In Search of Curricular Coherence

MADELEINE F. GREEN

Table of Contents

Executive Summary

The Faculty Planning and Curricular Coherence Initiative

In fall 2013 The Teagle Foundation issued an RFP inviting selected institutions and organizations to apply for grants that addressed the following question: "How can faculty work together to create a more coherent and intentional curriculum whose goals, pathways, and outcomes are clear to students and other constituencies with a stake in the future of higher education?" The grant initiative sought to "support campus initiatives that delve deep into the structure of the curriculum and make transparent to students what they can expect to learn and how the curriculum's architecture delivers this learning."

A total of 15 implementation grants were funded under the Faculty Planning and Curricular Coherence initiative between May 2014 and May 2018. This essay is based on an evaluation of four of the early grants in this initiative, involving 12 institutions: Oberlin College, College of Wooster, Ohio Wesleyan University, Kenyon College, Denison University and Allegheny College; Virginia Wesleyan University, Davis & Elkins College, Shenandoah University, and Eckerd College; San Francisco State University; and Pomona College, Claremont McKenna College, Harvey Mudd College, Pitzer College, and Scripps College (also known as The Claremont Colleges). The author reviewed proposals, annual project reports and related documentation; conducted annual phone calls with representatives of each participating campus; attended the April 2017 convening of the institutions participating in this initiative; and visited selected campuses.

A Problem of Long Standing

The issue of the fragmented and incoherent curriculum is not a new one. It first received national attention in 1983, with the report of the National Commission on Educational Excellence, *A Nation at Risk*. Two years later, the Association of American Colleges (now the Association of American Colleges and Universities [AAC&U]) followed with *Integrity in the College Curriculum*, which focused on the decline of the undergraduate degree, and pointed specifically to the incoherence of the curriculum. The discussion continues today. Former Harvard president Derek Bok devoted a chapter in *Higher Education in America* to the curriculum, underscoring the haphazard structure of many majors and the architecture of the degree. The solution, he posited, lies in an evidence-based approach to curriculum reform led by faculty. Scholar Robert Zemsky has been a persistent critic of the unfettered growth of the curriculum, both in terms of the educational confusion it creates for students and as a driver of costs. Recent works such as *Checklist for Change* and *Making Sense of the College Curriculum* elaborate on the nature of the problem and call for a collective faculty ownership and leadership in devising solutions.

Institutions have different implicit interpretations of curricular coherence and varied approaches to achieving it. Some see the faculty role as paramount; others view the students' efforts to integrate their learning as key, with faculty playing a supporting role. The strategies that institutions undertook in their projects reflected their views on the locus of responsibility for achieving curricular coherence. The principal strategies were as follows; the essay provides institutional examples in the text and in an appendix:

I. Curriculum redesign (general education and the major)

II. Curriculum mapping

III. Identifying clusters of related courses around an issue or topic

IV. Using pedagogy, especially high-impact practices (HIPs), to drive greater coherence in the curriculum

V. Using advising to help students see connections within the curriculum and among various learning opportunities

LESSONS LEARNED

The lessons learned from the four projects are as follows:

RECOGNIZING THE PROBLEM AND AGREEING ON ITS CONTOURS ARE IMPORTANT UP-FRONT WORK.

Shared recognition of the existence of a problem and agreement on its nature constituted a crucial first step in the reform process, generally accomplished through faculty retreats, workshops, and abundant conversations.

ACADEMIC REFORM IS A LEARNING PROCESS FOR FACULTY.

All the institutions supported their change efforts with faculty development opportunities. Focusing on improvement led to a climate of inquiry and learning, which the institutions supported by providing opportunities for a scholarly approach to the issues in conversation with colleagues within the department, the institution and across partner institutions.

LEAD WITH A CARROT AND START WITH THE WILLING.

Most institutions chose to start their reform initiative by inviting willing faculty members to participate, expanding the group of participants as the effort progressed and successes became visible. Some institutions developed mini-grant programs to departments or groups of faculty to incentivize their participation.

IDENTIFY AND ADDRESS STRUCTURAL BARRIERS.

Some good ideas fail because of processes, policies, and decision-making structures that get in the way. Identifying these barriers and taking steps to address them were key to several institutions' ability to move forward with their initiatives.

CONSIDER SUSTAINABILITY EARLY ON.

Not every innovation turns out to be sustainable. Although not all obstacles can be anticipated, several participating institutions thought carefully upfront about what would happen after foundation funding expired and started planning early for the future.

COLLABORATION IS DIFFICULT WORK.

The participating institutions used various strategies to address the obstacles to collaboration, including creating a shared vision for the work, harnessing the energy of faculty champions, identifying skillful project leadership, bringing in external voices, and supporting institutional leaders.

MANY PATHS CAN LEAD TO THE SAME OUTCOME.

Institutions prize their differences, as do schools and departments within institutions. Project institutions took care to identify shared goals and desired outcomes but at the same time gave units and departments the freedom to create their own paths to achieving them.

CONTEXT MATTERS.

Change initiatives do not happen in a vacuum. Project institutions experienced leadership turnover, unexpected structural barriers, and budget and enrollment shortfalls, learning that few reform efforts proceed in a linear fashion.

IT IS LIKELY THAT REFORM EFFORTS WILL BE ADDITIVE IN TERMS OF HUMAN AND FINANCIAL RESOURCES, UNLESS THERE ARE SPECIFIC GROUND RULES.

It is much less contentious to add people (or add to existing workloads) and money to support new initiatives than to decide how the ledger will be balanced with subtractions. Some institutions were explicit about ground rules pertaining to growth or increasing costs, but overall, there was little evidence that many institutional efforts would be either cost-neutral or cost-reducing in the long run.

In Search of Curricular Coherence

A Problem of Long Standing

What are students really learning in college? Does the curriculum make sense to them? Can they articulate the intellectual skills they are acquiring through their undergraduate education? Are they seeking answers to important questions and discovering their passions in choosing their courses or are they simply checking the boxes required to earn a degree? How do they navigate the many curricular choices that the curriculum presents?

Many of the answers to these questions lie in the nature of the curriculum offered to students. To what extent has it been designed to enable students to see explicit connections among courses and to scaffold their learning? To what extent has the curriculum grown by accretion, with new courses, majors and minors balanced by few corresponding reductions in offerings? And to what extent do faculty consider themselves to be independent contractors rather than having collective ownership of the curriculum together with their faculty colleagues? Would a more efficient curriculum, with more limited choices and clearer pathways produce not only better learning but also cost savings or better allocation of resources?

These and similar questions have led a number of national bodies and scholars to doubt the effectiveness of the college curriculum. Critics describe the curriculum as fragmented and lacking coherence, its whole failing to be greater than the sum of its parts. The pieces do not fit together, they assert; it has little "discernable shape" (Zemsky, 2013, p. 102) and offers students a vast array of seemingly unrelated choices.

The incoherent curriculum lends itself to metaphorical descriptions. The curriculum has been likened to a jigsaw puzzle, where the overall picture guides how the pieces are assembled and individual pieces only have meaning when they are put together (Beane, 1995, p. 1). A patchwork quilt is literally pieced together (National Commission on Excellence in Education [NCEE], 1983, p. 15). Then there are the culinary metaphors. "[T]he curriculum became a vast smorgasbord of tempting offerings" (Zemsky, 2013, 83). This abundant buffet yields "a cafeteria–style curriculum in which the appetizers and desserts can easily be mistaken for the main courses" (NCEE, 1983, p. 15). The unfettered proliferation of courses in many institutions has allowed faculty to teach courses they want and give students maximum freedom to pick and choose from a large menu and select their major by "pick[ing] eight of the following…[which] might literally be over a hundred courses, all served up as equals" (Association of American Colleges, 1985, p. 1). The supermarket metaphor points to students as consumers, not just diners, "where students are shoppers and professors are merchants of learning" (AAC, 1985, p. 2).

The fragmentation of the curriculum is not a new issue. In 1983, the National Commission on Educational Excellence (NCEE) issued its landmark report, *A Nation at Risk*. Although the report focuses largely on K-12, it connects the success of students in higher education to their prior educational experiences, calling for a "coherent continuum of learning" instead of "an often incoherent, outdated patchwork quilt" (NCEE,1983, p. 15). Only two years later, the Association of American Colleges (now the Association of American Colleges and Universities [AAC&U]) followed up with *Integrity in the College Curriculum.* The report focused on the decline of the undergraduate degree (AAC, 1985, p. 1), and especially the incoherence of the curriculum. Among the contributing factors the report cites is the professionalization of the faculty, who are trained in graduate school to be researchers rather than teachers; whose loyalties lie with their departments rather than with the institution; and whose concerns focus on the major rather than the total undergraduate experience. In describing the evolution of the undergraduate degree over the nineteenth century, the report notes the following:

> Faculty control over the curriculum became lodged in departments that developed into adept protectors and advocates of their own interests, at the expense of institutional responsibility and curricular coherence (AAC, 1985, p. 4).

Another contributor to curricular incoherence cited in the AAC report is the "chronic paralysis" of curriculum committees, which serve as gatekeepers and approval or veto mechanisms for curricular initiatives that largely come from the departments. They rarely serve as agents of innovation. The report pays particular attention to majors, which "are not so much experiences in depth as they are bureaucratic conveniences" (AAC, 1985, p. 27), arguing for a curriculum in both arts and sciences and the professions that brings together an understanding of the modes of inquiry of the discipline, its analytic tools and the substance of the discipline, as well a "sequence that assumes advancing sophistication (AAC, 1985, p. 29). The solution, posits the report, lies with administrative leaders, who must be bold enough to prod and reward faculty for owning the problem and working together to solve it, and with professors, who must act on a newly found sense of collective ownership of the curriculum.

Fast forward to 2013. Former Harvard president Derek Bok's comprehensive study of U.S. higher education, *Higher Education in America,* takes up many of the same criticisms of the curriculum. He notes that the multiple goals for higher education have resulted in a proliferation of requirements and questions whether institutions are actually achieving these objectives:

> As a growing number of goals vie for space in a crowded curriculum, it is possible that some of the requirements agreed to by the faculty are uneasy compromises that threaten to produce the worst of both worlds—making enough demands on students' time to represent a burden but not enough to afford much chance of actually achieving the hoped for result (Bok, 2013, p. 170).

Bok also questions whether the major achieves the oft-stated goal of improving critical thinking, especially in the absence of a senior thesis or project, reinforcing the assertion of AAC in *Integrity of the College Curriculum* that "the major in most colleges is little more than a gathering of courses taken in the department, lacking structure or depth, as is often the case in the humanities, or emphasizing content to the neglect of the essential style of inquiry on which the content is based (AAC, 1985; as cited by Bok, 2013, p. 172). Electives and general education have their own problems. Bok notes that little is known about how students actually use electives: "Are students exploring genuine interests or are they simply taking easy courses…" (Bok, 2013, p. 172). General education suffers from serving as the "repository for all the purposes not normally fulfilled through majors or the electives" (Bok, 2013, p. 173). The most common form of general education, the distribution model, does not ensure that students will achieve the aims of general education posited by the faculty, who rarely put their assumptions to a test of what students are actually learning in relation to the many goals they have asserted. Bok is not alone in describing the curriculum as a political compromise that satisfies various interest groups and leaves faculty members free to teach classes they prefer.

Addressing the problems of the curriculum, posits Bok, requires collective thought and action by the faculty, a much more difficult undertaking than persuading them to try new teaching methods. Given the complexity of the task at hand, he suggests tackling pieces of it over an extended period of time. Evidence of learning should be a primary consideration—to what extent are students actually achieving stated goals? The major should be scrutinized not only by the school or department, but also by faculty members of different disciplines. Electives should be subject to the same evidence-based scrutiny of what students are actually taking and test the assumptions about what the faculty believes electives are designed to achieve.

Robert Zemsky, scholar and "persistent critic" of higher education, has focused on the ineffectiveness of the curriculum for many years (Zemsky, 2013, p. 17). In 1986 Zemsky and his colleague Susan Shaman at the Institute for Research on Higher Education at the University of Pennsylvania analyzed transcripts at 30 institutions to map how students were fulfilling institutional requirements and to validate the AAC's assertions about the lack of structure and coherence of the baccalaureate (Zemsky, 2013). The resulting publication, *Structure and Coherence: Measuring the Undergraduate Curriculum*, found ample evidence to buttress the assertions of *Integrity in the College Curriculum,* finding that the curriculum in the liberal arts lacked both breadth and depth "as measured by either structured or temporally focused coursework." (Zemsky, 1989, p. 36, as cited by Zemsky, 2013, p. 8). In 2010, convinced that the growth of the curriculum was the main driver of escalating college costs, Zemsky and Finney (2010) proposed that both student choice and faculty be constrained. Imposing this discipline would both improve graduation rates by providing students with clearer pathways. It would also contain costs by diminishing

the need to add faculty to teach an increasing number of courses.

The twin themes of constraining costs and improving learning and retention are central to *Checklist for Change* (2013), in which Zemsky outlines in detail the forces driving the unfettered growth of the curriculum, describes several institutional approaches to addressing the problem, and offers suggestions for reform. He, too, lays the problem of the incoherent curriculum at the feet of the faculty, citing their fierce defense of their freedom to teach what they wish in "my courses" to "my students" (Zemsky, 2013, p. 25) and their lack of collective responsibility for the curriculum. He calls for a stronger faculty voice, greater collaboration, greater commitment by faculty to lead reform efforts, and making the department, rather than the individual faculty member, the unit of production. Additionally, the curriculum must be the product of deliberate design rather than the sum of accretions over time, with a clear statement of purpose, its courses intentionally linked, and desired student learning outcomes deliberately used to guide the curricular design.

Almost forty years after the publication of *A Nation at Risk*, Zemsky, Wegner and Duffield (2018) pondered the riddle of why the problem of the incoherent curriculum is still with us in spite of all of the calls for reform that followed.[1] To answer the question, the authors assembled a team to meet with 180 faculty members from eleven diverse institutions; the goal was to understand how faculty think about their professions, their students, and curricular change. What emerges is a picture of professors who are highly committed to their students, pulled in many directions, and who place tremendous value on autonomy to teach and research as they wish. Among the barriers to curricular change are the cumbersome decision-making processes that often do not result in decisions being made, entrenched faculty interests, a fixation on process that undermines a focus on substance, lack of time to devote to collective efforts to design curriculum, unwillingness to take risks, and the inclination to tinker rather than face a difficult and protracted battle. The real change that has occurred, posit the authors, is pedagogical innovation, which faculty members can choose to undertake or not, and which allows them to proceed independently to improve their teaching and student learning. Pedagogical reform is less risky and less threatening than curricular redesign, since the latter requires collective thinking and action and subtraction rather than addition to the curriculum.

> "
> *The curriculum must be the product of deliberate design rather than the sum of accretions over time, with a clear statement of purpose, its courses intentionally linked, and desired student learning outcomes deliberately used to guide the curricular design.*

---

[1] This book project was funded by the Teagle Foundation under the "Faculty Planning and Curricular Coherence" initiative described in the next section. As the authors note, the original intent of the project was to document successful curricular reform efforts, but the absence of good examples took the project team in a different direction.

The Teagle Foundation Initiative: Faculty Planning & Curricular Coherence

With these issues in mind, The Teagle Foundation issued an RFP in fall 2013 inviting selected institutions and organizations to apply for grants that addressed the following question: "How can faculty work together to create a more coherent and intentional curriculum whose goals, pathways, and outcomes are clear to students and other constituencies with a stake in the future of higher education?" The grant initiative sought to "support campus initiatives that delve deep into the structure of the curriculum and make transparent to students what they can expect to learn and how the curriculum's architecture delivers this learning."

The RFP asked institutions to craft an ambitious approach to curricular change, demonstrating clearer learning outcomes for general education and the major; more interrelationships among courses in a program or major; and "an effort to curb course proliferation and engage in substantive curricular streamlining as part of designing a more intentional and cohesive educational experience**."** Other features that were specified in the RFP were: a faculty-owned and led initiative; the creation of a faculty learning community across multiple disciplines and institutions; attention to inter-institutional learning; rigorous assessment of the effects of the curricular redesign on student learning and faculty practices; and a dissemination effort to share the lessons learned by the grantee institution.

This essay is based on an evaluation of four grants involving 12 institutions: Oberlin College, College of Wooster, Ohio Wesleyan University, Kenyon College, Denison University and Allegheny College; Virginia Wesleyan University, Davis & Elkins College, Shenandoah University, and Eckerd College; San Francisco State University; and Pomona College, Claremont McKenna College, Harvey Mudd College, Pitzer College, and Scripps College (also known as The Claremont Colleges). These were among the first projects funded under Teagle's "Faculty Planning and Curricular Coherence" initiative.[2] Brief project descriptions are described in greater detail in Appendix A.

---

[2] The Foundation funded a total of 15 implementation grants in this initiative between May 2014 and May 2018. As the evaluator for a sub-group of projects that kicked off this initiative in 2014, I reviewed the proposals, annual project reports and related documentation; conducted annual phone calls with representatives of each participating campus; attended the April 2017 convening of the institutions participating in this initiative; and visited selected campuses. My goals were to ascertain the extent to which the projects were achieving their stated goals and the Foundation achieving its goals for the initiative, and most importantly for this essay, what others can learn from the experiences of the participating institutions.

Whose Responsibility? Student and Faculty Roles in Creating Curricular Coherence

As the next section describing curricular strategies illustrates, institutions have different implicit interpretations of curricular coherence and varied approaches to achieving it. Some see the faculty role as paramount; others view the students' efforts to integrate their learning as key, with faculty playing a supporting role. Many faculty members interviewed as part of this evaluation were emphatic that the most important work of making the educational experience coherent lies with the student, and that the role of faculty is to be a guide and mentor in the process. Giving students responsibility for creating coherence can be seen as a celebration of student agency or a refusal on the part of faculty to take responsibility for offering a curriculum that is more than a smorgasbord of courses.

A focus on student agency led a number of institutions to emphasize strategies such as advising and establishing structures to coordinate curricular and co-curricular learning. Sometimes using the term "integrative advising," institutions sought to redefine advising as supporting students in integrating their different learning experiences. As one project leader put it, "advisors need to be better at asking students why they are taking particular courses and to ask them to reflect on how the courses connect."

Integrative advising aligns with AAC&U's concept of "integrative learning," defined as "an understanding and disposition that a student builds across the curriculum and co-curriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond campus (Ferren and Paris, 2015, p. 23). Students cannot do this alone, however. The authors posit that coursework that "form[s] an intentional and coherent program of study" and pedagogy that requires students to reflect on their learning are the pillars of integrative learning" (Ferren and Paris, 2015, p. 4).

Other projects chose to emphasize the coherence of the curricular offerings—reforming the major or general education or creating curricular maps and pathways through the curriculum. Their work emphasized the faculty's responsibility for providing a transparent and navigable curriculum, coursework that was sequenced and progressive, and co-curricular experiences that were integrated with classroom learning.

These two mindsets—emphasis on the students' role in integrating their learning and focus on the faculty responsibility to create a curriculum and other learning opportunities that form a coherent whole—are not mutually exclusive, but as the next section illustrates, most institutions included in this report concentrated their efforts on one or the other. The Foundation encouraged those institutions that focused on the students' role to expand their efforts to address the structure of the curriculum as well.

Strategies for Achieving Curricular Coherence

Looking across the 12 institutions, five major strategies to achieve curricular coherence can be identified. In this section, each strategy is described and brief institutional examples given. (More detailed descriptions are available in Appendix B.) The projects tended to emphasize either the student role in creating curricular coherence or the faculty's work in creating a more integrated and progressive curriculum. The examples are illustrative, and do not reflect all the efforts and activities that the project institutions undertook. Indeed, a number of institutions undertook several interconnected projects under the banner of the Teagle curricular coherence initiative (although not all with Teagle funding).

I.	CURRICULAR REDESIGN

Redesigning the curriculum generally focuses on general education or the major. In the case of the former, efforts often seek to align with students' achievement of a specific set of learning outcomes for general education. Efforts to redesign the major emphasize clear pathways through the major as well as scaffolding learning so that courses build on each other and students can see their progression.

REDESIGNING THE MAJOR

San Francisco State University (SFSU) provided competitive mini-grants to three cohorts of departments and degree-granting programs to undertake curriculum reform in the major to structure student learning in clear and intentional ways. Each cohort was part of a learning community that provided support, resources, and guidance to faculty leading the redesign process in their departments.

More on San Francisco State University's efforts to redesign its majors here

REFORMING GENERAL EDUCATION

Shenandoah University revamped its general education by identifying four overlapping spheres of learning to replace the previous seven. Faculty have to resubmit their courses to be approved as fulfilling one of the new spheres of learning requirements.

Virginia Wesleyan University revised its general education program by simplifying the structure to include three basic components: language proficiency (English composition and foreign language proficiency); a series of three required seminars that build on one another; and a breadth requirement consisting of two courses from Humanities/Fine Arts, Social Sciences, and Mathematics/Natural Sciences.

II.   CURRICULAR MAPPING

Curriculum mapping can be applied to general education, the major, or the entire college experience. It can be used to map how courses accomplish various learning outcomes; how students achieve the learning outcomes associated with the major over the course of their college experience; or how students build skills leading to a high-impact practice[3] such as a capstone course, study away, internships, or undergraduate research. A map can also be used to help students understand the learning they are achieving and/or to help faculty identify gaps in including certain learning outcomes in a program. In the latter case, curriculum maps should serve as a tool of curricular reform, pointing out areas where changes are needed, either in individual courses or in the structure of the program.

Davis & Elkins College created curricular maps in each program to chart student paths that included a foundational experience in the first-year seminar, mid-career assignments, and a capstone project, with courses at different levels building the requisite skills.

Virginia Wesleyan University's departments engaged in curricular mapping designed to create pathways in major academic programs that improve student learning outcomes and guide students towards successful capstone experiences in undergraduate research, study away, or internships.

III.   IDENTIFYING CLUSTERS OF RELATED COURSES AROUND AN ISSUE OR TOPIC

This approach involves identifying a series of courses and co-curricular experiences across disciplines that allow students to focus on a single broad theme, such as Peace & Conflict or Food Studies. The cluster of courses and experiences can be linked to advising

Ohio Wesleyan University created the "Course Connections Network" program, which provided students with a set list of courses around a theme.

Oberlin College approved the creation of three concentrations with a fourth planned. Concentrations are interdisciplinary networks of courses around a theme (e.g., book studies) that provide pathways and encourage curricular connections across disciplines in the humanities, natural sciences and social sciences.

---

[3] "High-Impact Practices (HIPs) are techniques and designs for teaching and learning that have proven to be beneficial for student engagement and successful learning among students from many backgrounds." Examples include first-year seminars, writing intensive courses, diversity/global learning, undergraduate research, internships, and capstone courses. (Source: AAC&U. http://leap.aacu.org/toolkit/high-impact-practices)

Allegheny College created six thematic "concentrations," which morphed into a program aimed at creating new, transdisciplinary majors and minors, still under development.

IV. USING PEDAGOGY, ESPECIALLY HIGH-IMPACT PRACTICES (HIPS), TO DRIVE GREATER COHERENCE IN THE CURRICULUM

Although HIPs do not by definition promote curricular coherence, they can be used to create scaffolded learning experiences and help students see a developmental progression in their studies. They can also be used to create connections among different courses.

Virginia Wesleyan University focused on ensuring that students are fully prepared for three high-impact practices (study away, undergraduate research, and internships) by asking faculty to review how their courses and the major prepare students for these experiences. VWU also holds an annual "Port Day" where students present a capstone experience in their undergraduate research, study away, or internship in panel or poster sessions.

Shenandoah University created a "Town Hall" experience that brings together students in different courses and disciplines within the General Education program to address topics such as poverty and gun control from different perspectives in a single culminating event involving students, faculty members, and community members.

Davis & Elkins College created "Capstone Day" where students present their senior capstone project orally or through a poster.

V. USING ADVISING TO HELP STUDENTS SEE CONNECTIONS WITHIN THE CURRICULUM AND AMOUNG VARIOUS LEARNING OPPORTUNITIES.

A number of institutions aimed to overhaul advising to enable students to articulate their academic and career goals; align their choices of courses with these goals; create their own connections within the existing curriculum; and explicitly link their coursework to their co-curricular activities. They sought to move from a more mechanistic conception of advising involving approving course selection to one that viewed advising as a form of teaching, with the goal of helping students articulate their learning, formulate their goals and aspirations, and to craft a college experience that is both fulfilling and coherent.

Denison University developed Advising Circles, one-credit courses for 10 first-semester students led by a faculty member who serves as the students' advisor. Students consider their goals, plan their educational experiences, and learn from each other as well as from the advisor.

Allegheny College created Gateway 100 (for first-year students) and Gateway 300 (for upper-division students), one-credit courses that focus on personal exploration and academic and career planning.

Oberlin College moved to a new advising system that emphasizes developmental advising, with first-year students organized into cohorts advised by three faculty advisors, one each from the Humanities, Social Sciences, and Natural Sciences. Each cohort also has a Peer Advising Leader and uses a new on-line advising tool that incorporates e-portfolio features.

Virginia Wesleyan University enhanced its First Year Experience with its "Pathway to See Change Program" aimed at helping students define goals and discover strengths and interests. It includes three required components facilitated by faculty. Two are sessions with faculty members and one is an online self-assessment exercise.

More on The Claremont Colleges' efforts to strengthen consortial academic collaboration here

Although The Claremont Colleges' project focused on strengthening consortial academic collaboration does not fit neatly into the five strategies outlined above, the lessons learned from their work provide useful insights for institutions seeking greater curricular coherence. The Claremont Colleges have now established a cross-campus Office of Consortial Academic Collaboration and is embarking on two new intercollegiate curricular initiatives, one focused on justice education and the other on the data sciences.

Lessons of Experience

Distilling the experiences of multiple institutions undertaking different kinds of change in pursuit of curricular coherence—or any serious change for that matter—risks overgeneralizing or appearing simplistic. Extrapolating lessons learned requires focusing on commonalities rather than differences, in spite of higher education's propensity to underscore the uniqueness of every institution. Indeed, most of the institutions participating in the projects that were reviewed for this report had many shared characteristics. They were private liberal arts institutions, largely residential, with traditional-aged students. They shared an emphasis on teaching and student-centeredness; also, attracting and retaining students had important financial implications. The smaller size of their faculties facilitated communication and collaboration. In a word, their contexts for change shared a number of important characteristics.

At the same time, the experiences of the liberal arts institutions demonstrated some strong similarities to those of the one large public institution, San Francisco State University (SFSU), part of the 23-campus California State University System. SFSU had a significant number of transfer students, part-time faculty, and a faculty union, as well as policy directives from the system office that influence its curriculum. The experiences and advice contained in SFSU's guide <u>Doing Curricular Change in a Shared Governance Setting</u> are equally applicable to other kinds of institutions; with a few tweaks it could easily be taken for the product of a liberal arts college. Similarly, the work of The Claremont Colleges consortium can be translated into a single institution setting or that of a public system. In a word, there are certain academic realities and process issues that cut across institutions, in spite of differences in institutional mission and culture.

Thus, looking across the institutions reveals useful lessons applicable to a variety of contexts.

RECOGNIZING THE PROBLEM AND AGREEING ON ITS CONTOURS ARE IMPORTANT UP-FRONT WORK.
Internally generated change initiatives usually start with the perception that something is not working (a problem) or that it could be working a lot better (an opportunity). Shared recognition of the existence of a problem and agreement on its nature constitute a crucial first step, generally accomplished through faculty retreats, workshops, and abundant conversations.

The problems addressed by the projects varied in nature, ranging from general education curriculum, to advising, to inter-institutional collaboration Through various forms of discussion and consultation, they obtained sufficient agreement on the existence and nature of the problem to move on to crafting solutions. Some institutions created a working group and charged it with developing alternative

solutions. Or they provided general guidance to various units who could choose to develop their own solutions. For example, the project involving Virginia Wesleyan and its campus partners developed a shared understanding of the characteristics coherent curriculum, elaborated in Appendix C, through a series of faculty workshops.

In the case of The Claremont Colleges, faculty members who were interested in consortial academic collaboration confronted logistical obstacles that discouraged initiatives that would provide greater opportunities for students. Devising solutions grew out of a deeper dive into the problem. The project devoted its first year to cataloging the existing collaborations, meeting with representatives of the collaborating groups, and learning what was working, what was not, and what their needs were.

As institutions defined and began crafting solutions, they saw new opportunities. Rethinking advising enabled institutions to make better use of faculty time while simultaneously helping students. Mapping the curriculum allowed faculty to see gaps in student pathways and make necessary adjustments in the curriculum. At one institution, revising general education yielded a new process for making curricular decisions across its constituent schools.

ACADEMIC REFORM IS A LEARNING PROCESS FOR FACULTY.
Change requires thinking differently in order to do things differently and to do different things. Project leaders and participating faculty and staff were enthusiastic about the opportunities their projects afforded them to get together with colleagues within their institutions (and their own departments) as well as across institutions to work together to improve the quality of the education they provided and to enhance student success. Many interviewees reported that it was very helpful to see that their institutions were not alone in confronting various problems. They affirmed that the project meetings were consoling, enlightening, and energizing. Several project leaders conducted workshops on other campuses within their multi-institutional projects to share their learning in a deeper way and to facilitate the transfer and adaptation of the experiences of the other campus.

All the institutions supported their change efforts with faculty development opportunities. SFSU was highly intentional about setting up a learning community for each cohort of departments selected to work on curricular revision. Each cohort met five times during its life of one year; cross-cohort meetings were also held. The facilitator provided background readings on various topics, including several on the change process. This rather unusual step provided an additional dimension to the faculty leaders' work—an opportunity to reflect on their own roles as change agents and on the change process they were engaged in. Nothing in the preparation of faculty members or most staff prepare them to think about process issues or the totality of the curriculum; as one project leader at an institution working on general

> "
>
> *Nothing in the preparation of faculty members or most staff prepare them to think about process issues or the totality of the curriculum; as one project leader at an institution working on general education reform put it, 'I did not get my Ph.D. in general education.'"*

education reform put it, "I did not get my Ph.D. in general education." The SFSU effort resulted in a publication entitled [Doing Curricular Change in a Shared Governance Setting](#), providing practical advice on the change process in the context of curricular reform.

Similarly, The Claremont Colleges work included background work on the nature of collaboration that informed how project proceeded. Early on, the project director and external consultant produced a paper outlining models and stages of collaboration, [People, Tools and Processes that Build Collaborative Capacity,](#) providing practical advice based on a conceptual framework.

Faculty development focusing on specific skills such as using new technologies can also be essential. Introducing new technological advising tools required multiple faculty workshops and a measured introduction process. Also, institutions seeking to change the role of academic advisors conducted a series of workshops to guide them through the new model.

Additionally, campuses benefited from the perspectives of outsiders. One project built into the proposal engaging a consultant with relevant experience, who was especially helpful in the first year in providing conceptual as well as practical advice. Two projects hired assessment consultants to review what they had accomplished and what else they needed to do. Nationally known experts were invited to facilitate campus workshops and speak at project meetings that included all the participating campuses. "Outsider" can also be a relative term. Some departments at SFSU invited project leaders from other departments to help them navigate their curricular reform process.

Another form of learning is missteps and outright failures that require changing course. Institutions learned that they could not necessarily adopt technology platforms that had been successfully used by their partner institutions, largely because of compatibility problems. Implementing clusters of thematically related courses required addressing student and faculty workload problems. An institution working on general education revision detoured to review its college-wide learning outcomes. Similarly, one institution, as it worked on advising, saw a need to develop a common language and definitions for institutional learning objectives that would inform the work of the advisors. Another institution abandoned its effort to use e-portfolios as an advising tool, since it was not integrated with its course management system and was an extra step for students, faculty and staff. Also, it did not seem to meet a perceived need. Some proposals went to the deciding committee only to be rejected for lack of widespread support or competing priorities. Sometimes questions arose about sustainability—would faculty be willing to continue to take on new responsibilities as ongoing additional work? And finally, some initiatives died because they emerged from the provost's office and faculty did not own them. Rarely is a change process linear or predictable; institutions must balance the need to

change course with the need to keep forward movement.

LEAD WITH A CARROT AND START WITH THE WILLING.

Incentives come in many forms. Foundation funding is the exception rather than the rule as a support for change initiatives, and sometimes institutions provide their own funding to provide incentives and support. SFSU and The Claremont Colleges created mini-grant programs offering modest grants to encourage participation and support the work. In a competitive grant program, SFSU supported three cohorts of departments in undertaking curricular reviews. The grant program enabled them to work with the departments in communicating and achieving the goals of the grant and to align the departments' efforts with the outcomes the university wanted to achieve. Similarly, The Claremont Colleges initially provided funding for two sets of initiatives[4]. One was a faculty-led effort to increase academic cooperation at the disciplinary or interdisciplinary level, supporting meetings, external consultant fees, and stipends. The second fund supported improvements in the infrastructure necessary for academic collaboration—practices, policies, and technologies that remove barriers to curricular collaboration. Both SFSU and The Claremont Colleges published rubrics for assessing the mini-grant proposals to make the initiatives' goals and ground rules clear to the applicants. They worked with the applicants to be sure that the proposed work aligned with their projects' objectives.

Whether or not funding is available, most institutions choose to start their reform initiative by inviting willing faculty members to participate. As one project leader put it, "Get trailblazers out there, build momentum, and you can pull people along." Over the three-year life of the grants, most institutions increased the number of participating departments or individuals; as the successes became evident, additional groups or individuals saw the benefits of participating.

Although the intrinsic motivation of many faculty to improve the quality of academic programs and student learning can be strong, it may not be sufficient, especially to sustain a new initiative. Lack of other incentives—such as recognition for the work in the promotion and tenure process, help in learning new skills, or the availability of resources for implementation—runs the risk of producing faculty burnout, cynicism, frustration, resistance, or apathy.

IDENTIFY AND ADDRESS STRUCTURAL BARRIERS.

Some good ideas fail because of processes, policies, and decision-making structures that get in the way. As The Claremont Colleges reviewed existing academic collaborations, they found that information flow, policies, and infrastructure were barriers. Specific obstacles included lack of staff support, finding times for group meetings, knowing what courses will be taught in a given semester, communicating with students across campuses, and interfacing with colleges' registrars and

" Get trailblazers out there, build momentum, and you can pull people along."

---

[4] After the first round of proposals, the decision was made to combine the two funds into one.

institutional researchers. Thus, engaging in academic collaboration across campuses was seen as a thankless task. As one faculty member noted, "We're always fighting fires; there's no time to just get together to think about program development" (Mashek and Culbertson, 2015, p. 29).

This diagnosis guided the work of the project to harmonize course numbering, bring the registrars into the conversations, and create a course-planning tool to facilitate the work of departments and groups that work across multiple campuses. The tool identified which courses would be taught in the coming year, in how many sections, and in which time slots. In a pilot, the project staff turned the results of using the tool into a spreadsheet that was shared with the faculty and then adopted by other cooperating groups.

As Shenandoah University worked on its general education reform, it found that it did not have a process in place for a curricular proposal that did not emanate from one of its schools. The new general education curriculum was to apply to all the schools, and was the work of a cross-institutional committee. Shenandoah created a new process, complete with a flow chart and ideal timetable for the approval of curricular proposals. The University Curriculum Committee (UCC) became the central player, receiving proposals, vetting them with affected colleges and schools, having the proposers revise as necessary for further review and then a vote by the faculty senate, with ultimate approval by the vice president for academic affairs. The UCC was at the center of the process, approving the proposal at various stages and sending it to the appropriate bodies.

At SFSU, some departments were stymied by lack of agreement on how to proceed, others looked to their by-laws for guidance. Where the by-laws were insufficient or non-existent, the solution was to develop department by-laws to guide their curriculum review process. In another decision-making arena, SFSU developed a fast-track review for "non-substantive changes" — defined as change of degree title, reduction in the number of courses, reorganization of courses within the degree that does not increase the total number of units, and revision of pre-requisites. Substantive revisions, which include discontinuance of a program or revisions that increase the number of units in the major, remains a more elaborate process.

CONSIDER SUSTAINABILITY EARLY ON.
Not every innovation turns out to be sustainable. As noted above, some institutions found they had to change course or abandon seemingly promising ideas. Although not all obstacles can be anticipated, it is worth engaging in serious thinking upfront about what happens after foundation funding expires, or as is more likely to be the case for most institutions, how things might play out a few years down the road. The Claremont Colleges project team and the deans began consideration of a central coordinating mechanism at the mid-point of their three-year project, which led to the

creation of a pilot [Office of Consortial Academic Collaboration](). And indeed, in the course of its work, the project identified key [ingredients for sustainable change]()—vision, incentives, skills, resources, and a plan—and the consequences when one of the ingredients is missing.

SFSU linked its Teagle-funded work to its ongoing cycle of program reviews and to the system-wide "Student Success Initiative," which provided one-time funding for departments to develop strategies to address retention and timely graduation. The participation of 18 departments in the Teagle project began a culture change at SFSU that fostered open discussion about departmental curriculum, focused on evidence and increasing student success. Both the processes designed by the departments and the culture shift created by the faculty learning community should facilitate future efforts.

Some institutions tied their reform initiatives to other changes to which they were already committed. Virginia Wesleyan, through its Quality Enhancement Process as part of its Southern Association of Colleges and Schools re-accreditation, established the "Lighthouse" to combine its study-away, internships, and undergraduate research under one roof. An important part of its Teagle work was ensuring the success of the programs under the Lighthouse umbrella through curricular reform.

COLLABORATION IS DIFFICULT WORK.

"

Curriculum reform requires collaboration, which in turn requires 'the capacity to share resources, turf, and leadership.'"

In their [paper on collaboration]() that grew out of The Claremont Colleges' work, Mashek and Nanfito (2015) state:

> [E]ffective and efficient collaborations can be excruciatingly difficult to develop, implement and sustain. Work with multiple stakeholders requires that facilitators help to create clear expectations to foster information sharing, to ensure follow through on problem-solving, and to track progress. Facilitating collaboration requires organizing all stakeholders around a common purpose that is congruent with desired outcomes and intersecting ambition. This is hard, slow-moving, highly iterative work.

Adapting Arthur Himmelman's "continuum of collaboration," they describe successive levels of working together, starting with networking, moving through coordinating, cooperating, and finally collaborating (Mashek and Nanfito, 2015, p. 2). They note that each of the stations on the continuum may be appropriate for a particular activity and that they build on each other. Curriculum reform, or any change that goes deeply into the academic enterprise, requires collaboration, which in turn requires "the capacity to share resources, turf, and leadership" (Mashek and Nanfito, 2015, p. 3). It is easy to see how struggles for enrollments, resources and philosophical differences can get in the way of collaboration. The participating institutions used various strategies to address the obstacles to collaboration, including creating a shared vision for the work, harnessing the energy of faculty

champions, identifying skillful project leadership, bringing in external voices, and supporting institutional leaders. Collaboration requires considering the common good and the benefit to students as values that override the "my students" and "my classroom" mentality.

MANY PATHS CAN LEAD TO THE SAME OUTCOME.
If there is any metaphor that is an anathema in academe, it is "one-size-fits all." Institutions prize their differences, as do schools and departments within institutions. Direct assaults on departmental autonomy are likely to be unproductive at most institutions. Thus, project institutions took care to identify shared goals and desired outcomes but at the same time gave units and departments the freedom to create their own paths to achieving them. Thus, SFSU was clear about what it wanted departments to achieve through curricular redesign, and placed some parameters around the work, but encouraged departments to define their unique issues and craft appropriate solutions. The Claremont Colleges started with existing collaborations, building out from many different models already in place. Virginia Wesleyan had departments create their own curricular maps, and only after several were developed did it create a template to guide future maps. Davis & Elkins proceeded in a similar fashion. Shenandoah required institutions to resubmit their courses to count as general education, but did so by providing the outcomes associated with each learning domain to guide the resubmission process.

CONTEXT MATTERS.
Change initiatives do not happen in a vacuum. Project institutions experienced all kinds of events that shaped the course of their work, sometimes in unexpected ways. A strategic planning exercise involving the entire institution caused one institution to hit the pause button on its project work. Turnover in project leaders in a number of institutions slowed the work. When the architect of the innovation (and of the grant proposal) left one institution a year into the project, the vision for the project was less powerful and the institutional energy behind it diminished for a while. Shortfalls in enrollment or budget cuts refocus the attention of the campus community. Thus, the course of any reform effort is subject to the winds that blow across campus, and rarely proceed in a linear fashion.

IT IS LIKELY THAT REFORM EFFORTS WILL BE ADDITIVE IN TERMS OF HUMAN AND FINANCIAL RESOURCES, UNLESS THERE ARE SPECIFIC GROUND RULES.
It is much less contentious to add people (or add to existing workloads) and money to support new initiatives than to decide how the ledger will be balanced with subtractions. And indeed, starting a reform effort with resource issues—rather than quality issues—front and center can be an invitation to resistance, turf battles, and negative publicity. Some institutions navigated this terrain by using curricular mapping to help faculty see redundancies in the course offerings that led them to streamline their offerings. In soliciting proposals for departmental efforts at

curricular redesign, SFSU shared with applicants the rubrics that comprised its scoring sheet. The first one specified that the proposed effort had to significantly redesign the curriculum's structure or goals, rather than simply adding new courses or concentrations. Overall, however, there was little evidence that the projects would be either cost-neutral or cost-reducing in the long run.

In Conclusion: Eyes on the Prize

There is no single or easy path to curricular coherence. The institutions reviewed for this report took different approaches, with varying degrees of success and impact on curricular coherence. Some were cost-neutral; others added costs. Few institutions reviewed took a hard look at the architecture of the curriculum. But the good news is that all the participating institutions had their eyes on the prize—they were committed to improving student learning and the quality of the student experience. They found ways to collaborate and to put the students at the center of their efforts. As the competition for students becomes more intense for many private institutions and the cost pressures more intense for all, the need for the curriculum to be easily understood, for learning to be progressive throughout the undergraduate experience, and for the pieces to clearly connect will be even more urgent. There is still much work to be done.

References

American Association of Colleges. (1985). Integrity in the College Curriculum: A Report to the Academic Community. Washington, DC: Association of American Colleges.

Beane, J.A. (1995). Introduction: What is a Coherent Curriculum? In J.A. Beane (Ed.), *Toward a Coherent Curriculum: 1995 Yearbook of the Association of Supervision and Curriculum Development*. Alexandria, VA: Association for Supervision and Curriculum Development.

Bok, D. (2013). *Higher Education in America*. Princeton, NJ: Princeton University Press.

Jaschik, S. (2016, Jan. 19). Distribution Plus. *Inside Higher Ed*. Retrieved from https://www.insidehighered.com/news/2016/01/19/survey-colleges-finds-distribution-requirements-remain-popular-new-features

Mashek, D. & Nanfito, M. (2015, Nov.). People, Tools, and Processes that Build Collaborative Capacity. Retrieved from http://colleges.claremont.edu/collaboration/tools-and-resources/

Mashek, D., Culbertson, S., & Holar, S. (2015, May). 5C Collaborations Project: A Snapshot of Cross-Campus Curricular Coordination at The Claremont Colleges.

National Commission on Excellence in Education. (1983). *A Nation at Risk: The Imperative for Educational Reform*. Washington DC: U.S. Department of Education. Retrieved from https://www2.ed.gov/pubs/NatAtRisk/risk.html

Zemsky, R. (2013). *Checklist for Change: Making American Higher Education a Sustainable Enterprise*. New Brunswick, NJ: Rutgers University Press.

Zemsky, R. (1989). *Structure and Coherence: Measuring the Undergraduate Curriculum*. Washington, DC: Association of American Colleges.

Zemsky, R. & Finney, J. (2010, May). Changing the Subject: Costs, Graduation Rates, and the Importance of Rethinking the College Curriculum. *Crosstalk*. Retrieved from http://www.highereducation.org/crosstalk/ct0510/voices0510-zemfin.shtml

Zemsky, R., Wegner, G., & Duffield, A. (2018). *Making Sense of the College Curriculum: Faculty Stories of Change, Conflict, and Accommodation*. New Brunswick, NJ: Rutgers University Press.

Appendix A: Project Descriptions

- **Oberlin College, College of Wooster, Ohio Wesleyan University, Kenyon College, Denison University and Allegheny College.** Each participating institution crafted a different path to achieve the following common goals: identify and structure connections within the curriculum; create online curricular mapping tools; and help students understand curricular connections through integrative advising.

- **Virginia Wesleyan University, Davis & Elkins College, Shenandoah University, Eckerd College**. These institutions aimed to use high-impact practices to ensure progressive learning and find effective ways to bring faculty together to create curricular change. The focus of their campus projects varied; initiatives included curricular mapping, general education reform, and the preparation of students for participation in high impact practices.

- **San Francisco State University** focused on the redesign of the major as a key element of student success. The project provided mini-grants to departments and degree-granting programs to undertake reform that would structure student learning in clear and intentional ways.

- **Pomona College, Claremont McKenna College, Harvey Mudd College, Pitzer College, and Scripps College** (also known as The Claremont Colleges). This project aimed to develop and maintain effective, efficient, and enduring academic collaborations among the participating colleges.

Appendix B: Institutional Strategies to Achieve Curricular Coherence

I.	CURRICULAR REDESIGN

Redesigning the curriculum generally focuses on general education or the major. In the case of the former, efforts often focus on the alignment of courses with student achievement of a specific set of learning outcomes for general education. Efforts to redesign the major emphasize clear pathways through the major as well as scaffolding learning so that courses build on each other and students can see their progression.

REDESIGNING THE MAJOR

SAN FRANCISCO STATE UNIVERSITY provided competitive mini-grants to three cohorts of departments and degree-granting programs to undertake curriculum reform in the major to structure student learning in clear and intentional ways. Representatives of the participating departments formed learning communities to share their learning and reflect on the change process. Each cohort met five times during its life of one year and cross-cohort meetings were also held. Eighteen departments participated. See more at Redesigning the Majors at SFSU.

REFORMING GENERAL EDUCATION

A 2016 survey conducted by AAC&U revealed that although 76% of respondents had a distribution model of general education, many are adding approaches such as capstone studies (60%), upper-level general education courses (46%), a core curriculum (44%), thematic required courses (42%), and common intellectual experiences (41%) (Jaschik, 2016). These additions promote coherence and likely avoid the political battles that might result from abandoning distribution requirements. Two projects described below take this approach.

SHENANDOAH UNIVERSITY (SU) undertook a revamping of its general education, which had been in place for 15 years, with acknowledged faculty and student confusion about its goals. In 2015, SU began the process of revising its general education curriculum for its four undergraduate schools, now called "ShenEd," by identifying four overlapping spheres of learning to replace the previous seven. The spheres of learning (literacies, inquiry, expression, and difference) combine liberal arts-based inquiry and pre-professional skills. Faculty have to resubmit their courses to be approved as fulfilling one of the new spheres of learning requirements; new courses will be piloted to test their fit with the new program. In the old version of SU's general education program, 142 courses were approved as fulfilling one of the domains; the resubmission process aimed to reduce that number. All students also take a First-Year Seminar, "Going Global." The new curriculum aims to go beyond a

distribution model by requiring faculty to incorporate integrative learning strategies, such as incorporating learning objectives from a different sphere (e.g., an ethics issue in a biology class). The Town Hall, described below (see #4), also serves as a vehicle for integration. The new curriculum will be launched in fall 2019.

VIRGINIA WESLEYAN UNIVERSITY'S revised general studies program (its term for general education) simplified the structure to include three basic components: language proficiency (English composition and a foreign language); a series of three seminars that all first-, second-, and third-year students must take; and a breadth or distribution requirement. This structure replaces one that included basic language competency, advanced writing requirements, seven epistemological approaches, and a senior integrative seminar. The three seminars in the new program are designed to build on each other, demanding increasing sophistication in reading and writing.

II.   CURRICULUM MAPPING

Curriculum mapping can be applied to general education, the major, or the entire college experience. It can map how courses accomplish various learning outcomes; how students achieve the learning outcomes associated with the major over the course of their college experience; or how students build skills leading to a high impact practice such as a capstone course, study away, internships, or undergraduate research. A map can also be used to help students understand the learning they are achieving and/or to help faculty identify gaps in including certain learning outcomes in a program. In the latter case, curriculum maps should serve as a tool of curricular reform, pointing out areas where changes are needed, either in individual courses or in the structure of the program.

DAVIS & ELKINS created curricular maps in each program to chart student paths that included a foundational experience in the first-year seminar, mid-career assignments, and a capstone project, with courses at different levels building the requisite skills. The curriculum mapping effort included discussions of guided pathways, scaffolding learning outcomes, and assessment. It enabled faculty to identify places in their program curriculum that could be cut, enhanced, or reconfigured for greater efficiency and with better results for students. Programs created six-year course rotations and four-year student plans, using templates devised by the curriculum committee. The templates guided faculty in indicating how courses and other program requirements fulfilled the learning outcomes articulated for the program. A survey of program coordinators revealed that the programs were revised through a combination of course additions, course deletions (which were greater than the number of courses added), and changes in course descriptions, level, and prerequisites.

VIRGINIA WESLEYAN UNIVERSITY's departments engaged in curricular mapping designed to create developmental pathways in major academic programs that

improve student learning outcomes and that guide students for successful capstone experiences in undergraduate research, study away, or internships. Faculty examined in which courses particular learning outcomes were being achieved. Another goal was to make majors more transparent to students. As a result of the exercise, several departments modified their curricula. For example, Mathematics reformulated the sequencing of courses and altered the timing of course offerings across four years. The Chemistry department identified oral and writing components to be included in upper-level courses, modified the laboratory curriculum to prepare students better for independent research in the capstone course, and modified the introductory course.

III.   IDENTIFYING CLUSTERS OF RELATED COURSES AROUND AN ISSUE OR TOPIC

This approach involves identifying a series of courses and co-curricular experiences across disciplines that allow students to focus on a single broad theme, such as Peace & Conflict or Food Studies. The cluster of courses can be linked to advising groups and/or co-curricular experiences related to the focus of the courses.

OHIO WESLEYAN UNIVERSITY, ALLEGHENY COLLEGE, AND OBERLIN COLLEGE had a shared interest in organizing clusters of courses around a common topic, spurred by Ohio Wesleyan University's experience with its "Course Connections Network" program, which provided students with a set list of courses around a theme, such as Social Justice or Middle East Studies. As explained below, OWU later moved from the cluster approach to interdisciplinary majors and minors.

Inspired by Ohio Wesleyan, **Oberlin** approved the creation of three concentrations with a fourth planned. Concentrations are interdisciplinary networks of courses around a theme such as book studies that encourage curricular connections across disciplines in the humanities, natural sciences and social sciences. A typical concentration includes a gateway course, three to four electives, and a culminating experience.

ALLEGHENY COLLEGE developed six "concentrations" (Peace and Conflict; Science and Society; Inequalities; Law and Policy; Health and the Human Condition; and Food Studies). These concentrations had very few requirements and were not transcripted. Over the life of the project, this concept morphed into a program that aims to create new, trans-disciplinary majors and minors that are still under development. These will be built around a set of courses, interdisciplinary modules, and co-curricular high-impact practices, and will be supported by a new advising system, described above.

The initial designs of the Ohio Wesleyan and Allegheny programs revealed some obstacles for students and faculty that required them to redesign or change course. Ohio Wesleyan decided to phase out its Course Connection Network after a six-year life. Four of the programs became new interdisciplinary majors. Problems they

encountered included the rigidity of the program's structure and extra demands the program made on students. Allegheny encountered similar problems and like Ohio Wesleyan, shifted the initiative to interdisciplinary majors and minors.

IV. USING PEDAGOGY, ESPECIALLY HIGH-IMPACT PRACTICES (HIPS), TO DRIVE GREATER COHERENCE IN THE CURRICULUM

Although HIPs do not by definition promote curricular coherence, they can be used to scaffold learning experiences and help students see a developmental progression in their studies. They can also be used to create connections among different courses.

Prior to the launch of its Teagle project, **Virginia Wesleyan University** established The Lighthouse, bringing together three high impact practices under one roof: study away, internships, and undergraduate research. The goal was to provide a one-stop office for advising, instruction, and financial support to students who engage in these three experiences. Virginia Wesleyan also developed a developmental framework of knowledge and skill development in which students progress through four stages of learning. Virginia Wesleyan's grant-funded work focused on ensuring that students are fully prepared for the three high-impact practices by asking faculty to review how their courses prepare students for these experiences and by engaging departments in reviewing how the courses in the major accomplishes this goal. Virginia Wesleyan holds an annual "Port Day" that provides students with an opportunity to present a capstone experience in their undergraduate research, study away, or internship in panel or poster sessions. No classes are held that day.

Modeled on an initiative at California State University-Chico, **Shenandoah University** created a "Town Hall" experience that brings together students in different courses and disciplines within the General Education program to address from different perspectives topics such as poverty and gun control in a single culminating event. It uses high-impact practices such as civic engagement, undergraduate research, and common intellectual experiences. Students and community members come together to discuss, debate, and create actions plans.

DAVIS & ELKINS COLLEGE created "Capstone Day" to provide students with an opportunity to present orally or through a poster their senior capstone project, which represents the culmination of a student's path in the major. No classes are held that day. Departments choose whether to participate. The student work provides an opportunity for faculty to assess their program's student learning outcomes at the capstone level. In a related initiative, departments created curricular maps that clarified learning outcomes and pathways (see #4 below).

A number of institutions aimed to overhaul advising to enable students to articulate their academic and career goals; align their choices of courses with these goals; create their own connections within the existing curriculum; and explicitly link their coursework to their co-curricular activities.

RECASTING ADVISING

These institutions sought to move from a more mechanistic conception of advising involving approving course selection to one that viewed advising as a form of teaching, with the goal of helping students articulate their learning, formulate their goals and aspirations, and to craft a college experience that is both fulfilling and coherent.

DENISON UNIVERSITY, with the development of its [Advising Circles](#), led the way for its partner institutions to focus on advising. Advising Circles are one-credit courses for first-semester, first-year students led by a faculty member who serves as an advisor for the 10 students in the course. Advising Circles provide an opportunity for students to consider their goals, plan their educational experiences, and learn from each other as well as from the advisor. Denison provides training for faculty who teach these courses, and has created programs for faculty, staff and students to serve as mentors.

ALLEGHENY COLLEGE [Gateway 100](#) and Gateway 300 are one-credit courses that focus on personal exploration and academic and career planning. Gateway 100 "Who Are You and What Do you Want to Become?" is aimed at first- and second-year students, while Gateway 300 "What Have You Learned and Where Are You Going?" enables upper-division students to reflect on their learning and articulate a professional goal and a process by which they might achieve it. Some of the Gateway sections are linked to specific concentrations, others are open-ended in focus.

OBERLIN COLLEGE moved to a new advising system that emphasizes developmental advising, with first-year students organized into cohorts advised by three faculty advisors, one each from the humanities, social sciences, and natural sciences. Each cohort also has a peer advising leader and uses a new online advising tool that incorporates e-portfolio features.

VIRGINIA WESLEYAN UNIVERSITY enhanced its First Year Experience with its "Pathway to See Change Program" program aimed to help students define goals and discover strengths and interests. It includes three required components facilitated by faculty; two are sessions with faculty members and one is an online self-assessment exercise. The first session encourages students to reflect on their lives and develop goals; the second session focuses on leading students to set goals and undertake experiences as the first step in pursuing them. Faculty advising is informed by a

detailed facilitator's guide for the program.

Appendix C: Defining a Coherent Curriculum

Virginia Wesleyan University and its three campus partners took on the definitional and assessment questions at the outset of the work as a framework for its institutional initiatives. As outlined in their project proposal, a coherent curriculum has the following measurable characteristics:

COMMUNICABLE **(well enough organized for all stakeholders to understand and articulate its logic)**

- Builds new learning on previous learning
- Helps students to identify and define individual, meaningful, and efficient pathways to degrees
- Has meaningful pathways that are directional across some courses while offering multiple opportunities across others
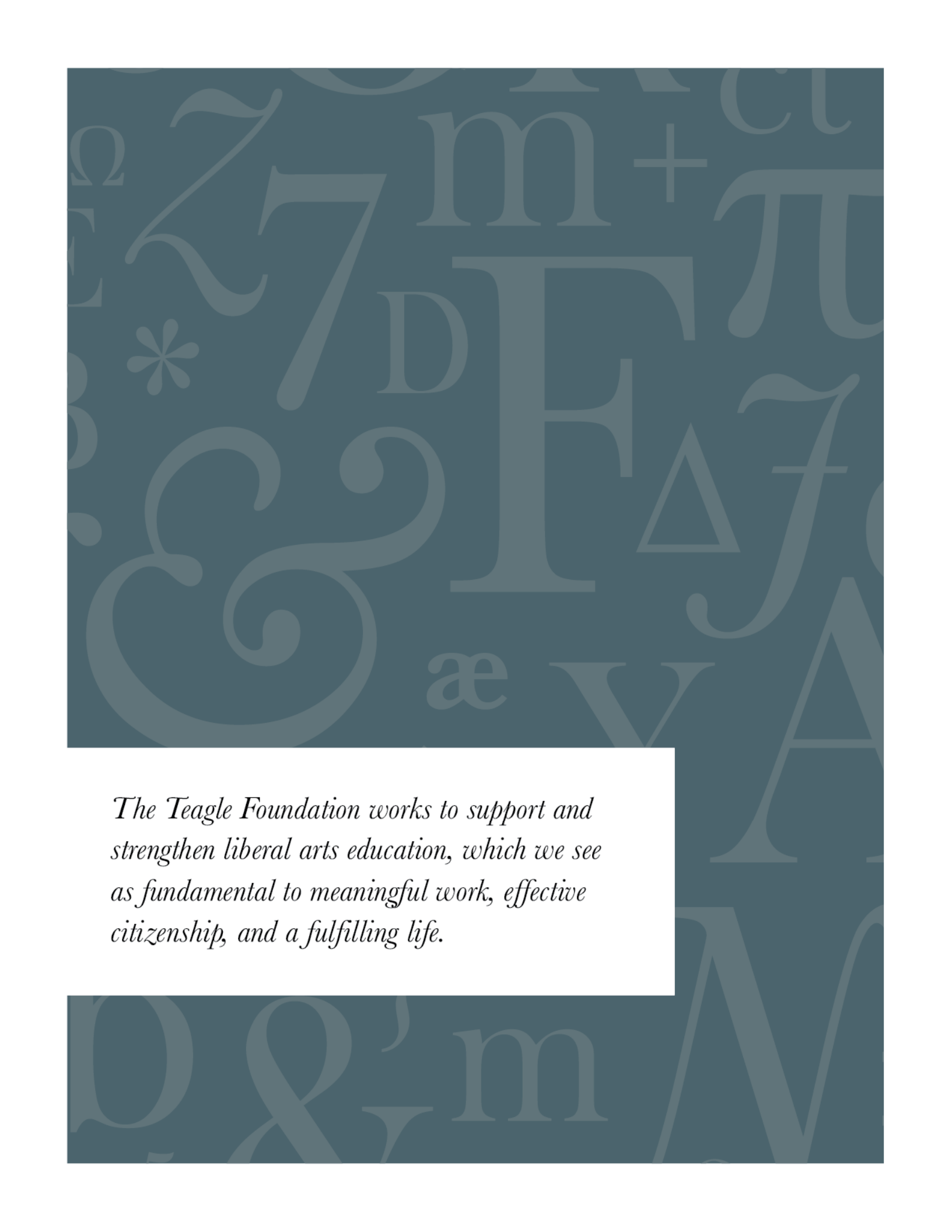
ENGAGING **(engages students enough to facilitate their learning)**

- Has consistent learning expectations
- Aligns lessons, courses and subject areas
- Is free of gaps, extraneous content, and unnecessary repetition
- Is implemented by instructors who know what is being taught in other courses by other instructors and how that relates to what they are teaching

EFFICIENT **(can be completed within an appropriate period of time and resources)**

- Provides appropriate on and off ramps for students who transfer in or out of the institution
- Is sustainable

The Teagle Foundation works to support and strengthen liberal arts education, which we see as fundamental to meaningful work, effective citizenship, and a fulfilling life.