC&U both in advancing the broad goals of a twenty-first-century liberal education and in promoting the equity-minded and digitally creative GEMs designs for general education that will play an integral role in helping students achieve those goals. They will be leaders in general education reform, and, because of their integrative approach to general education, in the renewal of liberal education as well.

Welcome to AAC&U's second century. We are leaning forward and, in partnership with you, creating a far-reaching LEAP vision and practice whose ultimate purpose is to make excellence—once and for all—inclusive. GEMs pathways for general education are central to that vision, and to all students' achievement of the vibrant education they need and deserve.

We invite your participation in GEMs reforms as AAC&U marks its Centennial by embracing the LEAP Challenge.

# Acknowledgments

The Association of American Colleges and Universities (AAC&U) is grateful to the Bill & Melinda Gates Foundation for its generous support of the first phase of the General Education Maps and Markers (GEMs) initiative and of AAC&U's Centennial planning for a second century of educational leadership for quality and inclusive excellence.

AAC&U also expresses its appreciation to Lumina Foundation, The Arthur Vining Davis Foundations, The Charles Engelhard Foundation, The Kresge Foundation, The Teagle Foundation, The Andrew W. Mellon Foundation, and to numerous individual donors. Their collective support will help AAC&U move GEMs from the design principles suggested in these pages and outlined in *General Education Maps and Markers: Designing Meaningful Pathways to Student Achievement* (AAC&U 2015a) to vigorous educational change efforts across the nation's college, university, and community college campuses, and in state systems as well. For more on the next phase of GEMs, see the last section of the foreword.

We also thank Kathryn Peltier Campbell for her expert editorial assistance and Michele Stinson and Shelley Johnson Carey for shepherding this and other GEMs publications through the design and production process. And finally, AAC&U thanks the members of the three GEMs working groups and the GEMs quality assurance group, who contributed greatly to the development of this document. The principles and guidelines it suggests are largely derived from their experience and experimentation and reflect and gather their ideas about general education. We appreciate their time, effort, and energy and their many, many good suggestions.

From the outset, I welcomed the opportunity to participate in AAC&U's GEMs initiative, both as a participant in the discussions of the Design Working Group and as the author of this publication. Never have I enjoyed an assignment more fully informed by the encouragement and constructive criticism of so many well-qualified colleagues. I refer especially to those whose names are listed below, for *General Education Transformed* incorporates their intensive discussions, their thoughtful evaluations, and their substantive recommendations for improvement. The balance of candor and tact in these discussions has created an ideal environment for this work. I'm grateful.

I offer thanks in particular to David Paris, who chaired the Design Working Group and who is largely responsible for *General Education Maps and Markers: Designing Meaningful Pathways to Student Achievement* (AAC&U 2015a). That cogent overview provides a practical platform for my efforts to "make the case" for general education reform as an avenue toward significant improvements in the baccalaureate curriculum. Developed through AAC&U's GEMs initiative, that document is one of several publications that are being released in the context of AAC&U's Centennial Year, 2015. And to AAC&U's acknowledgment of Kathryn Peltier Campbell's editorial savvy I add my own thanks. Rigorous and discerning, she has strengthened this document considerably.

—Paul L. Gaston

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## INTRODUCTION

# The Way Higher Education Should Be

The state of Maine prints on some of its license plates a compelling epigraph: “The Way Life Should Be.” But just as, even in Maine, life may sometimes fall short of the way it “should be,” most college students’ experiences of higher education currently fall far short of what they “should be.” At present, most students in most institutions of higher learning experience general education programs ill-designed to accomplish their stated purposes and ill-suited to ensure the wide range of learning outcomes that define degrees. Programs in disciplines (i.e., majors) are often complicit. If they fail to foster the learning and skills students achieve through general education, they may undermine what general education should accomplish.

This imperfect reality invites imagination of the way things should be. Throughout higher education, students should approach their college experiences with an informed understanding of the outcomes they should expect to achieve and of the ways in which the undergraduate curriculum—general education in concert with study in one or more major fields—will enable them to achieve those outcomes. Regardless of their family incomes, their personal backgrounds, or their institutions of choice, students should find at every stage of their college careers both ample and all-inclusive support and a commitment to intentionality: the alignment of creative, pragmatic educational paths leading through progressively more challenging study in the humanities, social sciences, arts, and sciences to clearly defined ends. These paths should lead students to graduate on time—confident in the value of their degrees, in the proficiencies they have developed, in their preparedness to contribute to the public interest and to economic competitiveness, and in their potential for further learning.

Closing the gap between the way things are and the way things should be is the goal of the Association of American Colleges and Universities’ (AAC&U’s) General Education Maps and Markers (GEMs) project. Building on a growing national consensus about the Essential Learning Outcomes that all students should achieve in college (National Leadership Council for Liberal Education and America’s Promise 2007), as well as on agreement about what it should mean to hold a college degree as described in Lumina Foundation’s Degree Qualifications Profile (DQP) (Adelman et al. 2014), the GEMs project envisions a compelling standard for student learning.

Consider the examples of two hypothetical students, Juan and Pat, on pages 2 and 3:

*Throughout higher education, students should approach their college experiences with an informed understanding of the outcomes they should expect to achieve and of the ways in which the undergraduate curriculum—general education in concert with study in one or more major fields—will enable them to achieve those outcomes.*

## JUAN

### A thoughtful, serious, traditional student

#### Considering College

As a prospective college entrant, Juan visits the website of Northeast Midwestern State University (NMSU). There NMSU has defined in practical and measurable terms (1) its institutional baccalaureate outcomes and (2) the contribution its general education program makes to the accomplishment of these outcomes. These straightforward statements show clearly how an NMSU education reflects the broad national consensus on degree-level outcomes expressed by the DQP, as well as the principles embodied in the GEMs project. The website also describes the ways in which an NMSU education is distinctive from that offered at other institutions.

An apparent congruence between the university's educational programs and Juan's priorities prompts him to begin the application process. First, Juan completes an online questionnaire that will generate a map plotting his preparation and interests against the university's general education and major programs. In response to this questionnaire, Juan receives documentation of several alternate curricular pathways. Some of these pathways align suggested general education coursework with likely majors, while others presume a major to be named later. Each pathway includes explicitly identified opportunities for Juan to engage in active learning (including through Signature Work that addresses complex problems important to the student and to society), to demonstrate academic proficiencies aligned with those of the DQP, and to participate in complementary cocurricular activities.

Thus even before admission, Juan has access to personalized overviews of several trajectories he might follow in his undergraduate experience, all organized according to student learning priorities. With these overviews, Juan can look forward to a curriculum that will build on his strengths and stimulate his curiosity. Now understanding the advantages to be found at NMSU, Juan completes the application process.

#### Admission

Juan receives his long-awaited admission letter from NMSU. Within forty-eight hours, he receives both a telephone call and an e-mail communication from an advisor who will offer guidance throughout Juan's career at NMSU. Stressing the importance of frequent consultation, the advisor schedules Juan's first one-on-one appointment prior to the beginning of the fall semester. At the same time, the advisor introduces Juan to an interactive digital planner that incorporates the curricular and cocurricular pathways projected earlier. Juan chooses a provisional curriculum and cocurriculum that will help him develop proficiencies in areas keyed to his interests and at levels of challenge appropriate to his preparedness. Both Juan's dedicated advisor and faculty advisors in his possible areas of specialization review the curriculum he has chosen and recommend modifications.

#### Transferring From One Institution to Another

Juan is highly successful—so successful that at the beginning of the second semester of his second year, he decides to transfer to Flagship University, where the educational program also embodies GEMs principles, in order to continue study toward a bachelor's degree and a master's degree in accounting. Juan's electronic portfolio documents (1) proficiencies achieved and demonstrated through Signature Work developed in connection with general education courses offering increasing levels of challenge and (2) accomplishments through the NMSU cocurriculum that complement his academic work. Working with this portfolio, an advisor in the College of Business (COB) at Flagship is able to compare Juan's preparation to date with the expectations of the Flagship COB and to recommend any necessary modifications in the pathway Juan is pursuing. At Flagship, just as at NMSU, Juan's pathway will align a four-year, interdisciplinary general education curriculum with the major curriculum and cocurriculum. The liberal learning proficiencies Juan develops through general education are strengthened through progressively more challenging learning in the major and cocurriculum.

#### Anticipating Graduation

Anticipating graduation at the conclusion of his fourth year—with acceptance to the Flagship master's program in accounting already assured—Juan participates in a multidisciplinary general education capstone experience. Through this capstone program, Juan integrates proficiencies gained through multiple disciplines while demonstrating the institutional baccalaureate proficiencies that have defined his pathway. Juan's electronic portfolio clearly and substantively documents his accomplishment of the DQP proficiencies that Flagship has designated as requisite for the baccalaureate degree. Because of Flagship's strategic integration of general education and the major, Juan's undergraduate career has prepared him for graduate study leading to the master's degree in accounting and to success as a Certified Public Accountant. No less important, Juan's general education has opened a pathway to a lifetime of continuing education, civic responsibility, cultural awareness, and ethical reasoning.

## PAT

### A motivated, employed, returning adult student

#### Considering Returning to College

At age eighteen, Pat began study toward an associate's degree in information technology at Warm Creek Community College (WCCC). However, finding the discipline unappealing, she dropped out after two semesters. Marriage and children prompted her to defer further formal education in favor of an interesting marketing position for a regional distributor. At age twenty-eight, having gained considerable practical experience in marketing, Pat decides to pursue additional formal education. This time, she will seek a baccalaureate in marketing—eventually, perhaps even an MBA. She sees a billboard for Northeast Midwestern State University that advertises NMSU's "welcome mat" for "experienced learners" and promotes "liberal education you can use to get ahead." Those are just the prompts she needs to pique her interest.

Pat visits the NMSU website and notes the institution's commitment to intentionality across general education and the major. The website enables her to grasp both the university's baccalaureate outcomes (keyed to the DQP) and the alignment of its general education curriculum with these outcomes. She realizes that she may need to make up some ground through general education courses that will address gaps in her preparation, but she can infer as well how her earlier study and employment experience may qualify for academic credit.

Pat decides to apply. As part of the application process, she completes a questionnaire that records her current academic priorities and compares her educational experience with outcomes defined by the DQP. She receives in response (1) a tentative assessment of the general education proficiencies she may be able to demonstrate and the gaps she will probably need to address, (2) a curricular plan linking her remaining general education objectives with study in her intended major, and (3) an estimate of time to degree and total costs.

#### Admission

Three weeks after submitting her application to NMSU, Pat receives a call from an advisor in the Experienced Learner program and agrees to an interview on Skype. During this interview, the advisor describes various methods through which a returning student can propose relevant work experience for possible college credit. The NMSU advisor also recommends that Pat consider retaking some general education courses focused on essential writing and computational skills that Pat has not practiced regularly since her year at WCCC.

Pat and her advisor schedule an on-campus day during which she will (1) create the template for an electronic portfolio, (2) use this portfolio to seek six hours of credit by documenting her work experience in the context of the DQP, and (3) make curricular choices both for the semester just ahead and for the full span of her college career. Following assessment of her application, Pat receives the credit for which she had applied. Pat also discusses with her advisor the gaps in her proficiencies that NMSU's focused and coherent approach to general education will remedy. Pat then chooses a curriculum consonant with her record to date. Both Pat's dedicated advisor and faculty advisors in her intended area of specialization review the curriculum she has chosen and make recommendations.

#### Anticipating Graduation

In contrast with her first experience in higher education, Pat finds at NMSU a logic and an intentionality that her experience enables her to appreciate. With the guidance of the DQP, she has succeeded in pursuing a curriculum with clearly stated objectives at every level—the classroom, the program, and the degree—and has been able to understand the value of all that she has accomplished. Because NMSU wants all its students to benefit from the clarity and practicality of its educational vision, transfer students like Pat participate in a multidisciplinary general education capstone experience with students who began their higher education careers at NMSU. There each student integrates proficiencies gained through multiple disciplines while demonstrating the baccalaureate-level outcomes that have been defined by the institution. By integrating general education, the major, and the cocurriculum, Pat's undergraduate career has prepared her for admission to an MBA program. Although Pat chooses to defer this next step, NMSU has also prepared her for a lifetime of education, civic responsibility, cultural awareness, and ethical reasoning.

No two examples, however carefully framed, can describe fully the complex realities of higher education. For one thing, these examples describe students pursuing preprofessional and professional programs. Many students no less focused than these two pursue liberal arts disciplines in order to achieve the broad acumen and flexibility that can lead to success in a volatile employment environment.

For another, both of the scenarios above describe students who are highly motivated and largely self-directed, while many students are neither. The academy must accommodate, challenge, and support such students as well. Indeed, one measure of the academy's commitment to equity will be found in its efforts to attend to the needs of students who require extra guidance and support to make the most of their college studies. As *General Education Maps and Markers* says, we must “meet students where they are” (AAC&U 2015a, 19).

Finally, while the examples here describe linear, cumulative educational processes, many students experience a far different reality: they may begin with a clear priority, proceed for a time but then change their major, discover an incompatibility, change or even reverse course, circle back to satisfy missed requirements, and so create a winding pathway.

Nevertheless, the reforms implied in the two examples above are meant to address the needs of all students, notwithstanding the unprecedented range in students' preparedness, intent, and experiences. Indeed, the implied reforms would offer much needed additional support *especially* to students who are uncertain of their course and to those who may “swirl” their way through the curriculum. These

reforms are not directed at Juan and Pat alone; instead, they would enable every student—regardless of race, gender, age, geography, or socioeconomic background—to become better informed, experience enhanced support, aspire to higher educational goals, and find more efficient pathways toward realizing their ambitions.

### DEFINING LIBERAL EDUCATION AND GENERAL EDUCATION

**Liberal Education:** A course of study designed to prepare students for complexity, diversity, and change. Best accomplished through the alignment of both broad or general education and a major or specialization, a liberal education helps students develop broad knowledge of science, cultures, history, and society, as well as knowledge and skills important in their chosen specializations. Liberal education also emphasizes the development of proficiencies that span all fields of study, including social and ethical responsibility, strong intellectual and practical skills (e.g., critical thinking, evidence-based reasoning, communication, and problem solving), as well as the demonstrated ability to apply knowledge and skills to complex problems and real-world settings.

**General Education:** Refers to the part of a liberal education shared by all students. Typically grounded in the humanities, sciences, social sciences, and arts, general education provides a platform for fostering proficiencies that span all fields of study (e.g., social and ethical responsibility, critical thinking, evidence-based reasoning, communication, and problem solving) while also providing opportunities for hands-on experience with complex questions and problems. By facilitating students' exploration of issues and questions that bridge multiple fields of study, general education helps students build the broad and integrative knowledge they need for careers, while also preparing them directly for questions and issues they will confront as citizens in a globally engaged democracy.

### In Brief: Reality and Reform

If the experiences of Juan and Pat exemplify “The Way Academe Should Be,” their pathways are still far different from those most students experience as they pursue their undergraduate degrees. As the authors of *General Education Maps and Markers* observe, there is far too often a “haphazard character” to the general education many students undertake (AAC&U 2015a, 6)—and, for that matter, to their entire undergraduate careers. The result? “Too few students are leaving colleges and universities with the skills, knowledge, and dispositions that prepare them for work, life, and responsible citizenship” (5).

That is the bad news, succinctly stated. But there is also much good news. Those who believe that higher education can and should become more effective have some reasons for optimism. I outline these reasons below:

### *We have documented the dilemma.*

First, it is now widely recognized that far too many college students fail to earn a degree. In their 2011 report for the Harvard Graduate School of Education, *Pathways to Prosperity*, William Symonds and colleagues observe, “College for all’ might be the mantra, but the hard reality is that fewer than one in three young people achieve the

dream” (Symonds, Schwartz, and Ferguson 2011, 9). Citing data from the Organisation for Economic Cooperation and Development, the report’s authors starkly declare, “the United States now has the highest college dropout rate in the industrialized world” (10). Moreover, too many of those who do not persist in college come from communities underrepresented in higher education. The harsh reality is that “racial or ethnic minority students have a higher probability of leaving post-secondary education than ethnic majority students” (Carter 2006, 33).

Second, it is widely known that those who do graduate may take far too long to do so. The six-year graduation rate for students seeking a bachelor’s degree (59 percent in 2012) has become effectively the default statistic for measuring institutional performance (USDE 2014). And those who graduate may discover that preparation sufficient to meet entry-level requirements for employment may prove inadequate to support their advancement (Hart Research Associates 2013, 2).

### ***We know a key source of the dilemma.***

Too many students experience general education not as a conspicuously useful and meaningful component of a coherent baccalaureate education, but as a curricular impediment that they must “get out of the way” prior to study in a major. If they hear this message from their advisors, they may be unable to visualize a meaningful trajectory in their curriculum, with an attendant loss of motivation and commitment to persist. In sum, students deprived of a general education that is transparently purposeful, substantive, clearly aligned with their personal goals, and expressive of explicitly defined institutional learning goals are far less likely to remain motivated, to strive for excellence, and to make a compelling case for themselves to potential employers.

*If general education and liberal learning outcomes are stated explicitly, students should work with greater motivation and a stronger sense of commitment.*

### ***We are committed to a solution that is equitable for all students.***

*Cornerstones of Completion* (a 2012 report by Lara K. Couturier on the Completion by Design project sponsored by the Bill & Melinda Gates Foundation) suggests a strong link between well-designed curricular pathways on the one hand and persistence to completion on the other (22). The report cites in particular a study by Melinda Mechur Karp (2011) that advocates “activities that clarify student aspirations and develop college know-how.” These activities “make student success more likely,” Karp concludes. While she focuses on “non-academic” activities, the principle she asserts could not be more germane to general education: college awareness leads to clearer aspirations that lead to increased persistence.

It should not be surprising that rigorous, authentic liberal education for all college students would encourage greater persistence among all students seeking degrees. It may be simplistic to observe that those who have a clear sense of why they are doing what they are doing perform more effectively. But the corollary is compelling: if general education and liberal learning outcomes are stated explicitly, students should work with greater motivation and a stronger sense of commitment. In turn, graduates should gain greater confidence in the proficiencies they have developed, in the value of their degrees, in their preparedness to contribute to society, and in their readiness for further learning.

### ***We know how to create a solution that can be implemented “at scale.”***

The single most direct and effective approach to improving the educational experience for all students is the redesign of general education as a platform for integrative, digitally rich, proficiency-based, and question-centered learning grounded in the humanities, arts, sciences, and social sciences. Rather than

a buffet of survey courses to be “gotten out of the way,” general education must become the integrative center for the most important learning outcomes—from the first year until the degree.

*We know what is required to implement the solution.*

We must affirm consensus about what degrees mean irrespective of discipline; frame curricula that lead, through general education and the major, to students’ accomplishment of clear learning outcomes; insist on and support high-impact practices, including students’ own Signature Work (AAC&U 2015b); direct, appropriately and strategically, the resources of the digital universe; provide ample assistance to faculty; and assess student accomplishment to document success and prompt improvement.

*We believe the academy is well prepared to undertake the solution.*

AAC&U’s thirty-year commitment to strengthening general education has resulted in the development of a solid platform for systemic and scalable reform. As described below (pages 18–20), with the publication of the Essential Learning Outcomes (ELOs) nearly a decade ago, AAC&U advanced a clear, widely shared, and eminently applicable consensus about what a liberal education

should offer (National Leadership Council for Liberal Education and America’s Promise 2007). A complementary AAC&U initiative, VALUE (Valid Assessment of Learning in Undergraduate Education), develops rubrics that enable institutions to measure and document student accomplishment relative to the ELOs. The Degree Qualifications Profile, published as a beta document in 2011 and formally released by Lumina Foundation in October 2014, complements the ELOs by specifying in concrete terms what degree recipients at the associate’s, bachelor’s, and master’s levels should be able to do with their learning and how they should be able to demonstrate what they can do (Adelman et al. 2014; see figure 1). AAC&U’s GEMs project directs these important efforts toward a genuinely transformative undertaking. By strengthening general education through curricula that are more efficient and more effective, GEMs seeks to inspire the renovation of undergraduate education so that all college students can earn meaningful degrees in a timely manner and can be better prepared to extend their studies, to pursue their careers, and to contribute to the public good.

#### **DEFINING SIGNATURE WORK**

In **Signature Work**, a student uses his or her cumulative learning to pursue a significant project related to a problem he or she defines. In the work conducted throughout at least one semester, the student takes the lead and produces work that expresses insights and learning gained from the inquiry and demonstrates the skills and knowledge she or he acquires. Faculty and mentors provide support and guidance.

Signature Work might be pursued in a capstone course or in research conducted across thematically linked courses, or in another field-based activity or internship. It might include practicums, community service, or other experiential learning. It always will include substantial writing, multiple kinds of reflection on learning, and visible results. Many students choose to use e-portfolios to display their Signature Work products and outcomes. (AAC&U 2015b)

FIGURE 1. The Degree Qualifications Profile

## Degree Qualifications Profile Overview

*A template of proficiencies required for the award of college degrees at the associate, bachelor's, and master's levels\**

### Knowledge

At each degree level, every college student should demonstrate proficiency in using both specialized knowledge from at least one field **and** broad, integrative knowledge from arts and sciences fields. **Both kinds of knowledge** should be pursued from first to final year, providing opportunities for **integration across fields and application to complex problems**—in the student's area of emphasis, in out-of-school settings, and in civil society.

#### BROAD AND INTEGRATIVE KNOWLEDGE

Key areas include the sciences, social sciences, humanities, arts, and global, intercultural, and democratic learning.

In **each area**, students:

- Learn key concepts and methods of inquiry
- Examine significant debates and questions
- Make evidence-based arguments

In **addition**, at each degree level, students:

- Produce work that integrates concepts and methods from at least two fields

#### SPECIALIZED KNOWLEDGE

Students demonstrate depth of knowledge in a field and produce field-appropriate applications drawing on both major field and, at the BA level and beyond, other fields. Students learn

- Discipline and field-specific knowledge
- Purposes, methods, and limitations of field
- Applied skills in field
- Integrative skills and methods that draw from multiple fields and disciplines

### Intellectual Skills

Students hone and integrate intellectual skills across the curriculum, applying those skills both to complex challenges within major fields and to broad, integrative problem-solving challenges in general education and in civic, global, and applied learning. Skills include

- Analytic inquiry
- Ethical reasoning
- Use of information resources
- Quantitative fluency
- Engaging diverse perspectives
- Communication fluency

### Civic and Global Learning

Students acquire knowledge required for responsible citizenship both from their formal studies (see knowledge and skills, above) and from community-based learning, and **demonstrate their ability to integrate both forms of learning in analyzing and addressing significant public problems and questions, in both civic and global contexts**. Civic learning may be demonstrated through research, collaborative projects, and/or field-based assignments.

### Applied and Collaborative Learning

Students demonstrate their ability to **integrate and apply** their learning (see knowledge and skills, above) in complex projects and assignments, including collaborative efforts, that may include research, projects, practicums, internships, work assignments, performances, and creative tasks.

\*This chart summarizes Lumina Foundation's Degree Qualifications Profile, released in 2014. The new release is informed by feedback from faculty and leaders from hundreds of colleges, universities, and community colleges that worked with the "beta version" of the document, which was published in 2011. The full Degree Qualifications Profile is available for download at <http://www.luminafoundation.org/resources/dqp>.

*Now, we affirm a strategy leading to the solution ...*

What is needed given the reality and the opportunity is a pathway defined by *clear maps and markers* that invite students, faculty members, and institutional administrators to develop a principled and practical understanding of the way forward. By aligning more clearly focused general education curricula with major programs more cognizant of and responsive to general education outcomes, higher education can ensure that students receive the benefits of a liberal education defined in terms of learning proficiencies and demonstrated accomplishments. The GEMs metaphor of “maps and markers” is apt: maps express thoughtful and pragmatic judgments about optimal routes toward clearly defined priorities, both for programs and for the students the programs serve. And markers enable those en route to affirm that they are on course and to measure their progress. With the engagement and commitment of faculty across the humanities, arts, social sciences, sciences, and professional disciplines, such pathways will lead to more compelling, more invigorating, and more effective undergraduate education.

*...and express our resolve to pursue that solution with urgency...*

No matter how well the case for liberal education has been made in the past, we must now reaffirm that case energetically, pragmatically, and inclusively—with special attention to the millions of students now being guided to narrow college programs that provide only a haphazard experience of general education. Again, the most efficient and effective approach to systemic higher education reform is through creating a more coherent and transparent general education curriculum, reinforcing the alignment between general education and the major, and improving and expanding the ways in which we communicate to students and the broader public the particular importance of general education in a dynamic global economy.

*...as we seek nothing less than genuine transformation.*

In short, we envision nothing less than the genuine transformation of general education, reflecting a sharp contrast between the present state (represented by the “From” column of figure 2 on page 9) and the desired state (represented by the “To” column). Such transformation necessarily must engage higher education at many levels: from the faculty, which has principal responsibility for curricular and course reform; to academic administrators, who must ensure that reforms are consistent by coordinating institution-wide efforts; to system leaders, who must make certain that benefits accruing to students in one institution accrue to students in all. The implications of such reform efforts are complex. As figure 2 indicates, effective reform will require the structure of general education to change, in part through far greater coordination with study in the major. Pedagogical emphases will shift from “what is taught” to “what is learned.” Assumptions that we are serving traditional students in traditional institutions will give way to deeper understanding about the diversity of our students and of our colleges and universities. While necessarily economical in format, figure 2 is meant to convey the scope and intent of the project described in the following chapters—a realistic but ambitious approach to genuine reform.

*We envision nothing less than the genuine transformation of general education.*

FIGURE 2. A Genuine Transformation\*

<b>DIMENSION</b>	<b>FROM</b>	<b>TO</b>	<b>ALLIES</b>
<b>Prioritizing quality learning</b>	Faculty teaching	Student learning	<i>Faculty members, academic administrators</i>
<b>Documenting achievement</b>	Courses, credits, and transcript	Documented proficiencies demonstrated in e-portfolios	<i>Academic administrators, accrediting associations</i>
<b>Building effective general education pathways</b>	Distribution requirements in first two years	Four-year path integrated with major	<i>Faculty members, academic advisors, system leaders, transfer coordinators</i>
<b>Focusing teaching strategies and improvements</b>	Discrete courses, content “coverage” and comprehension	Students explore complex problems across multiple courses	<i>Faculty members, disciplinary associations, academic administrators</i>
<b>Locating spheres of work</b>	Single institution assumed	Often multiple institutions	<i>Academic administrators, accrediting associations, system leaders</i>
<b>Advising for student success</b>	Occasional, mostly course scheduling	Sustained, focused on student priorities and progress toward expected proficiencies and project-based work	<i>Advisors, advising associations, faculty members, academic administrators</i>
<b>Increasing student awareness and motivation</b>	Limited, uneven, instrumental	Students know what they are expected to learn and plan early for their Signature Work	<i>Academic administrators, advisors, faculty members</i>
<b>Placing value on credentials</b>	Graduates value credentials for their utility, means to an end	Graduates value credentials for both their inherent value and their applicability—graduates are empowered by the demonstrated proficiencies that degrees signify	<i>Advisors, alumni, employers</i>
<b>Documenting student learning outcomes</b>	Transcripts affirm credit hours earned	E-portfolios document accomplishment and proficiencies	<i>Faculty members, registrars, accrediting associations</i>
<b>Expanding experiential education</b>	Optional, occasional	Required, sustained, assessed	<i>Faculty, academic administrators, disciplinary associations, foundations</i>
<b>Closing equity divides</b>	Deep and persistent inequities reinforced by standard curricula and structures	To ensure equity, curricula and structures respond to students’ different backgrounds and strengths; learning plans are personalized	<i>Faculty members, academic administrators, advisors, disciplinary associations</i>
<b>Expanding high-impact practices<sup>†</sup></b>	Optional, occasional	Required, sustained, included in all general education pathways	<i>Faculty members, consultants, foundations, associations</i>
<b>Deploying technology</b>	Unsystematic, idiosyncratic; focused on stand-alone courses rather than overall learning goals	Strategic, well aligned with curricular outcomes and student goals; also used to help students with needed areas of improvement	<i>Consultants, faculty development experts, faculty members</i>
<b>Forging connections with the public good</b>	Left to faculty discretion	Highly intentional, through exploration of public questions by students and faculty	<i>Faculty members, public partners</i>

\* A version of this figure appears in *General Education Maps and Markers: Designing Meaningful Pathways to Student Achievement* (AAC&U 2015a, 11).

† For more on high-impact practices, see page 35.



## PART 1

# The Dilemma

The compelling prompts for transforming general education may be summarized in brief as problematic gaps in current practice, external environmental challenges, and promising opportunities. As implied by the metaphor guiding AAC&U's General Education Maps and Markers (GEMs) project, those pursuing general education reform must recognize and evaluate impediments to moving from evident realities to urgently needed reforms.

But in order to move forward, we first must acknowledge a paradox: despite a growing consensus regarding the core values of a liberal education, a considerable breadth of understanding about how students may be enabled to achieve the learning these values imply, and an impressive set of tools for designing, delivering, and assessing programs of instruction that encourage students to achieve such values, most students benefit little if at all from this awareness. As noted in the introduction, far too many students still encounter general education curricula created to reflect vague notions of “distribution requirements” and framed according to the interests (and turf priorities) of participating academic departments. Further, when students begin study in a major, they may find little awareness of or respect for the general education that should provide a platform and a context for focused study within a discipline.

Although the “maps and markers” metaphor describes an approach to higher education reform, it also describes an approach to the student experience. Without a reliable map, many students are unable to define a point of departure for their academic careers, to track their progress toward the educational outcomes they seek, or to demonstrate that they have reached the next waypoint.

### Significant Gaps in Present Practice

The major plays an important role in contributing to students' achievement of liberal learning outcomes consistent with the award of a baccalaureate degree, but general education bears primary responsibility for creating a strong foundation for these outcomes. If students are to be well prepared for successful careers and satisfying lives, general education must do the job it is meant to do—and that is often not the case. Consider the evidence:

- Degree completion rates are far lower than they should be, especially for students from groups underrepresented in higher education (Carter 2006, 33); the nation, though explicitly committed to becoming more competitive globally in terms of degree completion, finds itself falling further behind (Symonds, Schwartz, and Ferguson 2011, 10).
- Students who do graduate often take longer than anticipated to do so (USDE 2014). Later, they may report a disappointing lack of alignment between what they have studied and what they find themselves doing (Abel, Deitz, and Su 2014, 4).
- Employers, who have made it clear that they seek in new hires the knowledge and abilities that define liberal education, complain that they often search in vain. In recent surveys conducted on behalf of AAC&U (Hart Research Associates 2013; 2015), employers indicate a decided preference for graduates (1) who can contribute to innovation in the workplace; (2) who can think critically, communicate clearly, and solve complex problems; and (3) who can draw on both field-specific knowledge and skills and a broad range of skills and knowledge—outcomes associated with liberal education.

Derek Bok observed nearly a decade ago, “Many seniors graduate without being able to write well enough to satisfy their employers. Many cannot reason clearly or perform competently in analyzing complex, nontechnical problems . . . . Few . . . are able to speak or read a foreign language. Most have never taken a course in quantitative reasoning or acquired the knowledge needed to be a reasonably informed citizen in a democracy” (2006, 8). But even more disturbing, in Bok’s view, is his sense that undergraduate education in some disciplines is “associated with *declines* in writing ability, cultural awareness, political participation, and a commitment to improving racial understanding” (Bok 2006, 141). And students’ “analytical and problem-solving skills, critical thinking, public speaking, and general knowledge” may become weaker as they progress in some majors. General education must become far more effective, to be sure, but the role of the major as a sustainer and developer of liberal learning is critical.

As the concerns above suggest, gaps between the concept of an effective liberal education and the reality represented by many of today’s graduates are, at present, all too evident. One such gap exists between the values that have long defined liberal education and the college education many students experience. Although such disjointedness may be more conspicuous in large universities with loosely defined distribution requirements, it is hardly confined there. As Mark Bauerlein has shown, a

*General education must become far more effective, to be sure, but the role of the major as a sustainer and developer of liberal learning is critical.*

prestigious institution may proclaim a compelling “core curriculum” on its website but in fact offer its students little more than a smorgasbord of unconnected electives, or, in catalogue language, “an array of intellectual approaches and perspectives.” “Let’s be honest about how it appears to 19-year-olds,” Bauerlein says. “They see such an ‘array’ as merely a bunch of random, disconnected courses outside their major. The courses they finish don’t cohere into a ‘core’ or a ‘common experience.’ They’re just a bunch of heterogeneous hoops to pass through” (2009).

Another gap divides laudable statements of curricular objectives at the program or degree level from the day-to-day experience in the classroom. It is one thing to agree on the outcomes consistent with a liberal education, but quite another to develop the clear standards, structures, and assessments that enable students to understand how a Tuesday morning class in Sociology 101 can contribute to their objectives in that course, their preparation for or work within a major, and the degree-level outcomes they should expect to be able to demonstrate. But if asked to summarize their institution’s expectations where degree-level educational outcomes are concerned, how many students would be able even to begin? How many faculty members? Some exemplary colleges enable their students to pursue highly intentional educational pathways, but far too many institutions maintain cumbersome, opaque academic structures and fragmented curricula.

The greatest and most compelling gap is that between the student who has the advantages of attentive advising, generous financial support, and a carefully chosen academic environment and the student struggling to make ends meet, coping with perplexing curricular requirements, and finding little encouragement or practical advice along the way. Discouraged by the potential costs or alienated by disconcerting application processes, some capable students may not even attempt college. Those who do make the attempt may encounter obstacles to access, superficial advising, inadequate financial support, and an opaque curriculum. The result may be found in the lamentable degree completion rates of precisely those colleges and universities that should be offering broad, inviting, hospitable pathways to success (USDE 2014). Reforming general education may not solve all of higher education’s problems. However, by prompting institutions to offer a more clearly purposeful and substantive curriculum, general education reform could pave the way for similar intentionality in addressing issues related to student support and guidance through the full curriculum.

## External Environmental Challenges

Through the GEMs project, AAC&U seeks above all to improve the educational experiences of all students—especially those from modest economic backgrounds and underrepresented minority groups—and to address more fully the nation’s urgent need for better educated citizens. But the project responds also to a sustained drumbeat of concern regarding the effectiveness and efficiency of US higher education. Once concentrated within the academy—consider appraisals by Frank Newman (1985), Ernest Boyer (1987), the aforementioned Derek Bok (2006), and Richard Arum and Josipa Roksa (2011)—criticisms of higher education and calls for reform now appear in State of the Union addresses, on op-ed pages, and in the media.

*AAC&U seeks ... to improve the educational experiences of all students—especially those from modest economic backgrounds and underrepresented minority groups—and to address more fully the nation’s urgent need for better educated citizens.*

US Senator Lamar Alexander, a Republican from Tennessee, opened discussion of the reauthorization of the Higher Education Act in a hearing on September 19, 2013, by comparing higher education today with the American auto industry in the 1970s. Among the clear signs of trouble, Senator Alexander noted the following:

- “We are no longer the leading nation in postsecondary completion—in the latest data we rank fourteenth.”
- “Fewer of the brightest international students are attending US colleges and staying here after they graduate.”
- “Governors tell us that the biggest problem they face is the lack of a properly trained workforce.”
- “Colleges and universities continue to operate inefficiently...” (Alexander 2013)

A former university president and a past US Secretary of Education, Senator Alexander has described himself as a friend of higher education, and he has in fact been a strong voice in discussions aimed at reducing federal regulatory oversight (Lederman 2008). But he has warned more than once that higher education’s unwillingness or inability to undertake significant reform may prompt increased federal intrusion.

Senator Alexander’s criticisms represent just a small subset of the external challenges facing higher education—challenges that are both well known and increasingly pressing. As state support for higher education has declined sharply over the past three decades, costs have risen sharply, more sharply even than costs in sectors such as health care (Deritis 2011, 55). Reductions in per-student funding that have strained institutional budgets have led in turn to substantive increases in student debt (Deritis 2011, 55), to an increasing reliance on contingent faculty who may be well qualified but who are rarely well supported (Kezar and Maxey 2013), to a confusing array of higher education providers and instructional modes of delivery, and to turf issues that drive faculty members to defend their silo walls instead of collaborating to offer integrative learning.

The Great Recession that began in late 2007 exacerbated these trends, and the gradual recovery that has followed has done little or nothing to reverse them. Using data on state appropriations compiled by Illinois State University, data on enrollments compiled by the State Higher Education Executive Officers Association (SHEEO), and the Consumer Price Index published by the Bureau of Labor Statistics, the Center on Budget and Policy Priorities found after adjusting for inflation that forty-eight states (excepting only Alaska and North Dakota) “are spending less per student than they did before the recession” (Mitchell, Palacios, and Leachman 2014). If funding represents one measure of support

for higher education's contribution to the common good, the continued decline in such funding suggests the continuing decline of such support—at least among policy makers.

While some elements in the changing environment are within the control of higher education, many are not. In a difficult environment, many colleges and universities have worked to raise the level of student success, both in terms of graduation rates and in terms of the quality of learning. But inaccurate perceptions are a challenge in themselves. While there is much that might be improved in higher education's practice, for the most part colleges and universities do not deserve their depiction as inordinately expensive, unconcerned about efficiency, and indifferent to student success.

### **Substantial Opportunities**

Exasperation with critics' misimpressions will not change the prevailing narrative. Instead, higher education must accept responsibility for doing so. Rather than standing by traditional paradigms when opportunities for change beckon, higher education must undertake vigorous efforts to improve the education that students experience—especially in the humanities, arts, social sciences, and sciences—and work purposefully to create the improved public climate that colleges and universities deserve and certainly need. The Degree Qualifications Profile defines the proficiencies students need and the kinds of practices that prepare students to deal with complex questions and problems. Now, through reform efforts like the GEMs project, higher education must map educational pathways for students, within and across institutional boundaries, as they pursue and accomplish these proficiencies.

*The Degree Qualifications Profile defines the proficiencies students need and the kinds of practices that prepare students to deal with complex questions and problems.*

Fortunately, ample opportunity exists to incorporate and build on progress being made in closely related arenas. For example, new digital technologies offer innovative platforms for experiencing learning, efficient modes of delivering learning, and effective methods for assessing and improving learning. These technologies can be used not only to enhance, but also to transform learning—an opportunity that lies less in hardware and software than in the focus on learning outcomes that their application invites and supports. Further, by assessing students' achievement of clearly stated learning outcomes and using those assessments to strengthen their programs and institutions, colleges and universities can better respond to the requirements

of regional and specialized accreditors. Increasingly, programs or institutions that document their commitment to continuous improvement are benefiting from more efficient and less intrusive accreditor oversight. Finally, as accounts from hundreds of institutions demonstrate, the opportunities for curricular mapping and program redesign implicit in AAC&U's Essential Learning Outcomes and in the Degree Qualifications Profile can lead to genuine improvement in the student experience.

But such opportunities notwithstanding, far too many college graduates continue to demonstrate that they are underprepared, undereducated, and overextended. That is the situation now at takeoff or at the head of the trail heading toward higher education reform.

The flight or hike ahead will be demanding. But the good news is that we can envision an inviting destination: a widely shared commitment to more effective liberal education, relying on both general education and the major, that results in more valuable and demonstrable learning outcomes pursued through more collaboration-based, real-world-oriented curricula. Accurate maps can enable us to picture that destination. Markers can enable us to reach it.

## PART 2

# The Solution

Because almost all students in US colleges and universities experience general education, the most expeditious strategy for reforming the baccalaureate is to achieve broad, systemic reform in “the nation’s largest educational program” (AAC&U 2015a, 6). General education must become clearly purposeful both in content and in structure. In concert with students’ majors, general education must challenge students to establish, demonstrate, and extend essential skills. Further, through a coherent and transparently incremental curriculum, general education must enable students to address and begin to demonstrate the broader proficiencies set forth in the Degree Qualifications Profile. And general education must challenge all students through Signature Work to exercise autonomy and resourcefulness in integrated learning. Such reform would enable the realization of a long-standing aspiration of the academy—that the advantages of a liberal education be made available to all college students.

*General education must challenge all students through Signature Work to exercise autonomy and resourcefulness in integrated learning.*

Of course, the case for liberal education has been made for a very long time—substantively, persuasively, persistently. Commentators on the right and on the left of the political spectrum have offered perspectives supporting liberal education. Researchers have created studies of employer views, analyses demonstrating financial advantages for individuals, and studies of the correlation between liberally educated citizens and healthy societies. And policy makers and stakeholders have offered arguments focusing on the competitiveness of national economies and acknowledging the value of liberal learning for personal self-realization. Indeed, for over two millennia, philosophers, political leaders, economists, artists, and scholars have acknowledged and explicated the multifaceted value of liberal learning.

Thinkers as diverse as Plato, Roger Ascham, W. E. B. Du Bois, and Martha Nussbaum are united in at least one respect: their endeavor to redefine for their respective contemporaries sempiternal values grounded in the sciences, humanities, social sciences, and arts. Du Bois, who believed that a liberal education was essential to leadership, memorably asserted in *The Freedom to Learn* that “of all the civil rights for which the world has struggled and fought for 5,000 years, the right to learn is undoubtedly the most fundamental” ([1949] 1970, 230–31). And Nussbaum, in *Cultivating Humanity: A Classical Defense of Reform in Liberal Education*, reminds us that liberal education “liberates the mind from bondage of habit and custom, producing people who can function with sensitivity and alertness as citizens of the whole world” (1997, 8).

But making a case in principle, however eloquently, does not ensure the liberal education of those who stand to benefit the most—the dispossessed, the uninspired, the constrained, the underserved. The project of general education reform described here seeks to do just that.

### **Liberal Education, America’s Promise**

In the twentieth and twenty-first centuries, a well-established validation of liberal education has informed and influenced a democratizing commitment to expanding access to higher education. Thanks largely to AAC&U’s leadership, discussions about equity in higher education have moved beyond a focus on access to include, with growing frequency, an explicit commitment to extending the advantages of a liberal education to all students, regardless of their academic specializations or intended careers (see Witham et al. 2015).

In an increasingly competitive and dynamic environment, liberal education no longer beckons to a select few but represents an approach to college learning that empowers individuals of widely varying backgrounds and ambitions and prepares them to deal with complexity, diversity, and change, whatever their chosen disciplines. Emphasizing knowledge of the wider world as well as in-depth achievement in at least one specific field of study, liberal education helps students develop strong cross-disciplinary intellectual and practical skills, a sense of social responsibility, and the ability to demonstrate knowledge and skills in real-world settings. Reflecting such vision and principle, institutions as rigorously focused as the Colorado School of Mines now challenge their students to pursue such practical and multifaceted ends: “Few important engineering decisions are purely technical. In our globally interconnected world, professionals must be able to integrate social, cultural, political, economic, ethical, and environmental knowledge into their decisions and designs” (2014).

*General education represents the American academy's distinct contribution to liberal education ... the most accessible and effective means of extending the values of liberal education to all students.*

By and large, employers understand liberal education's value. The series of employer surveys sponsored by AAC&U and conducted by Hart Research Associates (2006; 2008; 2010; 2013; 2015) documents just how fully employers value and search for the practical benefits a liberal education provides. They want to recruit graduates who practice innovation, who

demonstrate key liberal learning outcomes that cut across majors, and who supplement their field-specific knowledge with acumen in a broad range of areas. Even though today's employers say they often search in vain for graduates with a potential for promotion, their appreciation for what effective liberal education can accomplish represents a powerful source of encouragement for those following the maps and markers to general education reform.

A commitment to the reform of general education thus finds support in the compelling arguments for liberal education, the documented proof of its efficacy in the marketplace, and the recommendations of powerful allies. But educators today face the obligation every generation inherits: that of affirming the case in direct, compelling, and timely language. We may take up that obligation by responding to clear and urgent questions:

- What are the characteristics of effective twenty-first-century liberal education curricula?
- How can we most readily achieve these characteristics?
- How can we persuasively assess and document what students accomplish through such an education?

These questions lead us to consider both general education and the major, each of which must contribute to the liberal education of every student both discretely and through their alignment with one another. That is, general education and the major must reinforce and integrate what each accomplishes separately and substantively.

### **General Education: Strategic Means to Liberating Ends**

General education represents the American academy's distinct contribution to liberal education. It also represents, as noted above, the most accessible and effective means of extending the values of liberal education to all students. Ideally, general education should prepare students for active and integrative learning, whatever their major, provide a platform for in-depth study in the major, and continue to offer contexts for such study until the student receives his or her degree. Far more than simply a gateway to specialized study, general education at its most effective exists in dialogue with the major

and across majors, providing the means for students to integrate their professional perspectives within a broader context and enabling them to pursue Signature Work focused on significant questions. In sum, general education should enable students to achieve and demonstrate liberal learning outcomes appropriate to their degree level, regardless of field.

But in contrast to this admirable aspiration, most colleges and universities have maintained their commitment to liberal education principally by offering disjointed general education programs concentrated in the first two years of the college curriculum. The typical general education program combines a few required courses focused on essential academic skills with a cafeteria-style array of courses grouped according to distribution requirements. This model was established early in the twentieth century to juxtapose the “learning in breadth” offered by traditional liberal arts institutions with the focus on “learning in depth” evident in the disciplinary priorities of research and land-grant universities. In some respects, the results were commendable. Without the development of general education curricula in the early twentieth century, many students would have experienced even less opportunity to affirm and strengthen essential academic skills, to become acquainted with different ways of knowing, to acquire valuable contexts for further learning, and to make more fully informed choices regarding which areas of specialized knowledge to pursue.

But higher education has learned by doing, and it has become woefully apparent that the twentieth-century model—in which general education and the major are in effect *set against* one another—no longer serves students well. By contrast, an effective twenty-first-century model must embody lessons drawn from experience, from reflection, and from changes in the environment.

- Experience has shown that general education must be *coherent*. Students must be able to understand how its different elements fit together, how they contribute to degree-level learning outcomes, and how they offer preparation for further study and career advancement. As general education enables students to demonstrate assessable proficiencies, cumulative understanding, and improved discernment, students will stop thinking of their general education requirements as something to “get out of the way” and perceive them instead as a means to achieving genuine intellectual growth.
- There must be greater *continuity* between general education and the major. In circumstances where general education precedes the major, the curriculum must embody a commitment to applied learning as preparation for study in major programs and must prime the student for the learning major programs offer. Similarly, the major must act in concert with general education by placing value on general education proficiencies and by enabling students to continue to develop those proficiencies. But far more might be achieved through their alignment. Catherine M. Wehlburg observes several ways in which the integration of general education and the major “can enhance one another.” She proposes that “transfer of learning may occur more easily” as students employ skills gained through general education in their majors. Similarly, “content from the major may influence how a student views information in the general education courses.” The possibilities for improvement in educational effectiveness are “almost endless,” she observes (2010, 10). Assessment of curricular initiatives at the University of Nevada, Las Vegas; Oakland University; North Carolina State University; Saint Joseph’s University; the University of Cincinnati; and other institutions should in time document these advantages.
- According to *Completing College: A National View of Student Attainment Rates* (Shapiro et al. 2013), “nearly one in four students [in the cohort matriculating in 2007] who completed a degree or certificate (23.4 percent) did so at an institution different from where they first enrolled.” This and similar studies make it clear that the revitalization of general education cannot ignore highly mobile students who attend or draw instruction from more than one institution or provider.

Nor can such reform overlook other important demographic challenges. Many of today's students are mature adults. Many are workers who study rather than students who work. Many are the first in their families to attend college. General education programs must *take into account these trends* so that they may enable and support students who seek a coherent program of study from a variety of providers.

- Exponential growth in technological resources and applications provide new challenges and opportunities for delivering instruction and supporting learning. Such growth has also enabled new providers and encouraged experimentation with new protocols such as the direct assessment of competency-based learning. General education reform must evaluate and, where appropriate, *embrace the advances technology makes possible*. Strong programs that articulate clear educational priorities enable educators to choose responsibly among technological alternatives and support students who learn through them.

*General education is thus a critical key to effective undergraduate education, not only because of what it enables students to accomplish, but also because of the extent to which it enables students to learn more effectively in their chosen disciplines.*

Educational reformers have persuasively documented what general education can accomplish even as higher education has shown an increasing commitment to making general education more effective. As but one example, since 1991, faculty teams from more than four hundred colleges and universities have participated in AAC&U's annual Institute on General Education and Assessment, where they have reflected on best practices, rethought traditional paradigms, and framed recommendations for curricular revision. That work—as well as work supported by accrediting associations and by the Association

for General and Liberal Studies—has encouraged the view that the general education curriculum must now evolve to address new demands and to meet more clearly defined expectations.

Specifically, a general education curriculum should (1) enable student intellectual growth unachievable through an amalgam of discrete courses, (2) provide ample opportunity for reflection and increasing self-awareness, (3) help students develop skills and knowledge transferable from one field of inquiry to another, (4) invite synergistic association with the more specialized education of the major, and (5) provide systematic opportunity to use and extend what is learned throughout the degree program. As noted repeatedly, Signature Work can invite and enable many of these capacities. Through such assignments, students, assisted by mentors, take the lead in pursuing a significant question and in producing work that expresses the insights and learning gained from the inquiry.

*General education is thus a critical key to effective undergraduate education, not only because of what it enables students to accomplish, but also because of the extent to which it enables students to learn more effectively in their chosen disciplines.* By design, general education should “prompt students to integrate their broad learning in the liberal arts and sciences with the specialized learning of their major fields” (AAC&U 2015a, v). But general education also must enable students to achieve such integration through opportunities to “work progressively and intentionally on projects and produce materials that represent what they have achieved” (AAC&U 2015a, 10). Strong general education programs are critical to liberal learning. *Transforming* general education will *transform* liberal learning.

## Reaching Consensus on Outcomes

At the heart of the commitment to making general education more effective both as a platform for study in the major and as an invigorating context for such study, there now exists for the first time a comprehensive understanding of how higher education should communicate the liberal education outcomes it expects of students and of how it should ask students to demonstrate these outcomes. Three distinct but closely harmonized efforts express that understanding.

- The first appears in the Essential Learning Outcomes (ELOs) developed over the last decade through the AAC&U initiative Liberal Education and America's Promise (LEAP) (National Leadership Council for Liberal Education and America's Promise 2007). Reflecting a broadly consultative process, the ELOs offer a framework to guide students' cumulative progress through college. The ELOs have provided a point of departure for hundreds of institutions seeking to clarify and reframe their liberal learning objectives. Auspiciously, the consensus that the ELOs embodied when published has led over time to even broader consensus.
- The second effort, which focused on interpreting the ELOs in ways that can be consistently measured, produced the Valid Assessment of Learning in Undergraduate Education (VALUE) initiative. The VALUE rubrics help institutions, systems, and accreditors determine to what degree students are making progress toward the expected outcomes. (See [www.aacu.org/value/](http://www.aacu.org/value/) for more information about this initiative).
- Finally, because the ELOs were not meant to define the meaning of degrees or to provide a platform for documenting accomplishment from associate's through master's degree study, Lumina Foundation in 2009 convened national discussions focused on ensuring high-quality educational credentials at all levels. With the stated goal of increasing the proportion of Americans holding high-quality degrees, certificates, and other credentials to 60 percent by 2025 (Lumina 2013, 1), the foundation recognized that without a commitment to quality, the significance of achieving even such a big goal might be questionable. In short, credentials that are meaningful must represent authentic, substantive, demonstrable proficiencies.

*In order to be as effective as possible, general education must not stand isolated, as is often the case, from the curriculum as a whole—and especially not from the major.*

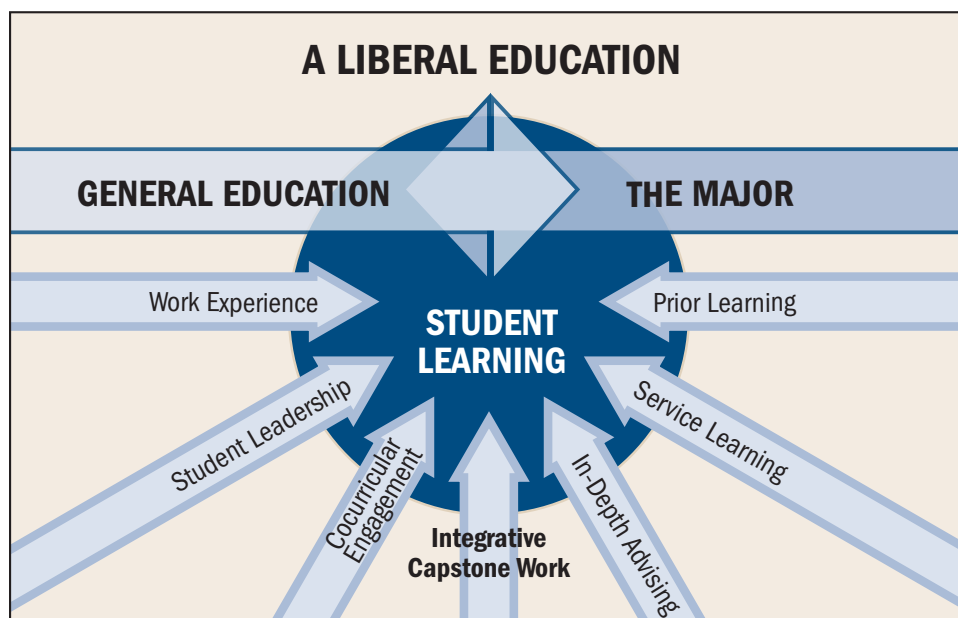
Following the 2009 discussions, participants in these closely related efforts concluded that a qualifications framework (similar in some ways to those guiding higher education in Australia and Europe) could provide the guidance necessary to ensure quality—in curricula, in the student experience, and in the credentials used to encourage and signify learning. As a result, Lumina Foundation commissioned the Degree Qualifications Profile (DQP), a baseline set of reference points published in beta form in 2011 to indicate what students should know and be able to do, regardless of their field of study, to merit the award of associate's, bachelor's, and master's degrees. In October 2014, Lumina formally released the DQP, which is now informed by the experiences and recommendations of more than four hundred colleges and universities that have used the beta version.

Experienced educators using both the ELOs and the DQP have described them as complementary initiatives that raise the same question—what should twenty-first-century college education signify in terms of student learning?—but ask it in different ways. In essence, the ELOs prompt educators to ask, *What are the liberal learning objectives that are broadly requisite for effective degree programs—and that all students should be enabled to achieve?* The DQP prompts them to ask, *What specific proficiencies should degree recipients be able to demonstrate, and how should they demonstrate them? And what program-level practices will help graduates achieve these intended proficiencies?* However, while these tools share the view that clear standards for learning outcomes are essential, neither prescribes how these standards are to be achieved. Both recognize that students must be enabled to demonstrate their learning in different ways and that institutions will develop approaches consistent with their respective missions and the needs of their student bodies.

These complementary initiatives share further the understanding mentioned above: that while general education is critical to liberal learning and can offer a fulcrum for strengthening the curriculum as a whole, general education cannot bear the entire responsibility for the liberal education of students. In

order to be as effective as possible, general education must not stand isolated, as is often the case, from the curriculum as a whole—and especially not from the major. A twentieth-century curricular model in which the broad learning associated with general education is separate from the in-depth learning associated with the major must give way to one where the two are vitally congruent. General education can create a platform for accomplishing the proficiencies associated with a college degree, but unless study in a major calls on and extends the knowledge and skills that general education can instill, they may atrophy. And unless such knowledge and skills are reinforced outside the classroom, both deliberately and serendipitously, through cocurricular learning experiences, they may not take deep root. As figure 3 suggests, it takes a university—general education, major programs, the cocurriculum, student employment, leadership opportunities—to educate a free (in Latin, *liber*, the root of “liberal education”) student and citizen.

FIGURE 3. A Twenty-First-Century Liberal Education



### Favorable Conditions for Transformation

Accepting the important recognitions (1) that general education and study in the major must be aligned and (2) that an understanding of what it should mean to earn a degree must provide the context for any reform that takes place, *the most pragmatic, direct, and promising approach to genuine reform in higher education lies through general education, viewed as a matrix of interrelated proficiencies across all levels of learning, from the first to the final year.* This re-envisioning of general education must include specific elements, all of which are consistent with the core values of liberal education and with the ways in which accomplishment in higher education has now been more thoroughly and explicitly defined:

- *Whatever their institution, whatever their discipline, whatever their stage of progress, all students deserve access to clear, easily understood, purposeful pathways offering carefully ratcheted levels of increasing challenge, from cornerstones to capstone. Students who understand what they are expected to learn and why they are expected to learn it learn more effectively.*

- *Students must have the opportunity to learn through active pedagogies that offer frequent opportunities to demonstrate and strengthen the proficiencies they are developing. Such pedagogies—which emphasize high-impact practices and authentic Signature Work—may develop within disciplines, but the most vital will be those that are transferable across disciplines, departments, institutions, and systems.*
- *Students must be enabled to appreciate how their study in the sciences, arts, humanities, and social sciences will endow them with transferable and adaptable skills, with awareness of their culture and of other cultures, and with acumen essential to further learning.*
- *Students must find assurance that the completion of a degree will signify in objectively measurable ways their readiness to exercise and further develop their proficiencies. They must also be confident that the work they are doing will prove portable if it becomes necessary for them to move from one institution to another—or from one degree level to the next.*
- *Students must be enabled to understand how their general education, in concert with their work in a major, will allow them to develop capacities essential to career advancement, to personal development, to active citizenship, and to global engagement.*
- *Students now challenged by issues arising from financial disadvantages, limited mobility, or other constraints must be afforded inviting and accessible opportunities.*

Given thinkers who have long made a persuasive case for liberal education, allies among employers, the emergence of a broad consensus on degree-level outcomes, and increasing agreement as to what must now be done, higher education is poised as never before for the transformation of general education and the revitalization of degree programs throughout the nation. What, then, is required? A pathway through the implementation process—and a commitment to following the pathway maps and markers that offer reliable guidance.



## PART 3

# The Implementation

In order for student learning to improve and higher education to serve more fully the public good, more is needed than an awareness of the problem and a determination to advocate for a practical and positive solution. We must have a map that describes the point of departure, that is, the present situation described in part 1. We must be able to identify our destination, that is, the needed reform outlined in part 2. And we must have markers that enable us to negotiate the distance in between, that is, elements of an understanding as to how implementation may be achieved. That is the subject of this part.

As we have seen, many of the cartographic essentials are now in place. We have documented the dilemma: far too many students graduate from college underprepared, undereducated, and overextended. We have reviewed the most efficient, pragmatic, and satisfying solution: rigorous, authentic liberal education for all college students that aligns coherent and compelling general education with learning in major programs. We have settled on the most promising approach to the solution: the reform of general education. And we have acknowledged both important concerns about present performance and promising signs of progress already well under way.

However well informed, such awareness must not become an end in itself. Thus AAC&U's "Design Principles and Guidelines for General Education" (*General Education Maps and Markers: Designing Meaningful Pathways to Student Achievement*, AAC&U 2015a) sets forth explicit prompts for the needed reforms. Well-crafted questions ask whether institutions and programs enable students to understand clearly the learning outcomes they are pursuing, whether they engage students as "active participants" in the creation of their respective educational plans, whether their curriculum provides opportunities for integrative learning and problem-based inquiry for all students, whether their degree plans "meet students where they are" and provide necessary support, and whether their curriculum as a whole invites and responds to assessment. In short, the critical principles of this important document—"proficiency," "agency and self-direction," "integrative learning and problem-based inquiry," "equity," and "transparency and assessment"—describe criteria for effective pathways (AAC&U 2015a, 13–22).

*If the intent is to change for the better the way students experience undergraduate education, we are unlikely to find a more effective lever than general education.*

Such markers serve several purposes. They provide a sense of direction, they allow hikers to find a reasonably direct route, they provide a means of measuring progress, and they offer reassurance that the trail has not been lost in the underbrush. Markers for higher education reform such as the questions posed in *General Education Maps and Markers* are meant to serve a purpose similar to that of blazes on the Appalachian Trail: they show that there is a route and enable observers to understand and follow it. In short, an effective map with useful markers enables different users, whether classroom teachers, academic administrators, or policy leaders at regional and national levels, to focus on what is most important while also providing detailed information that may prove essential in some circumstances. The following markers offer such guidance to those who are joining the nationwide movement on general education reform.

### Clarifying the Intended Benefits

It is not difficult to argue the case for making available to all college students the benefits of a curricular framework that is durable, inviting, cost-effective, and of both tangible and intangible value. It is even less

difficult to argue that such a framework must serve especially those students who have been constrained by circumstances or who are overcoming the inadequacies of their high schools. But advocates for general education reform must make the case to the nation in terms of broader benefits as well.

Implicit in the reform project is the recognition that pathways for general education that focus on proficiencies will benefit not only students, but society as well. Better-educated graduates are likely to contribute more to the economy and exercise their civic responsibility in more meaningful ways.

*General education reform thus supports a vision that transcends individual and even societal benefits to create the possibility of an American resurgence arising from shared commitment to equity and the public interest.* Higher education reformers must articulate that vision clearly, publish it widely, and promote it assiduously. They must be ready to challenge misinterpretations or mischaracterizations with powerful and accurate rejoinders, and they must understand that different constituencies may require different explanations.

### **Following a Route**

Just as in cartography even the most preliminary map sketches require awareness of different levels of detail, curricular design requires consideration of multiple issues. Nonetheless, it is possible to separate distinct but closely related design priorities for the purpose of addressing them in stages.

The route toward general education reform begins not only with acknowledgment of a dilemma (as detailed above), but also with celebration of a considerable legacy: a widely shared confidence in the value of liberal education and an increasing understanding that improving general education offers the most direct route to systemically improving higher education.

As this document has asserted, general education reform is key for several signal reasons. First, if the intent is to change for the better the way students experience undergraduate education, we are unlikely to find a more effective lever than general education, the one educational experience most students share. Second, while general education cannot be assigned full responsibility for ensuring students' access to all benefits of a liberal education, it represents the threshold on which most students encounter the promise of liberal education for the first time. Third, improving general education should encourage the development of reforms focused on new modes of delivery, promote fresh support for faculty engagement with improved pedagogy, and inspire the development of innovative cornerstone or capstone courses. In fact, general education offers a structure for organizing and pursuing such diverse initiatives. Finally, broad frameworks for general education reform, unlike a fully detailed curriculum, invite adoption and adaptation to particular circumstances.

Hence a marker encountered en route should point in two directions: backward to the “base camp” that is our long tradition of affirming the values of liberal education and forward to our awareness of the significant advances that might be accomplished in making more effective liberal education accessible to many more—and to much more diverse groups of—students. As we continue the journey from the base camp to our destination, we observe the marker signaling that the extent and pace of progress to date are insufficient in the face of accelerating change in society and in higher education. It prompts us to pick up the pace.

### **Identifying Allies**

The map we are following is more complex than the one that might have been drawn even a decade ago. Although traditional institutions of higher education still constitute a familiar landscape, the increasing diversity of the student body, of education providers, of means of delivery, and of

methods of evaluation challenge assumptions that were once reliable. Now, genuine reform in general education, while continuing to consider full-time students at four-year colleges, must look also to those who move among different institutions, who are likely to seek a greater part of their education through online instruction, and who may be “workers who study” rather than “students who work.” Most especially, such reform must “create equitable access to excellence for all students, with a special focus on underserved students” (Schneider 2015, vii). Markers leading to general education reform must help all allies in this effort—from those teaching in an Ivy League university in New England to the administrators of a community college in the Southwest to faculty in an online institution who reach students throughout the nation—to draw inspiration from one another, to work in ways that promote consensus and cooperation, and to document accomplishment through venues that invite even broader participation.

But allies lie not only at the institutional level. We have seen above the support we have from discerning employers who want to hire the liberally educated, we have glanced at the hefty trove of eloquent advocacy for the liberal arts, and we have acknowledged the foundational efforts (the ELOs, the VALUE rubrics, the DQP) that make this effort possible. Now, additional markers are pointing to an increasing willingness within disciplines to reexamine their assumptions, to articulate more clearly their learning priorities, and to focus more closely on student learning outcomes. A compelling example may be found in the American Historical Association’s (AHA’s) work to define a core curriculum for that discipline. In a December 2012 article published by *Inside Higher Ed*, Professor Anne Hyde of Colorado College, a member of the AHA teaching division, explains the initiative as an effort to describe the skills, knowledge, and habits of mind students develop in history courses and degree programs:

History students need to be able to find and sift information, read with a critical eye, assess evidence from the past, write with precision, and . . . tell stories that analyze and narrate the past effectively. We can also agree about a variety of ways students can demonstrate such skills.

The AHA’s effort is faculty driven, focuses on specific ways in which students might demonstrate their competence, provides a reference point to stimulate conversations, and is meant to be revised, taken apart, added to, or winnowed down to reflect the distinct character of each institution and its students. Many of these premises correspond closely to those proposed by GEMs.

Even disciplines beyond those traditionally identified as the liberal arts are showing a commendable willingness to revitalize their engagement with and contributions to the values of liberal education. In his foreword to *Shaping the Future of Business Education* (2013), Eric Cornuel, director general and chief executive officer of the European Foundation for Management Development, argues that the way forward is to help students to master both liberal arts and professional ways of thinking and foundations of knowledge. Strong programs in business must “deliver excellence in teaching and learning . . . by leavening the professional qualifications required for doing business in a tough global economy with the type of liberal education that produces well-rounded graduates” (ix). Similarly, in its *2013–14 Criteria for Accrediting Engineering Programs*, ABET includes among the learning outcomes it expects “an ability to function on multidisciplinary teams,” “an understanding of professional and ethical responsibility,” “an ability to communicate effectively,” “the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context,” and “a knowledge of contemporary issues” (2012, 3).

*Disciplines beyond those traditionally identified as the liberal arts are showing a commendable willingness to revitalize their engagement with and contributions to the values of liberal education.*

## Avoiding Hazards

As we pursue curricular change, we will encounter irregularities in the terrain, potential hazards just below the surface, and concerns related to the climate—in short, conspicuous and inconspicuous factors that must be considered. Among the most evident impediments to change are limitations in resources. We have considered earlier the broader implications of reductions in resources for higher education. On the institutional level, while fiscal challenges can prompt innovative thinking in some circumstances, in others they may reinforce an inclination to protect turf and avoid risk. A department's commitment to general education may consist of a balance of uninspiring but remunerative courses, and the faculty may see such courses as a burden to be borne, but in an environment of economic unease, the status quo may seem preferable to any reform with an element of risk. The markers guiding an effective proposal for change must recognize such impediments while enabling the pilot or pathfinder to circumvent them with sensitivity to concerns about resources and disciplinary loyalties. And even if concerns for security do not arise, a further hazard may be found in the inclination of some faculty members to focus solely on their disciplines and to greet with skepticism if not outright resistance any perceived intrusion on their traditional curricular prerogatives.

Fortunately, enlightened administrators understand that there are cost-effective ways to implement approaches to reform that offer assurance to faculty members and departments and signal respect for their disciplines. And there are many faculty members who have come to understand that their first responsibility is to their students and that they can best meet this responsibility by collaborating with colleagues in other disciplines and by becoming aware of best practices. The increasingly familiar phrase “from *my course* to *our curriculum*” has considerable merit as a descriptor for the rethinking required if faculty members are to exercise their rightful influence in reshaping general education.

### QUESTIONS A STUDENT SHOULD ASK ABOUT THE HIGHER EDUCATION CURRICULUM

- Are the college's learning outcomes clearly stated in terms I can understand and appreciate?
- Are the content and structure of the college's general education program clearly directed toward these outcomes?
- Will I be guided toward curricular choices that make sense in terms of both my broad educational aspirations and my interest in a discipline?
- Will I be able to document my progress through general education and the major toward the college's learning outcomes?
- Will the courses I take and the other educational experiences I have offer opportunities for active, collaborative learning? Will I accomplish Signature Work that addresses issues important to me—and enables me to demonstrate proficiency in solving complex and consequential problems?
- Will I be able to document and explain the proficiencies I have developed in language that is widely understood?

Still, those most directly engaged in reform should anticipate occasional resistance and prepare to address faculty concerns about autonomy and academic freedom. They can do so by directing attention to the proper exercise of these virtues: the promotion, assessment, and assurance of learning.

### Providing Checkpoints

Just as navigational beacons enable pilots to calculate distance remaining relative to fuel levels and headwinds or tailwinds, so, too, should markers draw attention to how different elements within the program are related. Even at preliminary stages, the design should indicate in a general sense the resources and processes required to realize reform goals.

The hypothetical student experiences described early in this publication illustrate the fundamental structural elements of a revised general education program based on the GEMs principles—elements that also are set forward in brief on page 23 of this document, and in greater detail in *General Education Maps and Markers* (AAC&U 2015a). Summarized earlier, the questions quoted in the box to the left offer a concise approach to evaluating whether these elements are present.

But a flight plan or hiker's route must include more than a list of discrete elements. It must prompt examination of relationships among these elements in order to identify those likely to prove mutually reinforcing and to detect any that may under some circumstances prove inconsistent or even contradictory. Europe's remarkable Bologna Process offers a useful caution in this regard. The priority of that process on increasing student mobility among the nations of Europe has been undermined by the competing goal of redefining the baccalaureate as a hurried three-year curriculum.

*Clear curricular pathways leading from cornerstone to capstone must offer increasing, carefully ratcheted levels of challenge.*

Fortunately, the principles and guidelines described in *General Education Maps and Markers* (AAC&U 2015a) appear closely related to one another in theory, and experience suggests that they are likely to reinforce one another in practice. In order to be inviting and compelling, clear curricular pathways leading from cornerstone to capstone must offer increasing, carefully ratcheted levels of challenge. Otherwise, there is the risk that general education, following a superficial once-over, will continue to offer “merely requirements to be fulfilled and checked off a list, one course in lonely isolation at a time” (Maxfield 2010, 8–9). If developing clear and effective curricular pathways is a priority, we must ask *how* these pathways invite students to participate in and demonstrate their learning at increasing levels of challenge. The answer lies in high-impact pedagogies directed, through authentic pursuit of Signature Work, toward helping students achieve DQP proficiencies that by their nature require demonstration outside the classroom.

As has been the case with the Bologna Process, there are potential points of friction between some priorities, to be sure. Because the ability to engage students deeply in their learning often depends in part on continuity in their learning experiences, attempts to improve educational portability among institutions may in some cases require trade-offs. Further, the Signature Work mentioned throughout can be labor intensive, particularly if the institution is fully committed—as it should be—to helping all students learn more effectively. And it may prove difficult to sustain carefully ratcheted levels of challenge as students move from one institution to another and from one degree level to another. Awareness of such points need not and should not lead to the sacrifice of any priority. An awareness of relationships among elements will enable us to build on identified synergies and mitigate possible stress or friction.

## Encouraging Persistence

Markers offer reassurance when doubts regarding the route arise and can prompt a request for higher altitude if thunderheads form. Among the markers that may prove useful on the route to general education reform are those suggested in possible responses to the following questions:

*Won't the assertion that demonstrable educational outcomes should be more easily transferable (or “portable”) encourage students to pursue even more highly fragmented undergraduate careers and thus make less likely their deep engagement with their learning?*

Once the principles articulated in *General Education Maps and Markers* (AAC&U 2015a) become a widely recognized standard for general education, students will perceive a meaningful difference between institutions that are following this lead and those that are standing by traditional, demonstrably less effective approaches. They may then be more likely to focus their work within a single institution or to pursue deep engagement across all institutions in which they enroll. *The extent to which students are deeply engaged in their learning is one marker on the path to successful general education reform.*

*Won't greater coherence and rigor advantage those who are already advantaged and thus create further inequity?*

This question represents a principle by which every stage of the proposed reform must be measured. Far from being discriminatory or inequitable, the reforms proposed here are meant not only to level the playing field, but to clear the way for students who at present find their paths strewn with obstacles. Equity is one of the fundamental principles of the GEMs framework. *The extent to which the reforms create equitable outcomes for students is another marker on the path to successful general education reform.*

*Won't assessing authentic engagement in Signature Work by all students prove taxing to the faculty members who must evaluate this work?*

The general education reforms proposed here presuppose an engaged and collaborative approach to Signature Work. These assignments should offer both mentor and student an opportunity for discovery and learning. Second, they should invite a creative, collaborative, and cumulative approach to assessment. As students develop portfolios that demonstrate their active and sometimes autonomous learning, faculty members can meaningfully assess the work represented in these portfolios through approaches that are rigorous without being labor intensive. Student-to-student evaluation, collaborative evaluation by faculty across disciplines, and technologically supported evaluation are but three possible approaches to assessment. In addition to relieving faculty members of tedious one-on-one “grading,” such approaches promise to extend as well as evaluate learning. *The extent to which assessment is predicated on assessments like these constitutes a third marker for evaluating reform efforts.*

*How can carefully ratcheted levels of challenge guide students moving among institutions or from one degree level to another?*

The approach to general education reform described here does not suggest a detailed curricular lockstep. To the contrary, it invites multiple paths appropriate to diverse fields and different institutional settings. Thus different general education programs in different institutions will express through their differentiated (but clearly presented) curricula their singular approaches to ratcheted learning—modeled through general education, but sustained in the major as well. At the same time, effective general education invites students to engage in cross-disciplinary inquiry at the associate's level and at the bachelor's level, through both significant projects in their own fields and advanced cross-disciplinary inquiry. *The extent to which general education pathways offer students such opportunities for ratcheted learning is another marker for measuring its effectiveness.*

## Setting Up an Approach

Nearing the destination, prior to contacting the control tower for instructions as to final approach, the pilot will consult charts to become familiar with the options. Similarly, the hiker will understand the importance of paying careful attention to landmarks even in the final miles. Markers offer reminders of assumptions worth keeping in mind once one is well down the flight plan or trail.

Having done everything possible to create the likelihood of success, GEMs must proceed with confidence that a curricular framework developed through a broad consultative process will win the approval of the academy as a practical, politic, and promising paradigm—not a “standardized” curriculum at all, but a principled and contemporary model adaptable within the rich diversity of US

higher education. (A solid platform for advancing such an approach already exists, of course, in the ELOs and DQP described above.)

There must also be the assumption that in bringing the full advantages of effective liberal education to many more students, higher education must offer curricular paths that honor students' collaboration in their own educations.

Finally, a transformed general education model must be guided by a vision wherein institutionally created, demonstrably effective programs become the rule rather than the exception. Given these premises, the following characteristics of a transformed general education model are likely to prove instrumental:

*The broad pedagogical interests that lie behind general education reform—that is, a priority on critical and creative thinking—must inform the commitment to cost-effectiveness.*

- The model must convey a conspicuous, compelling focus on student learning in terms that neither patronize experienced academics nor appear obscure to those not within academic institutions. That focus must make evident that deep engagement of faculty members is necessary to both the development of the framework and its elucidation.
- The model must emphasize equity. In their February 2014 monograph for the Institute for Research on Higher Education at the University of Pennsylvania, Joni E. Finney, Laura W. Perna, and Patrick M. Callan urge the states to pay closer attention to the increasing gap confronting society in terms of different groups of students' access to and attainment in higher education. As the authors of that paper argue, "No state can successfully meet [its] higher education challenges without creating a level playing field for low-income, minority, and first-generation college students" (1–2). The same goes for a general education framework qualified to serve as the basis of a pilot worth bringing to scale.
- The model must attend to cost-effectiveness. However attractive it might otherwise be, any reform effort that threatens to increase instructional costs would have little opportunity for success at many institutions, even as a pilot. But this cost-effectiveness must be achieved creatively, in ways consistent with standards valued by faculty. For instance, the reform effort must not achieve cost-effectiveness through further retrenchment in tenured and tenure-track faculty positions, nor should it require an increase in faculty workload. In short, the broad pedagogical interests that lie behind general education reform—that is, a priority on critical and creative thinking—must inform the commitment to cost-effectiveness.
- The model must reference clearly any expectations (of federal and state agencies, of regional accrediting associations, and of specialized accrediting associations) that are congruent with it. Where possible, the recognition of shared expectations may enable carefully framed cooperative endeavors. At the same time, general education reform efforts must identify external expectations that may distract from or impede the clear focus on demonstrated student learning (e.g., the expectation that the credit hour be reaffirmed as the singular measure of learning accomplishment).
- Finally, the model must make optimal and creative use of digital innovations both to support students as they practice needed proficiencies and to enable faculty to reallocate time from content delivery to more searching forms of inquiry, analysis, evidence-based reasoning, reflection on values, and collaborative problem solving. Students learn best when working toward such ends in collaboration with accomplished faculty members.

## Imagining Arrival

The final markers on the way to effective general education reform are those that signal arrival—that is, the salient characteristics of transformed general education pathways. The case built above, element by element, offers the opportunity to envision general education reform as a forceful, dynamic, and generative catalyst for profound educational improvement. The vision of general education reform proposed in this publication is not intended to limit or direct the rich discussions that are under way, but instead to give some purchase as we continue the challenging project of remapping our educational pathways. One foothold appears in the imagined case studies with which this paper begins. Another appears in the following description, meant to enable consideration of why the project of general education reform should prove successful in the near term and what success might look like five years from now.

*By significantly improving the effectiveness of general education, higher education in the United States will become more successful in addressing its principal obligation: offering cost-effective, highly flexible, and, above all, inviting and effective opportunities for student learning. Students will learn and be able to do more, and they will be able to apply more consistently and constructively what they know and can do. They will therefore be far more likely to persist in the pursuit and completion of meaningful degrees. Employers will recruit graduates who are better prepared not simply for entry into the workforce, but also for advancement in their careers. Democracy will benefit from a new generation of educated citizens who are both prepared and motivated to help create solutions to the many problems we face both at home and abroad.*

A generation ago, in *Higher Education and the American Resurgence*, Frank Newman called for a “period of purposeful renewal” (1985, xv). That renewal is needed even more today. While reasserting the importance of liberal education, Newman proposed that the purpose of liberal education be defined more broadly and more urgently. Liberal education, he said, should continue to provide “a broad base of knowledge and the requisite intellectual skills” (xv). But liberal education should also enable students to develop “an entrepreneurial spirit and a sense of civic responsibility” (xv). The pathways to liberal learning through more effective general education described here will lead not only to credentials for individuals and to a well-educated workforce, but also to greater opportunity for groups underrepresented and underserved in higher education and, ultimately, to a society that understands and pursues the obligations of national and global citizenship.

In addition to the positive outcomes outlined above, the transformation of general education has an important ancillary value: the greater engagement of students with their learning. Essential means to these ends include, again, a mapping of DQP proficiencies across learning experiences and the development of pathways for “a holistic, cornerstone-to-capstone focus on high-impact practices, inquiry- and problem-centered projects, and increasing levels of challenge” (AAC&U 2013).

## CONCLUSION

# The Sources of Success

Higher education is poised to succeed in transforming US undergraduate education through general education reform, for three reasons. First, such reform will offer a direct, pragmatic, and clear path from the present state of higher education, which has prompted a broad outpouring of concern, to a measurably improved system. Second, general education reform as described here embodies a sensitive appreciation for the present culture of higher education without allowing the inhibitions within that culture to forestall necessary change. Finally, this vision of general education reform is both highly focused on what the individual student deserves in terms of a high-quality education, and bracingly inclusive, aware of and directed to the economic and social needs of the nation.

General education programs created via the well-planned and energetically followed routes described above will be intellectually coherent and practically useful. Far from arcane expressions of abstract principle, these reformed programs will invite application as standards for comparison, guides to reform, and measures of success. The curricula that emerge consistent with this vision will enable students to graduate not just confident in their proficiencies, but proud of having created significant work—research, creative performances, analyses—all captured in electronic portfolios that demonstrate how well they can apply their learning to complex challenges.

Because the principles described in *General Education Maps and Markers* (AAC&U 2015a) suggest a model of excellence that can be adapted to distinct institutional contexts, their influence could—and should—become pervasive. After all, general education itself followed a similar evolution, beginning as a series of institutional innovations before becoming recognized as a competitive advantage and finally being expected by the public, by educators, and by accreditors. The growing acceptance of AAC&U's Essential Learning Outcomes and of the Degree Qualifications Profile is following a similar trajectory.

But there is potential in this vision for an even greater impact. The demand for discernable, measureable change in higher education has become more pressing. The strategic value of general education as the most accessible and transformative means of change is more conspicuous than ever before. And the readiness of important players for just such change—from the academy itself to public opinion leaders—seems increasingly apparent.

An optimistic but not unrealistic projection might therefore envision by 2020 true transformation of general education with deep penetration into all sectors, including community colleges, private liberal arts colleges, large state universities, and prestigious research institutions. As a tangible indicator of a commitment to best practice, a general education program built on the GEMs principles could represent a competitive advantage, a prompt for discernment by students making college choices, and a stimulus for innovation within institutions. A student contemplating college might well ask: *Why should I even consider an institution that does not offer a general education curriculum built on GEMs principles?* And on the real and virtual campuses of institutions that do offer such curricula, students like Juan and Pat will thrive. Their success in higher education, no longer extraordinary, will have become a firm expectation for all.

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## APPENDIX

# Liberal Education and America's Promise: AAC&U's Framework for Quality Learning and Inclusive Excellence

AAC&U's initiative Liberal Education and America's Promise: Excellence for Everyone as a Nation Goes to College (LEAP) was launched in 2005 and asks core questions about the learning students need most from college; listens and responds as employers make the case that today's workers need to be better prepared for a global economy; and focuses on education for knowledgeable and responsible citizenship, as well as careers.

The **LEAP Vision** includes a commitment to

- **Essential Learning Outcomes.** These are the learning outcomes essential for success in life and work in the twenty-first century (see page 37).
- **High-Impact Educational Practices (HIPs).** These are evidence-based practices that engage and challenge students. They include first-year seminars, intensive writing, collaborative projects, internships, learning communities, service learning, undergraduate research, capstone courses, and diversity/global learning courses and programs.
- **VALUE Assessments.** Using students' own work and faculty-validated VALUE rubrics, colleges should probe whether each student has developed Essential Learning Outcomes, and can apply his or her learning to complex problems and real-world challenges.
- **Inclusive Excellence.** All students at every kind of institution should benefit from a deep, hands-on, and practical liberal education that prepares them for success in work, life, and citizenship.

### LEAP Strategies for Change

Hundreds of institutions and a growing roster of state systems now are using the LEAP framework of Essential Learning Outcomes, high-impact educational practices, VALUE assessments, and inclusive excellence.

The next phase of work in the LEAP initiative is intended to help institutions take their foundational work on liberal education and inclusive excellence to the next level. The long-term goal is to ensure that every one of our students reaps the full benefit of an empowering liberal education, no matter what his or her background, intended major, or career and life aspirations. There are many pathways to students' achievement and demonstration of Essential Learning Outcomes. General education should help students chart their way forward and prepare to do their Signature Work. Each of our students deserves our help in finding the right pathway.

## The LEAP Principles of Excellence

The Principles of Excellence offer both challenging standards and flexible guidance so they can support high-quality learning and inclusive excellence at any college, university, or community college. These principles can be used to guide change and to influence practice across the disciplines as well as in general education programs. They are highly consistent with the Degree Qualifications Profile and the GEMs Principles and Guidelines. AAC&U uses the terms “Essential Learning Outcomes” and “proficiencies” interchangeably.



### ★ Principle One

#### *Aim High—and Make Excellence Inclusive*

Make the Essential Learning Outcomes a Framework for the Entire Educational Experience, Connecting School, College, Work, and Life

### ★ Principle Two

#### *Give Students a Compass*

Focus Each Student’s Plan of Study on Achieving the Essential Learning Outcomes—and Assess Progress

### ★ Principle Three

#### *Teach the Arts of Inquiry and Innovation*

Immerse All Students in Analysis, Discovery, Problem Solving, and Communication, Beginning in School and Advancing in College

### ★ Principle Four

#### *Engage the Big Questions*

Teach through the Curriculum to Far-Reaching Issues—Contemporary and Enduring—in Science and Society, Cultures and Values, Global Interdependence, the Changing Economy, and Human Dignity and Freedom

### ★ Principle Five

#### *Connect Knowledge with Choices and Action*

Prepare Students for Citizenship and Work through Engaged and Guided Learning on “Real-World” Problems

### ★ Principle Six

#### *Foster Civic, Intercultural, and Ethical Learning*

Emphasize Personal and Social Responsibility, in Every Field of Study

### ★ Principle Seven

#### *Assess Students’ Ability to Apply Learning to Complex Problems*

Use Assessment to Deepen Learning and to Establish a Culture of Shared Purpose and Continuous Improvement

Note: Adapted from *College Learning for the New Global Century* (National Leadership Council for Liberal Education and America’s Promise 2007).

## The LEAP Essential Learning Outcomes

Beginning in school, and continuing at successively higher levels across their college studies, students can prepare for both responsible citizenship and a global economy by achieving the Essential Learning Outcomes (ELOs).



### ★ Knowledge of Human Cultures and the Physical and Natural World

- Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

***Focused by engagement with big questions, both contemporary and enduring***

### ★ Intellectual and Practical Skills, including

- Inquiry and analysis
- Critical and creative thinking
- Written and oral communication
- Quantitative literacy
- Information literacy
- Teamwork and problem solving

***Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance***

### ★ Personal and Social Responsibility, including

- Civic knowledge and engagement—local and global
- Intercultural knowledge and competence
- Ethical reasoning and action
- Foundations and skills for lifelong learning

***Anchored through active involvement with diverse communities and real-world challenges***

### ★ Integrative and Applied Learning, including

- Synthesis and advanced accomplishment across general and specialized studies

***Demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems***

Note: This listing was developed through a multiyear dialogue with employers and with hundreds of colleges and universities about needed goals for student learning; analysis of a long series of recommendations and reports from the business community; and analysis of the accreditation requirements for engineering, business, nursing, and teacher education. The findings are documented in previous publications of the Association of American Colleges and Universities: *College Learning for the New Global Century* (National Leadership Council for Liberal Education and America's Promise 2007) and *The LEAP Vision for Learning* (AAC&U 2011). For more information, see [www.aacu.org/leap](http://www.aacu.org/leap).



## About the Author

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**General Education Maps and Markers (GEMs)** is a new and far-reaching initiative designed to significantly improve the quality of undergraduate education, increase student success rates, and chart a new course for general education curriculum design that is aligned with twenty-first-century goals for learning. GEMs—supported with an initial grant from the Bill & Melinda Gates Foundation—draws upon AAC&U’s long-standing work in the area of curricular reform in order to develop an adaptive and proficiency-based framework for general education. The initiative foregrounds problem-centered inquiry as the touchstone for quality in twenty-first-century undergraduate learning. Through the GEMs initiative, AAC&U seeks to ensure that all students, and particularly those from groups that have been traditionally underserved by higher education, are engaged in deep, inquiry-based learning and have multiple opportunities to apply their knowledge, skills, and ethical responsibilities to complex problems and questions.



## About AAC&U

The Association of American Colleges and Universities (AAC&U) is the leading national association concerned with the quality, vitality, and public standing of undergraduate liberal education. Its members are committed to extending the advantages of a liberal education to all students, regardless of academic specialization or intended career. Founded in 1915, AAC&U now comprises more than 1,300 member institutions—including accredited public and private colleges, community colleges, research universities, and comprehensive universities of every type and size. AAC&U functions as a catalyst and facilitator, forging links among presidents, administrators, and faculty members who are engaged in institutional and curricular planning. Its mission is to reinforce the collective commitment to liberal education and inclusive excellence at both the national and local levels, and to help individual institutions keep the quality of student learning at the core of their work as they evolve to meet new economic and social challenges.

Information about AAC&U membership, programs, and publications can be found at [www.aacu.org](http://www.aacu.org).



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