

REPORT TO THE YALE COLLEGE FACULTY ON THE PROGRESS OF THE CYCE¹

by the
CYCE Progress Review Steering Committee²

November 2011

For discussion at the December 1, 2011
Yale College Faculty Meeting

¹**Committee on Yale College Education**

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November 28, 2011

Dear Members of the Yale College Faculty,

During the past year, over a dozen committees of Yale College faculty, students, and administrators have taken a careful look at the curricular and programmatic changes implemented starting in the fall of 2005 that pertained to the Class of 2009 and beyond. These changes were recommended by the Committee on Yale College Education (CYCE) in its 2003 report. In the pages attached, the Steering Committee of the review reports on what we've learned about the changes put into place and where we still have work to do. I'm pleased to say that we have made major strides toward meeting the goals of the CYCE in most areas, and we point with a genuine sense of accomplishment to our progress. There are also some major challenges, especially in teaching.

Some notable features and recommendations of the report:

- **Internationalization:** The number of international summer experiences taken by undergraduates has tripled, and the total number of international experiences has doubled. We met the goals for increasing and diversifying the international population of undergraduates. We are continuing to develop programs that engage local resources and international opportunities, such as Global Health Fellows.
- **Foreign language requirement:** The total number of language course enrollments is steady, but with shifts among languages and levels. Over 60% of our students exceed the new language requirement. The Center for International and Professional Experience continues to seek additional opportunities for expanding summer experiences abroad, both in language study and internships.
- **Teaching and learning in Science, Technology, Engineering, and Math (STEM) disciplines and the Quantitative Reasoning (QR) requirement:** More than 80 courses for non-science majors and students with limited quantitative background have been developed or substantially enhanced, around 50 of which are offered in any year. The Science and QR Councils offer serious scrutiny of these courses, resulting in much more consistency in their rigor. Non-majors still report dissatisfaction with their experiences, and attrition from STEM majors remains too high. We also need to give further attention to math and statistics teaching. The deferral of improvements to undergraduate science and engineering facilities with the economic turndown has squeezed teaching and learning opportunities, and we need to advance the upgrading and expansion of teaching laboratories in the near term, but with a forward-looking program.
- **Writing (WR) requirement:** Studies of the writing portfolios for the Classes of 2008 and 2010 show greatest improvements for many students when English 114 is the students' first WR class. To that end, we will work to expand capacity in English 114. We must also promote WR courses in majors outside the humanities for upper-level students.
- **Arts:** Seven new or renovated theater spaces have been created since 2000. The new position of Associate Dean for the Arts has made possible the coordination of relationships between professional schools and undergraduates. Facilities, especially Hendrie Hall, need to be upgraded

and expanded, and we need more opportunities for non-majors to take arts courses. We also need to study further the question of arts creation and performance in the curriculum.

The current report also treats advising and the nature of the freshman academic experience. I have commissioned a separate review of the work of the YCDO in these areas, and will report back when that study is completed later this year.

Despite these many achievements, education in Yale College still has many challenges to meet. Let me return to the starting point that the CYCE established for the entire review and its recommendations in 2003. This item is the first of that document to appear in boldface, and should be held as the framework for all that came afterward:

... the Committee on Yale College Education reaffirms the central place of teaching in the Faculty of Arts and Sciences. If superiority of scholarly accomplishment is necessary for faculty appointments at Yale, excellence in teaching must also be given substantial weight in all hiring and promotion decisions. The University's high expectations about both teaching and scholarship should be made clear when new members join the faculty. We urge that Yale take as great pains to support the teaching aspirations of its faculty as it does their research activities, and that Yale celebrate outstanding teaching and scholarship in every possible way.

It is this mandate that needs our closest attention, notwithstanding much excellent teaching across Yale College. Many of the challenges that have been identified in these past twelve months with the undergraduate curriculum could and would be addressed by making excellence in teaching our highest priority in undergraduate education.

In the statement above, we proclaim that teaching matters, but look at the contradictory messages we also give out: we grant faculty leaders “relief” from teaching, and we call it a “teaching load” rather than a responsibility or, even a privilege, in that we teach engaged students who expect challenges. Despite much rhetoric about teaching, what do we do as an institution to reward it? What steps have we taken to *learn* how we teach and how we might be yet better teachers? Both at Yale and beyond it, the past ten years have been marked by new research about learning. Although we practice some new kinds of pedagogy, for example, in launching online courses, and many faculty have benefited from their work with existing teaching resource centers, there are practices we could introduce to promote better teaching more broadly.

Since the CYCE report was released in 2003, other major reports and policy decisions have changed the landscape at Yale. They must be taken into consideration. The Faculty of Arts and Sciences Tenure and Promotion report (FASTAP) opened opportunities for FAS junior faculty members, especially with respect to research leaves in order that they be better prepared for promotion, but this has resulted in junior faculty spending fewer semesters in their first years teaching our students. This change in the timing of faculty leaves may have shifted the culture and continuity of undergraduate teaching. Simultaneously, market forces have resulted in reduced teaching for faculty in some departments.

Another factor is the decision the University made in 2007 to increase the size of Yale College and to create two new residential colleges in order to do so. A report on this subject identified areas where academic resources would need to grow in order to sustain a 15% expansion of the student body. Given this, any review of the CYCE must ensure that Yale will be ready to accept 200 additional new freshmen in four successive years, starting in 2015 or in 2016.

We all know the impact that Yale College alumni have, not just on the direction of this University, but also on the nation and the world, in their leadership across all fields of human activity. Growing by 15% can make a real difference. Yet growing Yale College simply by adding 15% more classrooms or 15% more sections of English 114 and expanding Language and QR courses for non-majors by 15% would be to miss an opportunity. We should think of such growth as a time to re-think, re-imagine, and re-commit ourselves to teaching in the 21st century. We should view this moment as a once in a lifetime opportunity for the institution.

We will be much better prepared to commit to this enhanced cohort of students if we address the challenges of teaching more effectively *now*. Yale has taken other bold steps recently, among them launching a liberal arts college with the National University of Singapore and developing research institutes on West Campus. We can make a transformative difference right here by dedicating ourselves anew to undergraduate teaching.

Let's invest our next wave of energy in Yale College and the Faculty of Arts and Sciences, and let's start by identifying and then establishing initiatives and incentives to promote stronger undergraduate teaching and mentoring. We need to take advantage of the latest research into pedagogy and to sort among the various new techniques and technologies for teaching inside and outside the classroom. We need to find the most appropriate ways to tie our vibrant extracurricular culture to the aims of our curricular education. We need to find in teaching a vital experience of rediscovery and rejuvenation. We need to honor the traditions of undergraduate teaching and learning in Yale College by reinvigorating them to shape the lives of our faculty and students.

We began this review with the understanding that its mission would be simply to report on what we have done thus far towards the implementation of the CYCE proposals. We know now where we stand in our progress to fulfill those goals. Having done so much and come so far, we need to press on further and rededicate ourselves to the principal mission of that report — and of Yale College — the teaching of our undergraduates.

Yours truly,

Mary Miller
Dean of Yale College
Sterling Professor of History of Art

REPORT TO THE YALE COLLEGE FACULTY ON THE PROGRESS OF THE CYCE

In 2001, following the Tercentenary of the University, President Levin appointed a Committee on Yale College Education (CYCE) to “assess the adequacy of the current undergraduate program and to consider changes and improvements.” The common question directing the inquiry was “What will an educated person need to know a decade or two from now, and what steps can Yale College take to ensure that students are given the best preparation for the future world?” Thirty faculty members, four recent Yale graduates, and eight undergraduates spent sixteen months examining the character of education in Yale College. Their report – the first on Yale College education in over 30 years – constituted a rethinking of what Yale students should be required to study to become educated citizens of the world, keeping in mind the balance among breadth and depth and requirements and electives. The faculty engaged in spirited discussions about the perceived changes in the demographics of the student body, the goals of undergraduate education, and the challenge of reconciling the needs of a liberal arts college with those of a great research university, before recommending the full implementation of the report.

The CYCE (CYCE refers in this document both to the report and to the committee that wrote it) resulted in specific changes to the distributional requirements and in larger changes that affected the academic life of Yale undergraduates. In place of the previous requirement of three courses in each of four distribution groups (I: Language and Literature, II: other Humanities, III: Social Sciences and IV: Sciences), the CYCE proposed two courses in each of three broad areas: Humanities, Social Sciences, and Sciences. The CYCE also determined that showing “distance traveled” in three skills areas – Writing, Quantitative Reasoning, and Foreign Languages – would best serve students in their lives and in their future careers. Too many students, it reasoned, gave up one or more of these important skills after leaving high school and thereby neglected the opportunity to “mature and deepen” these important competencies. (See Table 1 on the next page for data on meeting distribution requirements under CYCE compared to the previous requirements.)

Table 1. Former Distribution Requirements Before and Since CYCE*

# of credits	Group I (Langs & Lits)		Group II (Other Hum/Arts)		Groups I and II (Humanities/Arts)		Group III (Social Sciences)		WR Courses
	Pre- CYCE	CYCE	Pre- CYCE	CYCE	Pre- CYCE	CYCE	Pre- CYCE	CYCE	CYCE
Fewer than 3	0%	6%	0%	17%	0%	0%	0%	12%	39%
3	9%	6%	8%	12%	0%	0%	10%	9%	23%
3.5 - 5	18%	19%	18%	19%	0%	3%	18%	14%	22%
5.5 - 8	32%	36%	22%	19%	5%	14%	18%	15%	12%
8.5 - 10	13%	13%	10%	8%	9%	13%	8%	9%	3%
More than 10	28%	20%	42%	25%	86%	70%	46%	42%	1%
# of graduates	7,742	2,432	7,742	2,432	7,742	2,432	7,742	2,432	2,432

This table shows a decline in the numbers of humanities credits taken by students, consistent with national trends. Nonetheless, most Yale College students take more than 10 credits in former Groups I and II and Yale students major in the humanities at a higher rate than do students at other Ivies and private research universities. The slight decline in social science credits taken is counter to the increase in Yale social science majors.

# of credits	Group IV (Nat Sci, Engr, Stat, Math, Comp Sci)		Group IV N (Nat Sci, Engr)		Sc Courses	QR Courses		Sc and/or QR Courses
	Pre- CYCE	CYCE	Pre- CYCE	CYCE	CYCE	Pre- CYCE	CYCE	CYCE
Fewer than 2	0%	6%	1%	20%	0%	32%	0%	0%
2-2.5	0%	16%	35%	32%	44%	13%	35%	0%
3	41%	21%	26%	12%	18%	9%	15%	0%
3.5 - 5	21%	19%	9%	8%	10%	15%	16%	46%
5.5 - 8	8%	7%	4%	4%	5%	16%	16%	13%
More than 8	30%	30%	24%	24%	23%	16%	18%	41%
# of graduates	7,742	2,432	7,742	2,432	2,432	7,742	2,432	2,432

The 20% of CYCE graduates who took fewer than 2 credits that would have counted as Group IVN under the old system illustrates the differences in definition of natural science courses in the two systems. Some current Sc classes in ANTH, PSYC, PHIL and other departments would not have counted as Group IVN.

*Note: Pre-CYCE classes are YC03-YC08. CYCE classes are YC09-YC10 (only students who matriculated in fall 2005 or later). Transfer students are excluded.

Going beyond this, the CYCE required a sea change in the kind of University Yale should be: global. It mandated not only better care and nurture of the increasing number of Yale students admitted from abroad, and a different pace for growing Yale's international curriculum, but a different attitude towards international experiences for Yale students and a strong mandate to provide resources for these experiences.

The CYCE also reaffirmed in the strongest terms the central place of teaching in the Faculty of Arts and Sciences and urged that "Yale take as great pains to support the teaching aspirations of faculty as it does for their research activities."

Finally, the CYCE recommended increases in small classes for freshmen and sophomores, improvements in undergraduate advising, strengthening of arts education in Yale College, capitalizing on the neighboring professional schools, and a requirement that departments and programs undertake regular reviews of their undergraduate offerings in light of the larger aims of a Yale College education.

How we have done in implementing these recommendations is the subject of this progress report.

CHARGE TO THE STEERING COMMITTEE

"Distance Traveled" since the Review

The faculty approved the CYCE report in 2003 and the new curriculum launched in Fall 2005 with the Class of 2009. At the time of the vote, the faculty further mandated that the initiatives it had proposed should be reassessed and evaluated in a timely fashion. The discussion about requirements had opened many difficult philosophical questions about what the balance between requirements and electives should be in a liberal arts education and whether we are educating our students as we aspire to do. The mandate was intended to require faculty and the Yale College Dean's Office to continue assessing progress and keeping the knotty questions fresh in their minds.

On the strength of this, in 2010, Dean Mary Miller asked over a dozen committees of Yale College faculty, students, and administrators to take a careful look at the curricular changes, and a CYCE Review Steering Committee (called "Steering" in this document) to

assess their findings and to pursue some additional questions, all described in the Appendix³. “My goal in convening this new committee,” wrote Dean Miller, “is not to repeat the work conducted by the CYCE – but to understand whether the curriculum now fulfills the mission we set for ourselves in 2003.” (Data in this report extend through Fall 2010.) What exactly has happened in the last years with the new skills requirements: Foreign Language, QR, and Writing? Have those areas evolved as the CYCE had hoped? Has the change in distributional requirements made positive change? Have the culture and teaching of science and engineering been enhanced with the new requirements and initiatives? Has Yale become more global? Have international opportunities increased and has Yale opened itself more to the world? What distance has Yale traveled in its effort to ensure that teaching holds a central place in Yale College? These (in addition to other queries) are the questions that the faculty was asked to stop and consider after the first two classes graduated under the new requirements and programs.

THE COMMITMENT TO INTERNATIONALIZATION

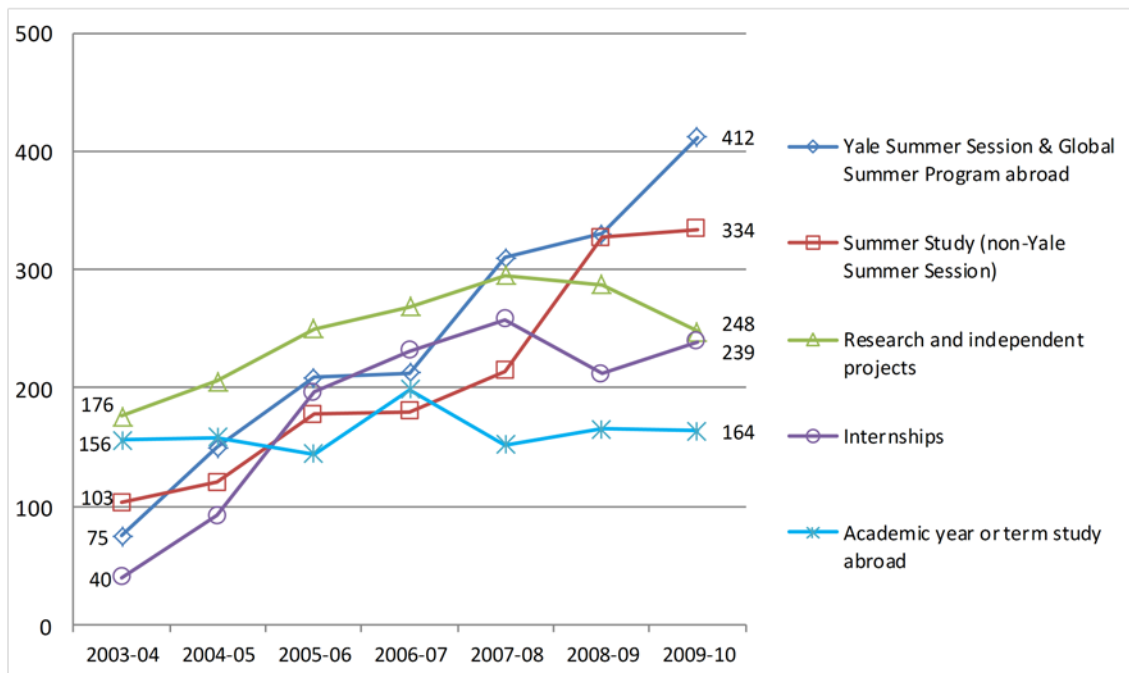
The greatest effect of the CYCE has been to make Yale students vastly more aware that they are citizens of the world. The shift is profound and definitive. Yale is becoming global, and so, too, is Yale College.

Of course Yale students now live in a culture of internationalization: the World Fellows Program, the Center for the Study of Globalization, the MacMillan Center, the new Jackson Institute, the development of Yale-NUS in Singapore, initiatives in China and India, and over 800 faculty projects abroad, as well as the scores of programs Yale’s graduate and professional schools run jointly with other countries surround Yale College students. These programs contribute to a culture of awareness of the world beyond Yale’s gates. In 2000, just before its Tercentennial year, the University began offering need-blind admission and full need-based aid for all international students, yielding a more heterogeneous population of students on campus.

³ The Appendix lists chairs and members of the Steering Committee plus the 14 working groups (mostly standing committees of Yale College) that provided information to Steering. Also included are charges to these groups plus CYCE goals where appropriate.

Nothing, however, has done more to give Yale students an international view than has enabling them to have an international experience. The CYCE affirmed that “Yale undergraduates should be expected to gain experience of the larger world and to plan their time abroad as an integral part of their Yale education.” Among the most passionate supporters of this initiative were the student members of the CYCE who insisted that the recommendation of working “toward the goal of funding the financial need of any student pursuing a Yale-approved opportunity abroad” become a part of the document. As a result of this recommendation, the University stepped up to provide the unique International Summer Award (ISA), a one-time waiver of the self-help contribution expected of students on financial aid, plus a percentage of the student’s summer study abroad budget. With a new dean and a Center for International and Professional Experience providing outreach and support, enhanced new internships, new summer session programs abroad, and with the means to access and make the most of them, students have developed a new global vision and have acted on it. In 2003-2004 students participated in more than 500 international experiences; in 2009-2010, that number was almost 1,400 (see Figure 2).

**Figure 2. International Experiences in Yale College
2003-2004 to 2009-2010**



Note that summer experiences are included with the preceding academic year. For example, experiences in 2010 are included in 2009-10.

The CYCE also highlighted “the academic study of the international world” and urged the enhancement of curricular opportunities for study. In the last eight years, new majors in Modern Middle East Studies, South Asian Studies, and Global Affairs have launched; new inter-disciplinary faculty appointments have been made through the MacMillan Center and Jackson Institute. New programs continue to emerge: the World Performance Project began in 2006; a new fellowship program in Global Health began in Summer 2011. Continued work is needed in the Faculty of Arts and Sciences in galvanizing all departments and programs to better support international experiences, finding institutional partners and academic programs abroad, and integrating experience abroad with language programs.

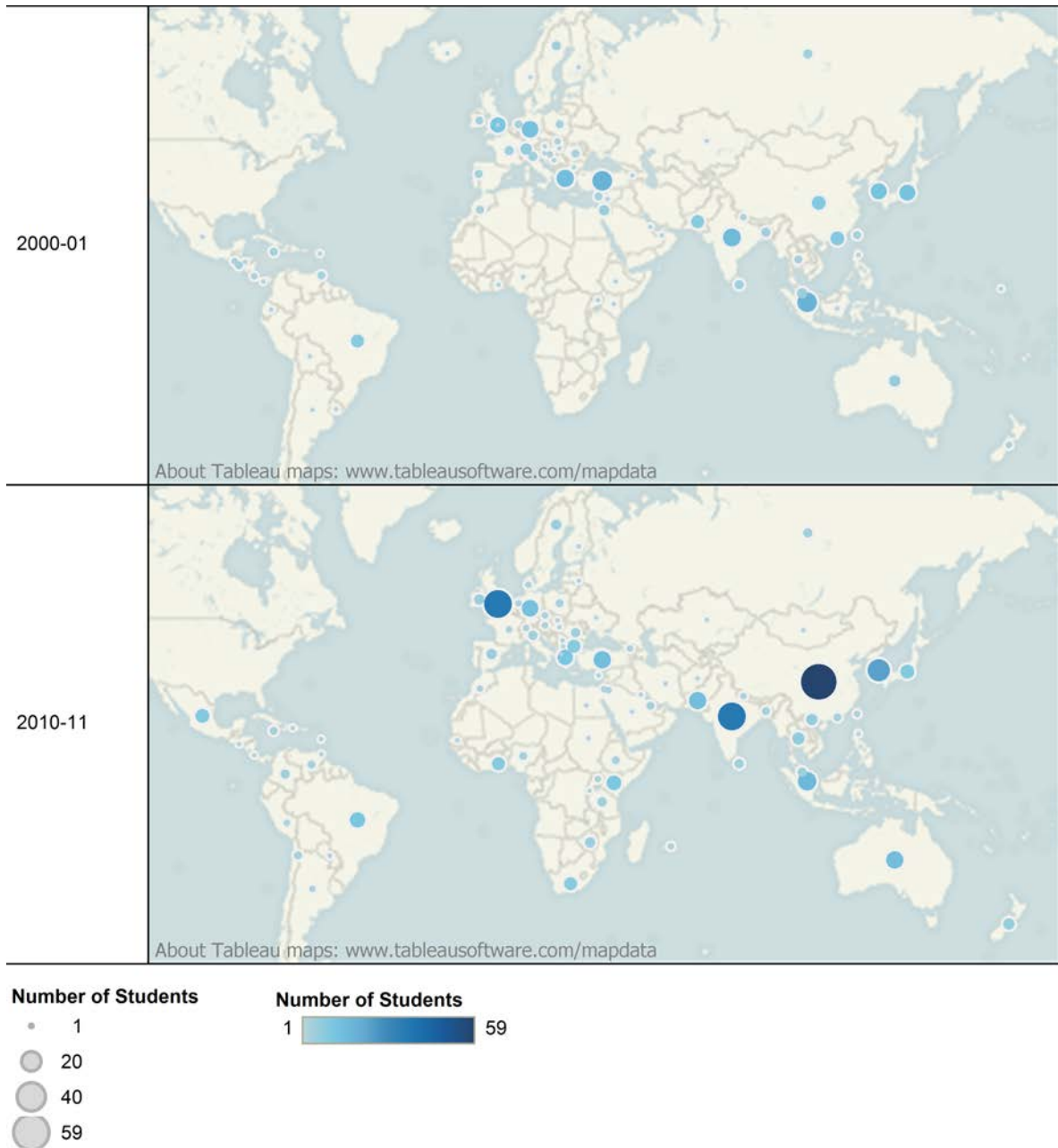
Equally important to the internationalization of Yale College is the experience international students have while they are at Yale. Although there is always more to be done, Yale – with the help and support of its Office of International Students and Scholars (OISS) – can claim remarkable success. The percentage of international students in the freshman class increased from 7% in the class of 2004 to 11% in the class of 2014. As Figure 3 (next page) shows, the number of students from China, India, and Africa has increased substantially.

Senior surveys from 2008, 2009, and 2010 and findings from the 2007 International Student Barometer show generally high levels of satisfaction among international students with the academic experience and with campus life. They feel generally well oriented and well integrated, despite the initial challenges of studying full-time in a foreign language and sometimes entering a radically different culture. Understandably, some international students need additional support in academic and other advising, and Yale College is attuned to these needs. Steering believes one cannot identify an institution where international students are better served than at Yale.

LANGUAGE STUDY

The teaching of language benefits from Yale’s rigorous and highly professionalized language-teaching staff, its Center for Language Study with advanced technological and pedagogical support (established in 1998), its Directed Independent Language Study (DILS) program, and most recently, its Fields program, in which students pursue advanced-level language study within the context of their academic area. Collectively, they have

**Figure 3: Citizenship of Non-Canadian International Students in Yale College
2000-2001 and 2010-2011**



The size and shading of the circles represent the number of students enrolled in Yale College from each country. Canadian students are omitted to show more variation in enrollment from other countries.

Canadian enrollment was 87 in 2000-01 and 71 in 2010-11.

Total international enrollment was 358 in 2000-01 and 524 in 2010-11.

developed a culture in which language learning is seen to be important, not only because it teaches mental discipline and is instrumental in developing a deep understanding of other cultures but also because it manifests an institutional recognition that language structures our experience of the world.

Before the CYCE, students who could demonstrate that they had reached a high level of expertise in language study were exempted from engaging in language coursework at Yale. Those students at a beginning stage in language study were required to study a language through the intermediate level – usually four semesters of study. The CYCE changed this and mandated “distance traveled” in post-secondary study of language while at Yale. All entering Yale students, even those with an advanced grasp of a foreign language, must now take at least one course in a language previously studied or at least two semesters of study in a new language. The thinking of the CYCE was that educated citizens in the 21st century would be advantaged by substantial foreign language proficiency. In not requiring language study of those who had accomplished the most in that area, the College was inadvertently ensuring that some of its best language students would never experience the possibilities for growth in this area and the advantages of language fluency for their future lives and work. At the same time, the CYCE reduced the number of semesters of study required for beginning students to three, hoping that more possibility for study abroad would incentivize students for further language study beyond New Haven.

In the discussion of the CYCE report in faculty meetings in 2003, the most controversial issue had to do with the change in the language requirement. Some language faculty were concerned that by reducing the number of semesters required for beginners to fulfill the language requirement, the commitment to language study was diluted. Studies of the classes of 2009 and 2010 demonstrate that the change in foreign language requirement has shaped the particular course selections students make but has not resulted in overall lower numbers of enrollments in language study. In addition, more than 60% of students exceed the current language requirement. (See Table 4 and Figures 5 and 6 on the following pages for patterns of language course taking and enrollment.)

**Table 4. Distribution of Foreign Language Credits Taken
YC03 – YC10**

	# of Language Credits Taken	
	YC03–YC08	YC09–YC10
None	10%	1%
1 – 1.5	7%	14%
2 – 3	20%	18%
3.5 – 4.5	10%	25%
5 – 6	28%	15%
More than 6	24%	28%
# of graduates	7,742	2,432

Figure 5. Language Enrollments by Level of Language

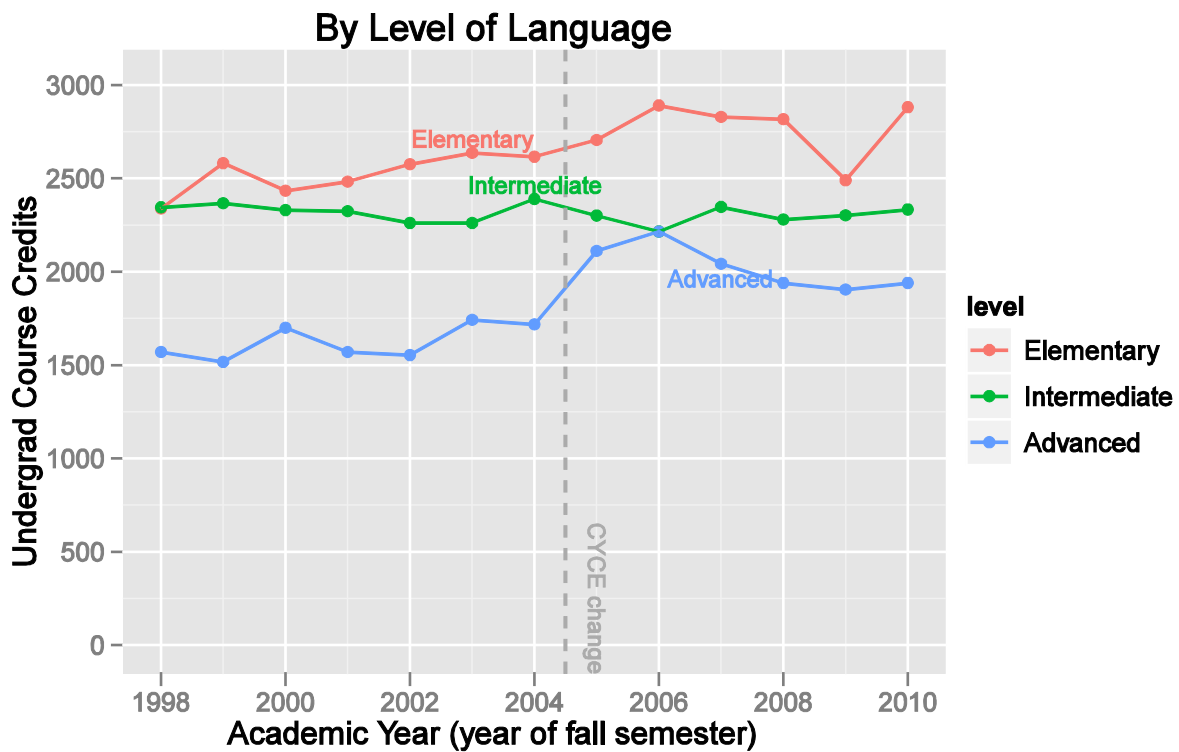
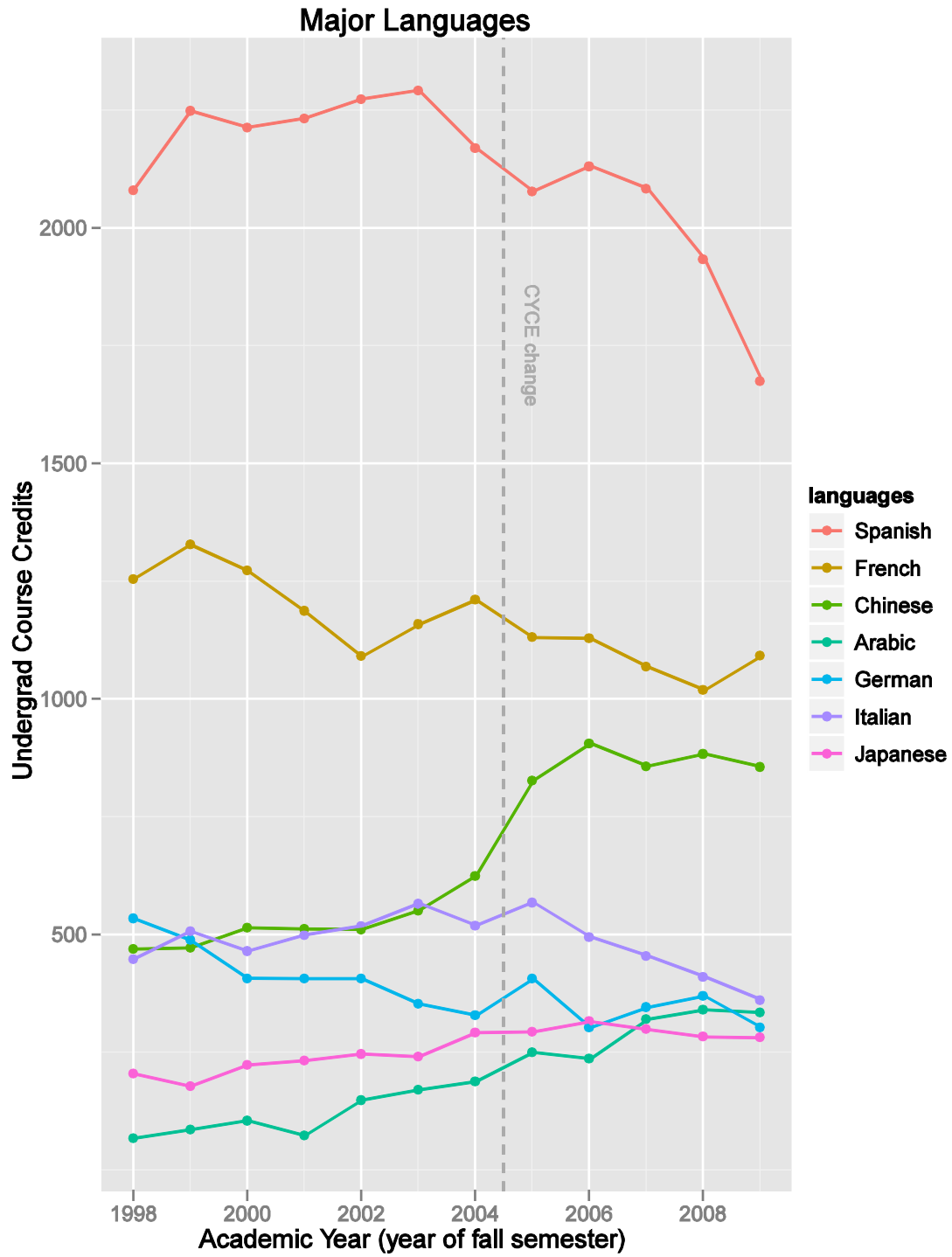


Figure 6. Language Enrollments for Major Languages



The Language Study Committee, in its report to Steering, made additional recommendations to strengthen the existing program: more attention to advanced language study (i.e., beyond Level 5) that better prepares students to meet their academic and professional goals; the development of a consistent approach to assessing how language proficiency is measured on return to Yale from study abroad; and use of an external assessment of language proficiency, such as existing American Council on the Teaching of Foreign Languages (ACTFL) or Common European Frame of Reference (CEFR) competency standards, that would allow students to document their language abilities.

Steering discussed the language requirement at length. A majority were satisfied with the current requirement and pleased that so many students exceed it. But not all cohorts exceed it – more than 50% of Engineering majors meet the language requirement at the minimum. Some Steering committee members believe that the relatively large number of credits required for language, especially compared to WR and QR, is counterproductive for STEM majors, who are faced with many requirements. The majority of Steering members nevertheless affirm the requirement and the way that it intertwines with more study abroad, which sustains and enhances an important skill. But Steering notes that since one of Yale's current aims is to support STEM majors, it is important to explore whether there are alternative routes to meeting the requirement.

SCIENCE, TECHNOLOGY, ENGINEERING AND MATH (STEM) EDUCATION

The CYCE report underlined the importance of STEM subjects for the education of Yale students, noting that “scientific illiteracy will be an increasingly costly impairment to anyone aspiring to be an effective citizen of the future world” and asking that “Yale bend every effort to make teaching in the sciences as compelling and richly available as any other form of study on this campus, both for students intending to go on in the sciences and for those who are not.” To this end, the report recommended an array of initiatives, including the development of courses similar in rigor to introductory courses for science and engineering majors but different in approach; an increase in opportunities for freshmen to have close contact with science and engineering faculty; more opportunities for direct participation in research; interdisciplinary courses in Health and Society; the strengthening of the teaching of science and technology in social context; the creation of a Science

Teaching Center to “improve science education at every level of engagement”; and the offering of more amenities to the community of students, staff, and faculty on Science Hill.

How have we fared? Have we been able to improve the experience in STEM courses for our students and have we been able to ensure they leave Yale with sufficient distance traveled in Science or Engineering and in Quantitative Reasoning? This is an area in which data suggest that significant challenges remain. Attrition from STEM majors is as significant here as it is at other institutions, and accordingly, Steering feels that Yale should make a commitment to do more to prevent such losses and potentially even attract more of our students to science and engineering.

Prior to the CYCE, the requirement for students in Yale College was three courses in the STEM area, with two of those in the natural sciences. The CYCE altered this to two Science courses and two QR skills courses. The standard to meet the Sc and QR requirements is higher than at any of our peer institutions (e.g., courses to fulfill requirements must be taken for a grade). The Science and Quantitative Reasoning faculty set standards for these courses and have attested to the appropriateness of their content. Since the inception of the CYCE more than 80 courses have been recalibrated or initiated for non-science majors and those with limited quantitative background. Yet, due primarily to resource allocation issues (e.g., demand for entry-level courses for non-majors vs. the need for upper-level courses for majors), it has been challenging to sustain these courses from year to year and to meet the demand for rigorous and well-taught courses appropriate for non-majors.

In addition the QR and Science Councils, the Dean’s Office, and individual departments have helped improve the student experience through a number of other initiatives. Better placement mechanisms for introductory courses direct students to appropriate levels; student achievement in those courses is strengthened through tutoring programs attached to specific courses. Small seminars in quantitative subjects for freshmen and sophomores help overcome the deficiencies of some under-resourced high schools. Most of all, access to early research opportunities, whether in the United States or abroad, opens the door to serious science and engineering.

Although much has been done, Steering believes that the University needs a multi-pronged initiative, with strong support from the highest levels, to further enhance the experience of both majors and non-majors in the STEM areas.

Teaching and Pedagogical Innovation

In the STEM areas, learning relies on the hierarchical development of skills more so than in most other areas: large beginning classes without opportunities for interaction may stifle, rather than nurture, student interest, impeding progress to the next step. Nothing can be as important at an introductory level as inspiring teaching. Every faculty committee – including the 1989 Prown Report, the 2003 CYCE, and now 2011 Steering – has emphasized the importance of teaching, especially in the STEM area. Although all teachers can become better teachers, there is an urgent need for widespread pedagogical innovation in STEM courses, especially introductory ones.

Towards this goal, Steering proposes that The Center for Scientific Teaching at Yale, directed by Biology Professor Jo Handelsman, should lead efforts to improve pedagogy. Faculty in all courses should be encouraged to develop active learning practices, whether in small classes or large lectures. Clickers, study halls, collaborative study, application-based problems and other approaches are being tried in a number of departments. Time and support are needed for faculty to learn about and build on such practices. Departments should make it a high priority to ensure that comprehensive introductory courses are consistently and well taught year after year, so that all students are guaranteed equally strong teaching.

New pre-medical requirements, issued in 2009 from a national committee co-chaired by the Dean of Yale's Medical School, Robert Alpern, present a unique opportunity to restructure our science curriculum and to incorporate innovative pedagogical practices. The new approach emphasizes competencies and allows schools to decide how to educate students to achieve these competencies – an unprecedented opportunity for change. Courses for biomedical study launched in Physics (2010-2011), Mathematics (2011-2012), and Biochemistry (scheduled 2012-2013) are leading the way, but many students take other introductory courses with the intention to enter medical school. The faculty, with

strong administrative support, should continue to assess these new requirements and plan how to integrate them into the curriculum.

Reward Excellence in Teaching

Yale has often emphasized the importance of good teaching, but encouraging it and nurturing it in a research environment take imagination, dedication, and incremental resources. The following teaching recommendations in fact refer to all undergraduate Yale teaching, but especially arose in discussions of the STEM disciplines. Steering suggests that faculty be acknowledged and rewarded for giving their time and attention to pedagogy in their courses and mentoring in the labs. Those who teach well in beginning and non-major courses especially must be encouraged and rewarded for doing so, especially if they are expected to sustain their efforts.

Specifically the University should:

- Provide incentives and support for developing new courses and for learning about state-of-the-art pedagogy.
- Ensure that teaching is a standard consideration in salary reviews. As part of the salary recommendation process, Chairs should be required to write three separate paragraphs for each faculty member: research, teaching, service.

Composition of Faculty

It should be noted that whereas there has long been a roster of non-ladder faculty to teach language and writing, Yale does not have the same resources in place to offer a sufficient number of small quantitative reasoning, engineering, or science courses to first and second-year students – or even to develop larger lectures specifically for introductory courses. Yale College should consider targeted use of non-ladder faculty or engagement of School of Medicine faculty who seek to be engaged in undergraduate teaching.

Research Opportunities

Early research opportunities are extremely important, as the Science report to Steering suggests, because “it is difficult for students to have a sense of what science and engineering really are without having had the opportunity to experience scientific

discovery first-hand.” Research experiences also give students access to better advising, through contact with post-doctoral fellows and principal investigators, initiating them into the culture of science and engineering at a high level.

Between 2001 and 2006, growth in the Yale College Dean’s Research Fellowship and the addition of the Yale-HHMI (Howard Hughes Medical Institute) Future Scientists program led to a doubling of the number of summer fellowships offered through the Science and QR Center. The Center has recently taken steps to ensure that freshmen with aspirations in STEM studies but who are not part of Perspectives in Science and Engineering or the STARS (Science, Technology and Research Scholars) Program have the opportunity to carry out summer research.

According to the Science Council’s report to Steering, “selection committees [for fellowships] are now reporting a sense that the most deserving students are being funded and that we are close to meeting the need for summer fellowship support through the Science and QR Center’s programs, other departmentally based programs, and strong support from faculty members who are able to provide compensation using grant funds.”

Culture and Community of Science

A culture cannot be imposed on an institution – it has to emerge from within and then be carefully fostered by all those committed to the same values. There is certainly a greater awareness of the importance of developing a culture of science among faculty and senior administrators in every part of the campus than there was before the CYCE. But in addition to a commitment to exciting courses and excellent teaching, other factors have an effect on building a culture favorable to STEM education.

The delay in fulfilling both new buildings and renovations of old on Science Hill has been disappointing, but the Provost, President, and Corporation affirm that renewed science and engineering facilities are a priority. The original Science Hill plan, which was developed prior to the financial downturn, will be revised with substantial input from faculty so that we are building with the advantage of new insights into research and teaching facilities as well as new insights into teaching and its relationship to research. Despite the urgency of

the need, the plan and its facilities must also address program, part of the long-term solution to culture.

Complaints about the distance from central campus and the lack of ambience of Science Hill are longstanding. The new Kline Biology Tower café makes staying on Science Hill more agreeable, and the planned Center for Engineering Innovation & Design planned for the first floor of Becton will bring life and light to Prospect Street. In the longer term, the new colleges will bring a center of residential life to Science Hill, helping to truly integrate science and engineering learning into the culture of Yale College.

WRITING

The CYCE report noted that its proposed requirements constituted a minimal idea of an education, not an adequate one. It further commented that it viewed certain skills as foundational and that undergraduates should travel a further distance in these skills while at Yale, so that their competencies might mature and deepen. An important one of these skills is Writing. Yale has long supported a robust and highly regarded array of freshman and sophomore courses that engage sustained and serious writing. Even before the CYCE established a skills requirement in Writing, more than 85% of Yale students elected an introductory writing course, possibly because the courses had the reputation of being well conceived, well taught, and impressive in honing skills. The CYCE wanted to ensure that all students had more than one intensive course in which significant attention was given to their writing skills, and so it recommended that all Yale College students “be required to take two courses...that give attention to the development of writing skills,” that these courses be available in a variety of disciplines, and that a Writing Center be established to coordinate writing courses and to support an enhanced tutoring program.

Since the CYCE, changes have been put in place that make the teaching of writing in Yale College better coordinated and more uniformly available to all students. The Writing Center (established in 2004 and modeled on the Center for Language Study), currently staffed by three teachers of introductory courses themselves, has helped develop or strengthen more than 300 writing courses in 43 departments, increased tutorial visits by 25% through a peer-tutoring initiative, revamped a six-week training workshop for

Teaching Fellows, and enhanced support for English as a Second Language writers. Yale can be justifiably proud of its writing program.

In summers '08 and '10, Writing Center staff read portfolios of completed student work. They discovered through this process that students made their greatest gains when English 114 was their first writing course, and when it was taken in the freshman year. These gains pertained to all students but were most dramatic among international students and those with verbal SAT scores of 650 and below.

- Steering believes that students with relatively low verbal SAT scores should engage English 114 first. Because these students may be apprehensive to take a course that has a reputation for being very challenging, advisers should be instructed to encourage them to do so. Despite additional sections added this year, over 40% of the students who attempted to enroll in the course were not able to do so during pre-registration. Although some of those students eventually found seats, logistical scheduling challenges remain. Resources to meet demand for this critical course must continue to be available from the Provost.
- The College Writing Committee believes, and Steering concurs, that there should be more WR courses in the Social Science, Sciences, and Engineering. Of the approximately 4,800 WR credits that students earned in 2009-2010, only 750 were in Social Science courses, and fewer than 200 were in Science courses.

THE ARTS

Many students who apply to Yale and who accept its offer of admission do so at least partly on the strength of its excellent opportunities in the arts. Their creativity and imagination intersect with many influential and longstanding Yale extracurricular opportunities in which students write, compose, design, choreograph, produce, direct, sing, and play musical instruments, and that diversity has little parallel in any other college or university.

Since the CYCE, new positions in the Yale University Art Gallery and the Center for British Art have helped galvanize a flourishing array of curricular and extracurricular activities that utilize the museums' resources. In response to the CYCE's beliefs that it should be a

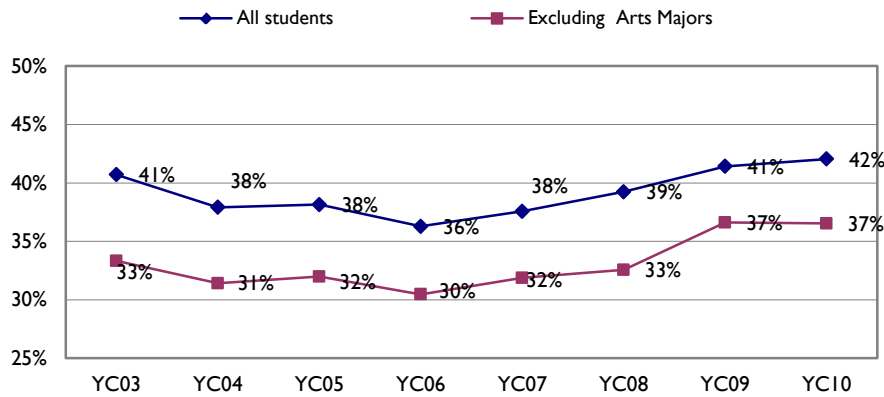
University priority to offer not only training to majors but “instruction at the elementary level open to students in general,” there has been an increase in beginning art courses in drawing and painting. Following the hiring of an associate dean for the arts in 2009, the undergraduate extracurricular arts are better organized, more professionally supervised, and more appropriately funded.

Yet the recommendation of the CYCE – that “the arts be brought into the mainstream of liberal arts education” – has been more challenging to implement. Yale College is arguably the number one liberal arts school in the nation for the strength of the extracurricular arts. It has a gifted student body with great focus on the arts, an incomparable constellation of campus resources, and a generous community of alumni supporters. Yet our stature is compromised by both inadequate facilities and the lack of resources for sustaining the undergraduate curriculum in the arts and strengthening faculty leadership in adjunct and practice-based positions.

The seven new or renovated theaters or performance spaces in the residential colleges notwithstanding, Steering notes that our facilities are still not adequate for the demands placed on them. Many residential college theaters have very small stages and accommodate fewer than 60 members in the audience. Only two campus theaters can support dance. Hendrie Hall, the renovation of which was deferred with the financial downturn, is inadequate for the Concert Band and the Glee Club to rehearse. The Yale Symphony Orchestra plays on a cramped stage in a mammoth and un-renovated hall. New media make ever-greater demands: digital arts activities by undergraduates have increased 350% since 2004 but staff and space remain constant.

Even more critical is the fact that Yale has not met expectations about curriculum development in the arts (see Figure 7 for the percentage of students taking practice-based arts courses). The CYCE proposed joint faculty appointments between Yale College and the arts professional schools; five of these have been established since 2004. Yet the implementation has been challenging: undergraduate and graduate programs have different aims and faculty needs, as well as different curricular objectives.

Figure 7: % of Yale College Graduates Taking Practice-Based Arts Courses by Class Year



In the end, Steering recognizes that extracurricular arts culture continues to thrive at Yale while curricular needs have not developed as fully as the CYCE had hoped. But it also may be, as the Steering discussion revealed, that the strength of the extracurricular arts is so powerful that curricular needs do not “feel” as crucial. Nevertheless, at this moment of assessment, it is important to underline the CYCE’s unfulfilled recommendations of what it takes to remain at the forefront in an area in which it already has such depth, such resources, and such a long history.

FRESHMAN ACADEMIC AFFAIRS

The CYCE report originally targeted the idea of “small classes in the freshman and sophomore year,” noting first that Yale had a number of areas in which freshmen very successfully had the opportunity to learn in smaller settings but also recommending “a major effort to increase opportunities for students to study with ladder faculty in small groups in both the freshman and sophomore years.” Freshman seminars were created as a way to offer more freshmen this sort of opportunity as well as introduce freshmen to a wide range of interesting and new subject matters. Unlike some other institutions, where freshman seminars meet once a week, the CYCE mandated that these seminars meet twice each week, to provide a transition from many high schools where classes meet every day.

To date 40 different departments and more than 100 faculty have offered freshman seminars.

As CYCE noted, the usefulness and appropriateness of freshman seminars depends on the discipline. In the humanities and in some social sciences, freshman seminars can be an ideal way to introduce students to a subject area. In other fields where knowledge acquisition is more sequential and hierarchical, such as in the natural sciences and economics, a variety of solutions may be best. The critical question is “How can each department offer the best beginning experience to students?” Given limited resources, departments must gauge strategically how their offerings are best divided; the best beginning experience cannot be disconnected from the best junior and senior experiences; adding small courses in the beginning years may mean – without added resources – fewer junior and senior options.

In some cases, notably the sciences, where majors can receive sustained mentoring through research at more advanced levels, the best solution may be to target resources to sustain excellent lecturing at the beginning level, where the quality of lecturing can sometimes vary from year to year. It also may mean reconsidering the development of an interdisciplinary introductory science program, something several Steering members advocate, despite the lack of resources for such a program.

In the social sciences, where the current cohort of students is very large, the answer to the question of how to enhance freshman academic opportunities may mean careful decisions about how to use all resources to ensure strong junior and senior seminars with continuing faculty who can best mentor and advise students as they undertake capstone work. The answer may mean – as Economics is doing – paying careful attention to placement and special courses for underprepared students. The CYCE recommended that “departments and programs be required to examine the curriculum on a regular basis, discussing their aims in the light of the larger aims of undergraduate instruction and the role their teaching plays in the curriculum overall.”

The Committee on Majors has initiated self-reviews for all departmental and program majors and these are being carried out both in external reviews of departments and the

departments' own regular reviews of their instruction. Steering gives emphatic support to these reviews and asks departments to review on a regular basis curricula, teaching, and the assignment of resources.

ADVISING

The CYCE recorded the complexities of advising a modern student body in a large research university that has “more variegated ambitions and needs and a faculty at once busier and more specialized.” It nevertheless underscored that “Yale must make a major commitment to strengthening undergraduate advising” and made a number of recommendations towards that end. There are, of course, many kinds of advising – freshman advising, sophomore advising, advising in the major, personal advising, mentoring in a lab environment, advising for international experience, advising with an eye towards future employment. Yet to students “advising” often means one thing: the focused attention and direction of adult community members who can help them realize their aims and ambitions.

The best academic advising grows from shared intellectual experiences; the challenges for academic advising are intertwined with the challenges for the undergraduate curriculum, both of which show the effects of over-specialization. Our faculty belong to a community of professional scholars organized by fields and sub-fields, and they can be unprepared to advise out of their own area. Our students often need more general guidance and instruction. They seek more broad, integrative courses rather than those with a narrow focus that some faculty prefer to offer. And, for various reasons ranging from parental advice to peer pressure, students tend to congregate in majors where there is a dearth of smaller classes and the student-faculty ratio makes it a challenge to provide personal advising and mentoring. While advising in the area of the major seems to be satisfactory in most fields of study, some students in those departments that have a great number of majors report feeling shortchanged.

In an effort to augment CYCE recommendations, The Committee on Teaching, Learning and Advising (TLA) issued a report on Advising in 2010 that built on some CYCE initiatives by increasing the number of steps the University could take to improve in targeted ways the

plethora of ways students are advised. First and foremost, their report suggested that the importance of advising be spelled out in letters of faculty appointment; that department chairs discuss the balance of advising activities (undergraduate and graduate) with faculty; that masters and deans promote advising to new faculty in college fellowships; that the Provost include a section in the faculty activity report on advising; and that the Yale College Dean's Office bring public recognition and awareness to advising, perhaps by implementing advising prizes.

But advising does not depend only on faculty, as both the CYCE report and the TLA report concurred. The CYCE report recommended a number of steps that have been accomplished: residential college deans oversee freshman advising; freshman orientation has been lengthened; sophomore advising has been augmented with special meetings; an advising Web portal has been developed; and there are regular cross-departmental meetings of Directors of Undergraduate Studies where they can share best practices. The TLA report also pointed to new tools and information to help students and faculty: creation of forums for intellectual discussion in the colleges between faculty and students; the exploitation of new media and technology and software for tracking student progress and communicating more easily with current and prospective majors; and more use of peer advising. Finally, the report suggested that the College continue to work to invest students in their own advising process by inspiring them to connect early with a faculty mentor, and insisting that they meet with their residential college deans and advisers at the end of freshman year to review the year and preview the next one.

One suggestion of both the CYCE and the TLA report – the establishment of sophomore seminars – shows the conundrum of many of these suggestions: they are good ideas but not easy to implement. In this case, with a fairly steady-state faculty, the initiation of more seminars in one area places particular stress on another.

While affirming the initiatives in both the CYCE and the TLA reports, the Steering Committee recognizes that better advising also lies in a number of initiatives that are being promoted in other ways: targeted use of off-ladder appointments in areas where they are appropriate, since faculty focused on teaching are often excellent mentors; the investment

of more resources in advising in large majors where added support would make a difference; and more support in the Science and Quantitative Reasoning Center, the Health Professions Advisory Office, the Center for International and Professional Experience, and elsewhere in the Dean's Office where advising already occurs. Steering notes that placing more resources exactly where they are needed might be the most cost effective way of giving students the sense of being well-advised, nurtured and mentored in their academic experiences. All of these are priorities for improvements in our undergraduate advising.

The current review has revealed some other points of stress. Students entering Yale with the lowest verbal SAT scores in the classes of 2009 and 2010 are more likely than others to meet the WR requirement at the minimum and slightly more likely to meet the Foreign Language requirement at the minimum. Residential college deans report anecdotally that these students are more likely to struggle with other courses as well. They are more likely to have crises about their academic path, and are more likely to switch their course of study after an academic or personal crisis. Growing awareness of these challenges by deans and faculty in departments, the Science and Quantitative Reasoning Center, the Writing and Language Centers, and in the Yale College Dean's Office have led to some helpful changes to placement, advising, teaching and course development. Steering advocates continuing evaluation of skills as a way to ensure the appropriate education of all of our students, almost all of whom have performed exceptionally well in their pre-college environments, but who enter Yale from many kinds of schools and at various stages of preparation.

TRENDS IN ENROLLMENT

Students have always concentrated themselves in certain fields of study at Yale – for decades it was History and English – and they are concentrated in six large majors today: Biology, Economics, English, History, Political Science, and Psychology. Enrollments in the Social Sciences at Yale – particularly in Political Science and Economics – were ratcheting up before the CYCE changes, as they have nationally, creating challenges in placement, small seminars, advising, and capstone work.

Among some Humanists there was concern that the CYCE report, with its change in distributional requirements, might adversely affect enrollments in the Humanities. This

appears not to be the case. National trends in degrees earned in the Humanities show a long decline, reaching back to a peak in the early 1970s. However, Yale still leads its peers in the percentage of the undergraduate body that receives a bachelor's degree in the Humanities (just below 40%), and Yale Humanities degrees have not declined at the same rate or to the same extent as they have nationally. Enrollments since 2005-2006, when 25% of the students embarked on the new curriculum, have hovered at 10,000 a year and there has been little change since then. There are no data to indicate at this stage that the CYCE changes have contributed to change in these areas, but Steering suggests that the Course of Study Committee continue to monitor patterns of course choice and to collect and analyze data. University leadership must also take care not to be complacent about Yale's pre-eminence in the Humanities. Student satisfaction with teaching and advising in Humanities majors remains very high, both with respect to other divisions of the University and other institutions. This success should be cultivated, and the skills of instruction supported, if not emulated, within the institution.

FINAL THOUGHTS

In this report of Yale College's progress since 2003, we have sought to understand whether the curricula and programs of Yale College now fulfill the mission we set for ourselves. Have we further enhanced Yale's unique opportunity of offering a superb undergraduate liberal arts education within a leading university? Have we taken major steps to ensure that we give students the best preparation for their future world?

We are pleased to conclude that we have made major strides toward meeting the goals of the CYCE in most areas. This report points with a genuine sense of accomplishment to our progress. However, despite these many achievements, Yale College faces academic challenges. Foremost among these challenges is the critical role of undergraduate teaching, the first recommendation from the 2003 Report:

... the Committee on Yale College Education reaffirms the central place of teaching in the Faculty of Arts and Sciences. If superiority of scholarly accomplishment is necessary for faculty appointments at Yale, excellence in teaching must also be given substantial weight in all hiring and promotion decisions. The University's high expectations about both teaching and scholarship should be made clear when new

members join the faculty. We urge that Yale take as great pains to support the teaching aspirations of its faculty as it does their research activities, and that Yale celebrate outstanding teaching and scholarship in every possible way.

It is this mandate that needs our closest attention, notwithstanding much excellent teaching across Yale College. Many of the challenges that have been identified in these past twelve months with the undergraduate curriculum could and would be addressed by making excellence in teaching the priority in Yale College.

What are challenges to such a commitment? What steps should we take? Both at Yale and beyond it, the past ten years have been marked by new research about learning; and although we practice some new kinds of pedagogy, and many faculty have benefited from their work with existing teaching resource centers, there is much more for us to learn in order to animate the classroom, and more for us to learn about this current generation of students. The Steering Committee recognizes that many forces are at play, from facilities to staffing; in the programming that underpins practice, from freshman courses to summer opportunities; and perhaps most of all, in the culture of teaching, in which the successful engagement with the undergraduate classroom needs not only acknowledgment but sustained support over the course of academic careers.

Additional challenges can be seen in other major reports and policy decisions that have changed the landscape at Yale since the CYCE report was released in 2003. They must be taken into consideration. The Faculty of Arts and Sciences Tenure and Promotion report (FASTAP) opened opportunities for FAS junior faculty members, especially with respect to research leaves in order that they be better prepared for promotion, but this has resulted in junior faculty spending fewer semesters in their first years teaching our students. This change in the timing of faculty leaves may have shifted the culture and continuity of undergraduate teaching. Simultaneously, market forces have resulted in reduced teaching for faculty in some departments.

Another factor is the decision the University made in 2007 to increase the size of Yale College and to create two new residential colleges in order to do so. A report on this subject identified areas where academic resources would need to grow in order to sustain a 15% expansion of the student body. What steps must we take to ensure that Yale will be ready

to accept 200 additional new freshmen in four successive years, starting in 2015 or in 2016?

We all know the impact of Yale College alumni, not just on the direction of this University, but also on the nation and the world, in their leadership across all fields of human activity. Growing by 15% can make a real difference. Yet growing Yale College simply by adding 15% more classrooms or 15% more sections of English 114 and expanding Language and QR courses for non-majors by 15% would be to miss an opportunity. We should think of such growth as a time to re-think, re-imagine, and re-commit ourselves to teaching in the 21st century. We should view this moment as a once in a lifetime opportunity for the institution.

Let's invest our next wave of energy in Yale College and the Faculty of Arts and Sciences, and let's start by identifying and then establishing initiatives and incentives to promote stronger undergraduate teaching and mentoring. We need to take advantage of the latest research into pedagogy and to sort among the various new techniques and technologies for teaching inside and outside the classroom. We need to find the most appropriate ways to tie our vibrant extracurricular culture to the aims of our curricular education. We need to honor the traditions of undergraduate teaching and learning in Yale College by reinvigorating them to shape the lives of our faculty and students.

Appendix. CYCE Progress Review Working Groups: Memberships, CYCE Goals, and Progress Review Charges

Steering Committee

Members: Mary Miller (Chair), Joseph Altonji, Gary Brudvig, Hazel Carby, Judith Chevalier, Eric Dufresne, Bonnie Fleming, ; Rebecca Friedkin, John Goldin, Joseph Gordon, Emily Greenwood, Judith Hackman, Jo Handelsman, Penelope Laurans, Edward Rugemer, Philip Smith, Lloyd Suttle, Kyle Vanderlick

Charge: Oversee progress review. Receive and revise reports from all working groups. Develop overall conclusions and recommendations.

Arts Advisory Committee

Members: Susan Cahan (Chair), Francesco Casetti, Toni Dorfman, Anne Fadiman, Lee Faulkner, Clinton Jukkula, Richard Lalli, Penelope Laurans, Thomas Masse, Bimal Mendis, Holly Rushmeier, Taja Cheek, MC '11, Sean Owczarek, SM '11; Beverly Waters (OIR)

CYCE Goal: Secure Yale's status as a leader in the arts for undergraduates.

Charge: Review undergraduate Arts curriculum, faculty appointments, facilities, extracurricular activities, course patterns and post-college activities for arts majors.

Business Affairs and Development Team

Members: Jane Lee (Director, Yale College Business Operations), Daniel O. Smith (Director of Finance, Yale College); Judith Hackman (Yale College)

Charge: What have been the incremental financial investments, starting with the 0405/0506/0607 budgets? What are current funding sources supporting accomplishment of each of the CYCE goals?

Committee on Honors and Academic Standing

Members: Mark Schenker (Chair), Leslie Woodard (Secretary); Dana Angluin, Jill Carlton (ex officio fall term), Sam Gensburg, SY '11, Aaron Gerow, Tim Kressman, BK '12, Jill North (fall term), Daniel Rosner; Russell Adair (OIR)

Charge: Continue the Committee's review of the award of Distinction in the Major; examine grading issues, including grade distributions by disciplinary area, major, and other variables.

Committee on Majors

Members: Sean Barrett (Co-Chair), Maria Pinango (Co-Chair), Kyle Farley (Secretary), Lara Fourman, SY '13 (spring term), Joseph Gordon (ex officio), Madeleine Haddon, JE '12 (fall term), George Levesque (ex officio), Richard Cohn, Leo Hickey, Ellen Lust; John Goldin (OIR)

Charge: Review development of curricular plans for majors, including differences among majors, course sequences, concentrations, student-defined course choices, and majors not in departments.

Course of Study Committee

Members: Ron Eyerma (Chair), Joseph Gordon (Vice-Chair), Jessica Brantley, Paul Bushkovitch, David Cameron, Judith Hackman (ex officio), George Levesque (Dean's Designate), Richard Larson (spring only), Yang Lim, MC '11, Antonia Monteiro, Paul North, Eileen Quinn (Secretary), Melissa Tartari, Patrick Vaccaro, Tse Muhammad Usman, TD '13, Rachel Wilf, TD '12; John Goldin (OIR)

Charge: Review effect of Humanities and Social Sciences requirements on course taking patterns.

Freshman Academic Affairs Committee

Members: George Levesque (Chair), Hannah Brueckner, Julie Dorsey, John Faragher, Douglas Kankel, Maurice Samuels; Rebecca Friedkin (OIR)

CYCE Goal: Enhance the freshman year experience.

Charge: Review freshman seminars and other freshman academic activities.

Freshman Affairs/Student Life Committee

Members: Marichal Gentry (Chair), Therese Barbuto (Staff), Melanie Boyd, Marvin Chun, Saveena Dhall, Craig Harwood, George Levesque, Andrew Ruben, SY '11, Steven Smith, Leslie Woodard; Cynthia Langin (OIR)

CYCE Goal: Enhance the freshman year experience/strengthen student life.

Charge: Review student affairs for freshmen, especially orientation and follow-up.

International Experience Committee

Members: Jane Edwards (Chair), Joseph Errington, Karyn Jones (ex officio), Douglas Kankel, Colleen Manassa, William Whobrey (ex officio), Keith Wrightson; Cynthia Langin (OIR)

CYCE Goal: Develop a global perspective among all Yale College graduates.

Charge: Review international summer and term-time experience outcomes.

International Students Committee

Members: Ann Kuhlman (Chair), Rebekah Westphal, Caesar Storlazzi, Ryan Wepler, Saveena Dhall, Elayne Mazzarella, Cynthia Langin, Diane Frey, Roman Kuc, Jasmina Besirevic-Regan; Cynthia Langin (OIR)

CYCE Goal: To ensure a successful transition to Yale and enable international students to have the same opportunities and experiences as other Yale students.

Charge: Review outcomes for international students.

Language Study Committee

Members: Steven Fraade (Chair), Emily Bakemeier, Angela Capodivacca, Jane Edwards, Krystyna Illakowicz, Edward Kairiss, Pieter Keulemans, Ruth Koizim, George Levesque, Brian Lizotte, Nancy Ruther, Pamela Schirmeister, Sonia Valle, Nelleke van Deusen-Scholl, Suzanne Young; Howard Barnaby (Secretary), Rebecca Friedkin (OIR)

CYCE Goal: Promote quality undergraduate language education.

Charge: Review Foreign Language requirement outcomes including distance traveled and University of Wisconsin study.

Quantitative Reasoning Council

Members: Joseph Chang (Chair), William Segraves (Vice-Chair), John Emerson, Michael Frame, Roger Howe, Douglas Kankel, Benjamin Polak, Frank Robinson, Kurt Zilm; Rebecca Friedkin (OIR)

CYCE Goal: Enhance education in quantitative reasoning.

Charge: Review QR requirement outcomes.

Science Council

Members: John Harris (Chair), William Segraves (Vice-Chair), Jay Ague, Amy Arnsten (spring only), Jo Handelsman, Mark Johnson, Michael Koelle, Priyamvada Natarajan, Mark Saltzman, Mitchell Smooke, Stephen Stearns, John Tully, Robert Wyman; Rebecca Friedkin (OIR)

CYCE Goal: Enhance education in science.

Charge: Review Science requirement outcomes.

Teaching, Learning, and Advising Committee

Members: Karen Wynn (Chair), Joel Silverman (Secretary), Jill Carlton (ex officio), Kirk Freudenberg, Jenny Goff, BK '12, , George Levesque, John Loge, Faye Maison, ES '11, Nicholas Ornston, Douglas Rogers, Thomas Smyth, SY '12, Richard Yang; Rebecca Friedkin (OIR)

Charge: Better define the goals and characteristics of a typical Yale College sophomore year. Complete the already begun (in 2009-2010) comprehensive review of advising from freshman to senior year. Examine the use of the Credit/D/Fail option.

The College Writing Committee

Members: Janice Carlisle (Chair), Brian Lizotte, Bruno Cabanes, Joseph Gordon, Karin Gosselink (ex officio), Alfred Guy, Susan Nolen-Hoeksema, Alastair Minnis (fall only), Pamela Schirmeister, Stephen Stearns, Ryan Wepler (ex officio); Rebecca Friedkin (OIR)

CYCE Goal: Support efforts to train students to write well.

Charge: Review Writing requirement outcomes including distance traveled portfolio assessments and syllabi for Writing requirement courses.