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Approaches to the Core Curriculum: An Exploratory Analysis of Top Liberal Arts and Doctoral-Granting Institutions

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General education is frequently taken to mean the collection of experiences crafted by the institution to provide students with a breadth of learning experiences and a broad knowledge base that sharpen students' problemsolving, interpersonal, and oral and written communication skills, as well as their cultural and linguistic literacy (Jones, Hoffman, Ratcliff, Tibbets, & Click, 1994). However, it is a field that is seemingly in a constant state of flux; Ratcliff, Johnson, La Nasa, and Gaff (2001) note that 57 percent of the programs they surveyed were undergoing a process of general education review, with many more considering the process. The methods of achieving a sound general education thus seem to change rapidly and are in need of ongoing review. The current approaches often include the development of a core curriculum or a distribution requirement of courses taken from introductory courses of various academic departments (Aloi, Gardner, & Lusher, 2003). Gaff and Wisescha (1991) found that the typical general education approach required two writing courses, one mathematics course, four humanities courses, one fine arts course, two natural science courses, and three social sciences courses. Smith et al. (2001) highlight the James Madison University program as being an iconic representative of the

status of general education in the 1980s and demonstrating a revitalization of "lifelong learning, interdisciplinary perspectives, written communication skills, and critical thinking" (p. 85). These elements are often teamed with separate requirements for all students; half the institutions in their study required a foreign language, while others required courses such as physical education, speech, computer literacy, or quantitative reasoning.

The makeup of the core curriculum, and just what counts as a distribution requirement, has been debated across American higher education for ages. In fact, one of the most foundational documents in higher education, one that still influences higher education today, the Yale Report of 1828, can certainly be credited as being the locomotive that initially drove the core curriculum debate with its calls for focusing on the true purpose of a higher education: the furnishing of the mind. This debate has ranged from discussions of requiring specific courses to deliberating over the canon of Great Books, and the discussion and debate over general education have been going strong for quite some time. Throughout this debate, a variety of efforts and methods for regulating general education have surfaced across institutions.

The purpose of this article is to provide an exploratory analysis of the current context of general education requirements across two institutional types that dominate the American higher education landscape: liberal arts and doctoral-granting institutions. In doing so, we identify prevalent themes of general education found across these two institutional types through data from the top institutions within each classification. In this examination, the means of achieving the various goals of general education fall into one of two camps: core curriculum or distribution requirements.

The core curriculum was the most typical form of general education provided prior to the 1960s; after that, the more generic distribution requirement came to the fore (Latzer, 2004). In a core curriculum model, specific courses are offered that are general in scope and meet fundamental and broad-based objectives. This approach supposes that a distribution alone is not enough but, instead, that specific courses should be tailored to provide a more coherent and consistent learning experience and allow for the integration of topics across disciplines in far more detail than a distribution requirement (Boyer & Kaplan, 1994). Latzer (2004) argues that student demand and the need of faculty to teach within their specialty have hastened the demise of the core curriculum.

Distribution requirements, as noted, have grown to become more in vogue than core curricula (Elphick & Weitzer, 2000). In fact, Latzer (2004) believes that Harvard University now is planning to make the shift to a distribution requirement, a move Latzer thinks will legitimize the approach to some due in large part to the prestige of the institution. Part of the rationale for the

shift toward a distribution requirement is the decrease in consensus on what specifically should be a part of a core curriculum, including a lack of consensus as to what constitutes the canon of Great Books (Boyer & Kaplan, 1994). The difference is based in an assumption that the breadth of courses offered across various disciplines is significantly formative in and of itself and that the distribution requirement will provide the associated gains desired in students. The distribution requirement approach seeks to draw on the knowledge base of whole disciplines rather than the narrowly tailored foci of individual courses. Some institutions now are shifting in an effort to achieve these same ends without the use of either, instead leaving the process of ensuring breadth to student and adviser (Elphick & Weitzer, 2000).

Relevant Literature

What do we mean by a sound general education? What constitutes the canon? There are a number of possible answers to these queries that have been provided in the literature (Allan, 2004; Hall & Kevles, 1982; Thompson, Colson, & Lee, 2002; Wudel, Weber, & Lee, 2006). Regardless of the approach toward general education used by an institution, there are desired outcomes associated with general education. From debating what works and bodies of knowledge constitute the canon to determining precisely which courses each student enrolls in, students are expected to develop understandings of a breadth of topics, enhance their critical-thinking abilities, and become well-rounded, educated citizens.

History and Evolution of General Education

The liberal arts have been a great bastion of education for centuries. Indeed, the roots of liberal arts education can be traced to Roman and Greek orators and philosophers over two thousand years ago. But precisely which subjects have been considered so essential that all students should be exposed to them have changed over time; the decision of which topics to include within a liberal arts education and how to do that may never have, and perhaps never will, reach normative proportions (Kimball, 1995). Despite the shifts in higher education brought by the onset of the Germanic model and the elective system, the liberal arts tradition has maintained a strong foothold across institutional types. In many ways, the liberal arts tradition has morphed and transformed into what we now know as the general education requirements, taking shape through either a core curriculum or distribution requirements, as found in course catalogs throughout higher education.

At the formation of the United States and its early colleges with religious and classical foci (Stevens, 2001), students followed a unified curriculum in preparation for a career in law, medicine, or the clergy. Their education consisted of Greek, Latin, mathematics, and moral truths (Fuhrmann, 1997). In the early 1800s, several institutions tried to move toward a more general education to prepare students for professions, but these initial efforts were primarily met with failure and were abandoned due to a lack of students being drawn to the relatively radical departure from normal program structure (Rudolph, 1990). The middle of the century, though, found general education gaining more of a foothold; efforts from individuals at specific institutions like Brown and Michigan combined with larger-scale changes like the Morrill Land Grant Act of 1862 all spurred changes in the curriculum from a standard classical approach to one that was more tailored to the individual (Boning, 2007). Charles Eliot, who became president of Harvard in 1869, devoted much of his energy to the development of the elective system as well, furthering the change in general education (Boning, 2007). Boning argues that the coherence of general education became completely fractured at this point, with students taking whatever courses they desired for electives to the extent that by the early 1900s, students receiving the same degree from the same institution could take a significantly different set of courses.

Looking for greater coherence and relationships between areas of study in the early to middle 1900s, institutions moved toward distribution requirements (Thomas, 1962). Stevens (2001) notes that at this point the movement to combine general education and major with electives began to take on more shape, arising out of the elective approach that grew as classical offerings such as Latin and Greek gave way to more generalist courses. Under Hutchins's guidance at the University of Chicago, students faced the knowledge that one-half of their degree would consist of required courses. This helped to provide students with an individualized education while ensuring a level of consistency among all students (Stevens, 2001). Hutchins's aim argued against the prior movement toward vocationalism and instead argued that common learning across areas, such as the Great Books curriculum, would benefit students regardless of their ultimate aim (Boning, 2007). Boning argues that the pendulum has swung two more times back to fragmentation, first in the 1960s with in loco parentis and students' demands for more ownership of their education, accompanied by the Higher Education Act of 1965. Beginning in the 1980s and continuing into the present, the effort has been to rearticulate and clarify general education models in a movement toward greater coherence once again. Now, students generally take some form of general education, combining skills in writing, mathematics, and foreign languages, along with a sampling of social science, natural science,

and the humanities (Stevens, 2001). Many institutions also build electives into major course work, further augmenting the general education requirement that is achieved through core curricula or distribution requirements.

The Role of General Education in Undergraduate Education

The role of general education in the context of an overall higher education degree program has developed over time to work hand in hand with the role of the major course of study—in other words, to ensure that breadth accompanies depth. The delicate balance between breadth and depth of learning has been pursued across the variety of institutional types with a wide range of missions over the history of American higher education.

Newton (2000) argues that there are generally three main models of general education that all engage with the four main tensions of general education and its reform: knowledge, learning, faculty, and content. The first of the three main models is the Great Books Model, which posits that the best mode of providing for intellectual breadth and student development is through a historical review of the most seminal works rather than learning the latest cutting-edge research within the disciplines. The second model, which Newton terms the Scholarly Discourse Model, takes the opposite approach in the belief that a general introduction drawn from several disciplines and the latest thinking within them is the best anchor for students' intellectual breadth and development. The third model discussed by Newton is the Effective Citizen Model. According to this third model, students are best served by intellectual bases in areas that will serve them well in the twenty-first century rather than nostalgic looks back or disciplinary fragmentation. In each, the desired outcomes, goals, and roles of general education are slightly different.

Several authors have suggested and supported through research that providing educational opportunities to facilitate student growth in the auspices of grooming the "well-rounded" student is critical to student success (Kuh, Kinzie, Schuh, Whitt, & Associates, 2005; Kuh, Schuh, Whitt, & Associates, 1991). Through this perspective, we see the development of an ideal of general education that draws attention to outcomes that are not content-reliant. In striving for student success through the fostering of the development of "well-rounded" students, general education efforts can be seen to reach beyond the classroom and touch upon students' experiences elsewhere on campus.

One such area that is cited as deriving from preparing "well-rounded" students is critical thinking. Critical thinking is often linked to general education through its inclusion in courses (Hatcher, 2006). This might be sought through the use of a variety of teaching methods and assignments, including problem-based learning. By including the development of critical-thinking skills into course work across general education requirements, students learn to think critically from a variety of disciplines and paradigms.

While some institutions might choose to require individual courses designed to address critical thinking, civic engagement, or writing, some work to infuse the desired outcomes associated with each of these components into courses throughout general education. For those institutions that seek to integrate these elements throughout the curriculum, evidence from the literature (see Boning's [2007] review of the swings between coherence and fragmentation in general education approaches) suggests that there is no cut-and-dried method for achieving these goals. No one particular manner of addressing general education, whether through core curricula, distribution requirements, or some other form or arrangement, seems to be better suited to integration across the curriculum.

Throughout the history of American higher education, the role of general education has been evolving. But despite the ways in which general education has been approached, the goals of general education have remained the same over time. Each institution uses its approach to general education in its efforts to achieve its educational mission of teaching.

From its earliest growth, American higher education has looked to those institutions considered to be the best for leadership in undergraduate education. As the educational atmosphere moved away from the rigid structure of the classical curriculum through the elective system and on to the elaborate offerings of plentiful majors we know today, the institutions regarded as the best of the best continue to be looked to for guidance. As the general education debate continues, and as we consider the merits of different approaches, we look again to the top institutions in the land.

Methods

This study sought to explore the current context of general education requirements through the ways in which they are employed by the top twenty-five institutions across two dominant institutional types: baccalaureate-granting (liberal arts) and doctoral-granting (research) institutions. The rankings of the institutions are drawn from data provided in *U.S. News and World Report*, which serves as one of the most recognizable ranking systems in American higher education, with far-reaching implications for college campuses (see Table 1; Kuh & Pascarella, 2004; Webster, 2001). In its ratings, baccalaureate colleges and universities are listed as "Liberal Arts" (*U.S. News and World Report*, 2004a), while the heading of "National Universities" (*U.S. News and World Report*, 2004b)

represents doctoral-granting institutions. There was a tie for the twenty-fifth position in the National University rankings, so a total of fifty-one four-year institutions were considered for data collection. In each case, the college or university Web site was visited to assess several elements and resolve our research question: What is the current status of general education requirements in topranked liberal arts and doctoral-granting institutions? Thus, the data collected included not only the specific requirement but also the nature and philosophy of that requirement and any corollaries, including but not limited to mission statements and guiding principles.

TABLE I U.S. News and World Report 2004 Rankings

Liberal A	rts Colleges	National Universities		
Rank	Institution	Rank	Institution	
1	Williams College	1	Harvard University	
2	Amherst College		Princeton University	
	Swarthmore College	3	Yale University	
4	Wellesley College	4	University of Pennsylvania	
5	Carleton College	5	Duke University	
	Pomona College		Massachusetts Institute of Technology	
7	Bowdoin College		Stanford University	
	Davidson College	8	California Institute of Technology	
9	Haverford College	9	Columbia University	
	Wesleyan College		Dartmouth College	
11	Middlebury College	11	Northwestern University	
12	Vassar College		Washington University (St. Louis)	
13	Claremont McKenna College	13	Brown University	
	Smith College	14	Cornell University	
	Washington and Lee University		Johns Hopkins University	
16	Colgate University		University of Chicago	
	Grinnell College	17	Rice University	
	Harvey Mudd College	18	University of Notre Dame	
19	Colby College		Vanderbilt University	
	Hamilton College	20	Emory University	

(continued)

TABLE I (continued) U.S. News and World Report 2004 Rankings

Liberal Arts Colleges		National Universities		
Rank	Institution	Rank	Institution	
21	Bryn Mawr College	21	University of California–Berkeley	
22	Bates College	22	Carnegie Mellon University	
23	Oberlin College		University of Michigan– Ann Arbor	
24	Mount Holyoke College		University of Virginia	
	Trinity College	25	Georgetown University	
			University of California– Los Angeles	

The data collected from institutions' Web sites consisted of philosophies that guide the development of general education offerings and requirements, course listings and descriptions of those courses included in the core curriculum, descriptions of the purposes of distribution requirements, and overviews of options that focus on the teaching of Great Books. The extent to which each of these items was available from each institution varied, based on the approach to general education employed by each institution. For example, an institution that utilizes a distribution requirement would not include descriptions of a core curriculum that mandates individual courses in which every student enrolls.

Findings

The philosophies presented for various general education models often recount many of the same values—preparation for life, citizenship, and lifelong learning—although their enactment differs. Indeed, this is the case in the philosophies and requirements at the top twenty-six doctoral-granting institutions and top twenty-five liberal arts institutions. Focusing on the stated missions themselves as a form of data is difficult, as the terminology is consistent in many ways. However, as is noted at Harvard University, "The Core Curriculum for undergraduate education at Harvard is both a requirement and a philosophy" (2008). By looking at the requirements, we see more of the enactment of the mission and can seek to make more sense of the desired outcomes.

Overall Models of General Education in Use

The most frequent form of general education being used across both institutional types is, as suggested, the distribution requirement. Seventeen of the twenty-six

(65 percent) doctoral-granting institutions and twenty of the twenty-five (80 percent) liberal arts institutions employ a distribution requirement. While this indicates that there is a difference, it is not necessarily an extreme one. But this does not mean there are no differences in how general education is handled across the two institutional types. Indeed, there are some clear changes that have occurred over time since Gaff and Wisescha (1991) considered the form of general education almost two decades ago. In their study, they found an average of eleven courses for thirty-three hours to be associated with general education: four humanities, one fine arts, one math, two science, and three social science courses. In 2006, the numbers had increased by an extra course at liberal arts institutions, going to thirty-six hours, and had stayed at thirty-three hours at doctoral-granting institutions, although the courses were spread over a more specified set of areas, including foreign language and quantitative reasoning (see Tables 2 and 3 for a specific breakdown and classifications).

TABLE 2 Breakdown of Requirements by Institutional Type Compared with Gaff and Wisescha's (1991) Study

Course Type	Aggregate General Education, 1991	Liberal Arts, 2006	Doctoral Granting, 2006
Language	0	2	2
Physical Education	0	1	0
Quantitative Research	0	0	1
Multicultural	0	1	1
History	0	0	1
Literature and the Arts	4 humanities, 1 fine arts	2 literature	1 literature
Science and Math	1 math, 2 science	1 math, 1 science	2 math, 1 science
Social Science	3	2	1
Writing	2	1	1
Other	0	2	
Total Courses	11	12	11
Total Hours	33	36	33
Average Hours	Unreported	35	34

Interestingly, three liberal arts institutions (Amherst, Grinnell, and Smith colleges) required no specific form of general education at all at the time the data were collected, instead leaving it to student and adviser to craft a meaningful program of studies for that student. Such a model does not necessarily imply

TABLE 3 Categorization of Courses by Area

Category	Courses		
Morality and Ethics	Religious Studies, Ethical Issues		
Language	English, any modern foreign language, including American Sign Language; no Latin		
Physical Education	Swimming, General Physical Education, Jogging, Crew, Aerobics, Weight Training, Walking, Tennis, Golf		
Quantitative Research	Project classes, Statistics, Advanced Statistics		
Multicultural	Studies of other cultures, study abroad		
History	American History, Western History, Art History, World History, African History, African American History, Asian History		
Literature and the Arts	American Literature, English Literature, Theater, Dance, Fine Arts, Music		
Science and Math	Basic Math, College Algebra, Trigonometry, Calculus, Biology, Chemistry, Physics, Geology, Zoology, Geography, Botany		
Social Science	Economics, Government, Psychology, Sociology, Political Science, Anthropology		
First-Year Seminar	Seminars on succeeding in schools, study habits, or specific school, college, or institution environment		
Writing	How-to classes on writing papers or thesis, Structure, Critical Analysis, Expository Writing, English Composition, general writing requirements element attributed to another class		
Other	Technology or Applied Science, International or Comparative Study, Creative Expression, junior or senior thesis; leisure activities; elective requirements		

that the institution does not value general education but may indeed indicate that the general education differs so much by individual student that only by crafting the entire educational program of study for the student can you truly develop breadth and depth in student learning most fully. This harkens back, at least in some essence, to the institutional approach some colleges and universities took prior to Hutchins's model at Chicago, with students having a wealth of electives to draw upon to accompany the major course of study (Boning, 2007). In such an approach, the role of the faculty or academic adviser looms large to ensure that the student does indeed get both breadth and depth.

In comparison, this lack of any general education requirement is an approach found in only one doctoral-granting institution, Brown University. At the remaining institutions the distribution requirement is the norm, while eight of the institutions use a true core curriculum approach. Institutions without

a distribution or core curriculum requirement tended to require a first-year seminar, at times to match up students with an adviser who might share their interests (see Elphick & Weitzer, 2000).

Amherst College, Grinnell College, Smith College, and Brown University all state on their Web sites that the faculty/student relationship and student need should drive curriculum development and as faculty are experts, they should be deferred to for matters regarding education and graduation requirements. For example, Brown University's (2005) philosophy is that "developing an individual, liberal course of study is central to a Brown education. A central aspect of this development is the relationship of the student with professors and fellow students and with the material they approach together. Structures, rules, and regulations of the University should facilitate these relationships and should provide the student with the maximum opportunity to formulate and achieve his or her educational objectives. Accordingly, the curricular structure and types of degrees offered at Brown reflect these objectives." This leads the discussion to one of open curriculum at both the liberal arts and doctoralgranting institutions. In that vein, in a white paper prepared by a consortium of institutions that included Brown, the following is asserted: "An open curriculum is based on the assumption that students learn best what they choose to study and that students should be regarded as active learners rather than passive recipients of information. A related value of the open curriculum is the belief that students will be best prepared for the opportunities and uncertainties of the future by developing confidence in their ability to explore and respond to difficult issues without a pre-given road map" (Teagle Foundation Working Group, 2006, p. 11). However, even Brown has areas of study that are "recommended," and the faculty members meet regularly to debate the value of continuing the open curriculum. As there is a possible movement into a third option or a form of general education—student- and adviser-constructed curricula—further analyses should consider the movement of distribution requirements over time to track whether the trend is toward more open and less onerous requirements or a tighter regulation and increased requirements, as well as to see if the nature of what is included in these programs has changed over time.

Rather than covering point by point the similarities and differences, the following subsections provide more detail about the main areas highlighted in Tables 2 and 3 that show differences between the institutional types.

Physical Education. Physical education is included more frequently as a requirement in liberal arts institutions (seventeen colleges) to provide for a more holistic or whole-body approach, but not as substantially as might be initially

supposed. Conversely, at doctoral-granting institutions, the physical education requirement existed at only nine of twenty-six institutions.

At the institutions that required physical education, it was generally limited to passing a swim test or taking one or two physical education courses, and the requirement was to ensure a healthy, well-rounded student. For example, Swarthmore College states that its goal "is to contribute to the total education of all students through the medium of physical activity. We believe this contribution can best be achieved through encouraging participation in a broad program of individual and team sports, aquatics, physical fitness, and wellness" (n.d.).

Foreign Language. A foreign language course or proven competency in a foreign language is common at both liberal arts and doctoral-granting institutions. Typically, when the requirement was stipulated at doctoral-granting institutions it was as part of the philosophy to ensure proper education. For example, Duke University believes it is important "for all Duke students to have a level of competency in a second language sufficient to enable them to engage meaningfully with another culture in its own language" (2005a).

At liberal arts institutions foreign language requirements were typically included to improve the breadth and depth of understanding and ability to interact with other cultures. Carleton College (2007) specifically states: "The goal of Carleton's language requirement is the learning of a second language in addition to one's native tongue. The process of learning a second language is in itself a valuable expansion of a person's perception of the world and one's understanding of English. Good literary and cultural texts can be excellent teaching tools both for developing linguistic skills and for stimulating student interest."

Quantitative Reasoning. Quantitative reasoning skill requirements were more common at doctoral-granting institutions with approximately three-fifths requiring, as opposed to liberal arts institutions where just fewer than 50 percent stipulated the requirement. Also, the underlying philosophy was different. At doctoral-granting institutions, quantitative reasoning was typically recognized to be a necessity for a properly educated person who wishes to conduct business or research, whereas at liberal arts institutions quantitative reasoning was imperative for a well-rounded person by giving one the ability to discuss worldly concerns. While both types of institutions stressed the importance of quantitative reasoning to the development of well-rounded or educated individuals, the outcomes beyond this general statement varied between the two groups.

At Yale University (2005), the following is communicated regarding the value of quantitative reasoning in undergraduate education: "The mental rigor resulting from quantitative study has been celebrated for as long as formal

education has existed, and applications of quantitative methods have proven critical to an astonishingly wide range of disciplines. An educated person must be able to make, understand, and evaluate arguments on the basis of quantitative information." On the other hand, Haverford College (2007) states that "quantitative reasoning is an extremely important skill. The impact of science and technology in our century has been enormous. Today, those who lack the ability to apply elementary quantitative methods to the world around them are at a severe disadvantage."

Writing Requirement. Both liberal arts and doctoral-granting institutions used first-year seminars slightly more than half the time, often in conjunction with writing seminars. The institutions that did not require writing seminars or specific components often stressed the value of writing and the inclusion of intensive writing in course work or offered writing workshops. Bates College (Bates College Catalog, 2005), for example, provides that "the College values students' ability to think critically and write clear, vigorous prose. The Writing Workshop helps students assess their needs and hone their writing skills through hour-long tutorials with members of its staff of professional writers. . . . Students may use the workshop to learn to analyze assignments, generate and organize ideas, revise drafts, and polish their writing." Additionally, at many of the institutions of either category there exist clear statements about the value of writing requirements. Duke University's (2005b) Web site specifically states that "effective writing is central to learning and communication. The Writing requirement is designed to provide students with sustained engagement with writing throughout their undergraduate career. The first-year writing experience helps students to develop the intellectual, organizational, and expository skills appropriate to university study. Later writing-intensive courses link writing to various fields of study, thereby providing students with the opportunity to deepen these skills."

Discussion

The findings of this study suggest that significant differences exist between the top-rated institutions in both the liberal arts and research categories. However, these very differences support the idea that liberal arts and doctoral-granting institutions may see their missions and foci differently. We know that the focus of the institution as a whole is different given the Carnegie divisions of them, but much of this is due to the type of degree offered and the number of them or the type of research funding (McCormick, 2007). McCormick rightly notes that the *U.S. News and World Report* college rankings fail to take into account certain aspects of the Carnegie typology even though they draw on the Carnegie

Basic Classification system. For example, the national/regional issue is part of the division *U.S. News and World Report* uses as its breakdown for comparison groups, but McCormick argues that this is misguided. While it may be limiting and imprecise, the fact is that the institutions ranked highly by *U.S. News and World Report* (2004c) as Liberal Arts institutions or National Universities do differ in their focus on undergraduate education. Furthermore, those institutions that do well in the ranking, or do well in general, are looked to by their peers for keys of how to structure their own college or university programs (see Jaschik, 2006, for example). The Carnegie Foundation (2008) has changed its institutional typology several times over the past decade and a half, with the claim that it has at times been used or seen by institutions as a hierarchy, with colleges and universities wanting to "climb the ladder" to a better or more prestigious level, possibly ignoring or subverting their mission in doing so.

This concept of institutional isomorphism or drift has been cited or studied often in the past decade (see, for example, Dey, Milem, & Berger, 1997) and mirrors the concept that institutions not in the top twenty-five of the college rankings may seek to be like those that are. As Jaschik (2006) writes, Harvard has long been viewed as having an impact on the curriculum nationally through its decisions locally; other institutions watch to see what it will do. Not dissimilarly, many institutions watched and waited to learn of the outcomes of the Supreme Court's rulings on Michigan's admissions policies. The existence of differences between the two institutional types, then, may be a sign that these top-ranked institutions, at least, are focused very intently on their mission and structure, and this may be the cause of some institutional differences. They do not necessarily look to be like one another, which would be an excellent sign in light of the Carnegie Foundation's (2008) experience of institutional desire to "move up."

While the use of distribution requirements is prevalent in higher education in both institutional types, the existence of greater focus on quantitative reasoning at doctoral-granting institutions and the higher level of physical education requirements and open curricula at liberal arts institutions may fit with the Carnegie typology expectations. Specifically, liberal arts institutions are a curious mix on the issue of the use of a particular overall general education model, of using a distribution requirement or a core curriculum. Perhaps because of their smaller size and generally smaller resources, they are reticent to adopt a core curriculum model in which specific courses are delimited as "core" courses. Liberal arts institutions, which "emphasize undergraduate education," might be expected to have the most specific set of general education rules possible, more so than national or research universities, many of which, while they "offer a wide range of undergraduate majors as well as master's and doctoral degrees[,] . . . strongly

emphasize research" (*U.S. News and World Report*, 2004c). Instead, the liberal arts institutions run an interesting gamut of general education methods; on the one hand, they widely use distribution requirements to assure breadth, while on the other hand, they are also at the forefront of leaving the entire curriculum open to negotiation between the adviser and the student. Regardless, they are less likely to have a specific set of core curriculum courses as such than doctoral-granting institutions.

Liberal arts institutions also are dedicated to the holistic development of the student; the higher percentage of these institutions requiring some sort of physical education requirement suggests a larger focus on healthy living or active lifestyle as a part of education than at doctoral-granting institutions. Perhaps these activities are considered extraneous or beyond the scope of the curriculum at more research-oriented institutions, but it is a clear indication that the holistic student is a more central concern in liberal arts general education thoughts than at doctoral-granting institutions. On the other end of the spectrum, doctoral-granting institutions are more likely to require the quantitative reasoning requirement, which fits with the more research-oriented mission of these institutions. While the doctoral-granting institutions are devoted to getting students a breadth of knowledge that challenges them to develop widely, just as liberal arts institutions do, the doctoral-granting institutions do appear to have a greater proclivity to ensuring student quantitative abilities. Both sets of institutions, however, were devoted to foreign language (which at times is considered a cultural element) and use of the first-year seminar as a way to access and impact these students.

First-Year Seminars

First-year seminars can serve a number of functions and often vary greatly across institutions. Certainly at the very least, as Ishler (2003) so appropriately notes, the first-year seminar and general education share many of the same overarching goals. Much like general education, a great deal of the design of the first-year seminar experience has been based on theories of student development and retention (Engberg & Mayhew, 2007). As such, the grounded nature of these seminars has caused some (see, for example, Engberg and Mayhew's conclusions) to laud that such experiences be available to students in all years rather than just those in their first year. Given the espoused universal benefits of these seminars, it seems that the optimal first-year seminar model would be linked to broader institutional general education efforts. Through such offerings, students are exposed to topics that not only are likely to aid them in being successful and persisting in college but also provide links to curricular offerings across the

institution. The first-year seminar also provides a form of cohorting that allows students to develop links and bonds with peers trying to find their way, at what for many is a critical time in their college persistence decisions, the first six weeks and first semester (Engberg & Mayhew, 2007).

An element that is often coupled with the first-year seminar is a shared reading experience, in which incoming first-year students read the same text and spend time with the cohort of their first-year seminar course discussing the text, what lessons can be gleaned and applied to their college experience, and the links that can be established from the book to general education. The texts chosen for the shared reading experience run the gamut from what might be considered classics to books that are considered controversial. The University of North Carolina at Chapel Hill's selection of a controversial book about the Koran received national attention in 2002 (see Hoover, 2002).

Institutional Mission, Guiding Principles and Philosophies

Beyond mission statements, a number of the institutions provide detailed explanations of the principles and philosophies that guide their approaches to general education. The use of such guiding principles and philosophies suggests that those institutions take a more substantive approach to constructing their general education approaches. By detailing their approaches to general education, institutions leave little room for guesswork on the part of students or faculty. While many explanations of principles and philosophies are vague, it is perhaps their very existence that is as important as what they say. The extra thought put into a guiding principle or set of expectations for desired undergraduate student outcomes is an important institutional guiding force, as well as an important symbolic aspect in the unspoken and ongoing public domain ebb and flow of approaches to general education (see Boning, 2007).

While the use of distribution requirements over core curricula is more common among the top institutions in both the liberal arts and doctoral-granting categories, this does not suggest that the use of core curricula is dying out or giving way to distribution requirements or other avenues of general education. Both approaches have strong support among these two groups of institutions, and regardless of approach, the use of either is most often coupled with detailed explanations of the approach and the underlying principles by which it is guided.

Area in Flux

As can be seen from the models, there has been change over the past decade and a half, and there is a difference across institutional types. But an important caveat to

looking at these differences is that the very state of general education is in constant flux. Consider the example of Harvard, having proposed one of the hallmarks of general education when it formed its core curriculum in 1978 (Wilson, 2006). Harvard's efforts to revise its core over the years have been widely publicized. On its Web site regarding the core curriculum, Harvard University (2008) notes, "In contrast to Harvard's former General Education program, the Core Curriculum is far more specific in identifying both the areas and approaches to knowledge that students ought to experience as part of their undergraduate education." However, even now, Harvard is still in the news for considering other changes to its core. Jaschik (2006) notes that the faculty have bounced frequently in their discussions between moving from their famous core curriculum to a distribution requirement and then back the other direction to a revised core curriculum. Updating the core detailed in 1978, the new model would require students to take seven courses from the following areas: cultural tradition and change, ethical life, the United States and the world (one on the United States and one on the world), reason and faith, and science and technology (one in each area). The growth of the reason and faith component, in many ways one of the more revisionist issues, mirrors efforts across campuses to consider more carefully the spiritual development of today's students. The core is also seeking movement toward incorporating more of the students' extracurricular lives into their course work, in an almost modified activity-based earning approach (Jaschik, 2006; Wilson, 2006).

Implications for Practice and Research

Although the two methods of core curriculum and distribution requirements dominate the structure of general education requirements, other approaches may be emerging. Nesteruk (2005) advocates for what he terms an optional curriculum, in which students choose from a variety of core curriculum options. Through Nesteruk's proposed optional curriculum, a student would choose a particular focus, and course selections and other experiences would be drawn from that focus. Through such an approach, students' experiences become integrated through the relationship between courses and the focus or theme. The approach by one doctoral-granting institution, Brown, and three top-ranked liberal arts institutions to have an open curriculum is another alternative reappearing on the general education landscape now. In practice, this may give other colleges and universities pause to consider what their peers are doing and why and whether to follow current trends or not. For individual students, these findings suggest they not only think carefully about the best fit for their prospective major but also consider how differently these two particular institutional types enact general education and reflect on what fit is best for them.

What this study reveals is more than a snapshot in time of the approaches to general education by the top institutions in the country. The growing use of distribution requirements and optional curricula reveals that the way we define core is changing. The days of a list of required courses and sequences outside of the major are waning. Because it is an ever shifting line in the sand, however, continual review of the status of general education will need to be undertaken, a regular barometer of the temperature of the field.

Other helpful research is yet to be done as well. One area that needs more research is the extent to which other institutions outside these top-ranked ones mirror or are dissimilar from the ones in this study. Second, more work needs to be done to see if indeed more meaningful interpretations can be made of the philosophical statements institutions include with their core curricula. Also, there is work to be done to establish just how "common" the common shared curriculum is. Even if we know how similar distribution requirements are, the fact of the matter is that exposure to subject areas in this way can still take a great number of roads. Do entry-level courses in biology use the same texts, the same information, across institutions? In a hard science, as typified by Biglan (1973), perhaps it would be fairly consistent. But what about in the literature and arts fields? Or in the cases of colleges with a core curriculum and a requirement for moral reasoning? Just how consistent is such a requirement across institutional types? Much more research of that vein is needed to tell us just how germane (or not) more broad approaches like this one are. There is more yet to be known about the ways in which we discuss general education. Should we rely on the ways in which we label approaches to general education, we may be comparing apples to oranges. We need to go beyond the labels we employ in order to really begin to understand the similarities and differences that exist in approaches to general education.

Limitations

While revealing, the findings of this study are limited, due in large part to the examination of a small number of institutions. Fifty-one institutions cannot be said to be representative of the curricular approaches to general education of the more than three thousand four-year institutions currently operating within the United States. Despite this limitation of breadth, the institutions included in this study provide a point at which to begin such an examination. This group of institutions, with the prestige associated with their rankings, serve as exemplars in American higher education and therefore are a suitable starting place to begin the comparisons offered in this study.

Conclusions

The debate over the best delivery of general education, whether through a canon of Great Books, a core curriculum of specific courses and course sequences, or a distribution requirement of course types providing for greater student choice, has existed for generations. Today, the debate plays out in practice across the top-rated colleges and universities in the two most dominant institutional types: liberals arts and doctoral-granting institutions.

As shown through the findings of this study, for each similarity that exists in approaching general education, so too do differences exist. Despite any differences or disparities, however, there are common elements, common outcomes, that are valued by these top institutions. Whether through the language and rhetoric of core curricula, distribution requirements, Great Books, or optional curricula (Nesteruk, 2005), there is something core to general education. In working to achieve their missions to furnish the mind, top institutions seek to instill in students the values that guide the teaching, service, and research of those institutions.

What does the future hold for the ways in which the nation's top colleges and universities approach general education? Only time will tell. The most dominant of approaches to general education, core curriculum requirements and distribution requirements, meet the goals of general education for their institutions. But for general education to meet the needs of every institution and its students, then the approach taken must reflect each institution's mission and its guiding principles and philosophies.

General education is likely to face subsequent waves of reform as higher education continues to evolve to meet the needs of a changing world. Just as the classical curriculum served the colonial colleges, so too might a new wave in general education meet the needs of twenty-first-century colleges and universities. In order to understand our own evolution, we must examine the practices of those institutions that we consider to be the benchmarks of American higher education: the top-rated liberal arts colleges and research universities.

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