Implementation of the Undergraduate Communication Requirement:
A Report on the Assessment (2005-2007)

Executive Summary

Beginning with students entering in Fall 2001, all MIT undergraduates must fulfill a Communication Requirement (CR) by completing a program of four communication-intensive (CI) subjects that teach written and oral communication. This program replaced a narrower Writing Requirement that required students to demonstrate competency in writing at two levels. The current CR is designed to ensure that the students' communication training is distributed over several years of study. To achieve this goal, the requirement is structured so that students complete at least one CI subject in each year of undergraduate study.

Two of the required subjects are chosen from a group of designated subjects offered in the School of Humanities, Arts, and Social Sciences (SHASS) and provide students with generally useful skills in expository writing and speaking in the context of subject material. The other two required CI subjects are taken in the student's major department (CI–M subjects) and provide experiences that prepare students for effective communication in their chosen discipline. As a consequence of this structure, a wide spectrum of communication-intensive subjects is offered in 34 majors across all five Schools throughout the Institute. There are currently approximately 121 CI–H subjects and 134 CI–M subjects spanning a diverse range of topics from 4.602 Modern Art and Mass Culture (CI–H) to 18.821 Project Laboratory in Mathematics (CI–M) to 21L.473J Jane Austen (CI–M) to 20.380 Biological Engineering Design (CI–M). These subjects encompass a number of formats including: laboratory classes, in which students write, revise and present laboratory reports; seminars, in which they prepare and lead discussions; senior theses; and independent research projects.

Oversight of the Communication Requirement is the responsibility of the Committee on the Undergraduate Program's (CUP) Subcommittee on the Communication Requirement (SOCR). SOCR was charged by the Faculty with assessing the implementation of the CR. In Spring 2005, it invited an advisory group to make recommendations on how such an assessment might be structured in order to measure the effectiveness, degree of curricular integration, and acceptance of the CR. This assessment study, which was launched in Fall 2005, was not designed or intended to measure student communication skills per se, but rather the implementation of the new CR. It draws on data from student and faculty surveys, individual interviews, and moderated roundtable discussions gathered over two academic years. Preparation of this assessment report was a collaborative effort between staff in MIT's Teaching and Learning Laboratory (report body) and members of SOCR (discussion and recommendations).

Findings

MIT students and faculty place a high value on communication skills and expertise, and students recognize their CR experiences as contributing to the development of these skills. Students and faculty generally agree that the four CI-subject structure of the CR is satisfactory. Furthermore, faculty are supportive of incorporating communication instruction and practice as part of their CI–M subjects. Faculty and students expressed little concern that this instruction is included at the expense of discipline-specific content. Students report that disciplinary content and communication experiences are generally well integrated in their CI–M subjects. They also report that CI activities facilitate learning in the disciplines, and seniors particularly value their CI–M experiences. The one caveat to these reassuring findings is that some students find that the CR unduly constrains their choice of subjects.

Another encouraging finding is that students also credit activities outside of the CR in developing their communication skills. For instance, they often cited extracurricular activities, internships, non-CI academic subjects, and UROP as improving their communication skills.

From the inception of the CR, Institute resources were committed to support the increased emphasis on communication instruction that the Requirement entails. Instructors have been added to the Writing Across the Curriculum (WAC) program, and some department – and School-based instructors have been hired to provide support for communication instruction in CI–M subjects. A program of writing tutors who work with faculty in some CI–H subjects also has been established. More than 70 percent of the faculty respondents agreed that using instructors and tutors is an effective way to improve student writing. However, students and faculty reported different levels of satisfaction with these collaborative teaching efforts. Faculty that reported high satisfaction also reported being well matched with an instructor or tutor. In contrast, no single issue emerged in the responses from faculty that were less satisfied. Therefore, the assessment was largely inconclusive at pointing to specific factors that facilitated or hindered these teaching collaborations. It is important to note that SOCR and TLL did not survey this cohort of teaching staff (WAC instructors, department – and School-based instructors, and CI-H writing tutors) for the current report.

CI subjects involve writing, oral communication, or both. Students placed the highest value on writing instruction in the CI–H subjects and on instruction in oral presentations in the CI–M subjects. The analysis of the assessment data highlighted the different approaches to oral communication in the CI–H and CI–M subjects; the surveys focused students' opinions on oral presentation activities and not an expanded definition that could include discussion and class participation (common activities in CI–H subjects). Some CI subjects engage students in group exercises, both written and oral. Students saw group oral presentations as more valuable than group writing assignments.

Students' initial CR subject placement and/or selection appears to influence how they value subsequent CI classes and how they approach writing and oral assignments in those later subjects. Those who had taken a CI–HW subject (CI–H subjects with particular emphasis on writing that are required of some incoming students) were more likely to report that in-class revisions of written work, as well as feedback received on oral presentations, helped them improve their communication skills. Similarly, those for whom a CI–HW or ELS subject was required were more likely to report that the feedback and/or instruction they received from their instructors and/or tutors helped them improve their communication skills.

SOCR is primarily responsible for administration of the CR, including the review and approval of CR subjects. Some faculty reported the oversight of the CR by SOCR is inflexible, particularly as it relates to the straightforward designation of subjects as CI. In addition, monitoring student compliance with the CR – with respect to both the Requirement in general and also the students' pace of completion – has been labor-intensive for DUE, specifically the Office of Faculty Support and the Registrar's Office.

Assessment Recommendations

1. Maintain Structure of the Requirement

SOCR recommends that the current structure of the CR, including two CI–H and two CI–M subjects, be retained. The distribution and sequencing of communication instruction across the undergraduate program should be maintained as well.

Given the demonstrated support for and success of the CR, SOCR feels strongly that the Educational Commons Subcommittee (ECS), the current committee proposing reform to the undergraduate program, needs to be aware of the structure of the CR and how its recommendations may affect the CR.

2. Investigate Best Practices

One of the first priorities for SOCR following the release of this report is to develop a "Best Practices Inventory" for teaching CI subjects and to share this collection with the community. This study will inform the design of new CI subjects, offer the potential to improve existing ones, and promote conversation among faculty members teaching CI subjects.

Even though individual models and teaching styles may vary, 70 percent of the faculty surveyed agreed that the use of writing instructors and writing tutors is an effective way to improve student writing. Approximately 29 percent of the CI–H subjects and 50 percent of the CI–M subjects received additional instructional support in AY08. These teaching collaborations have been integral to the overall success of the CR, and SOCR and the faculty continues to value the contributions of the communication instructors. Given the varied faculty and student reports

on the effectiveness of collaboration among faculty members and communication instructors (including those in WAC, CI–H tutors, and graduate teaching assistants), SOCR recommends a joint study with the Program in Writing & Humanistic Studies and Writing Across the Curriculum to explore fully the many collaborative models to identify best practices and suggest methods to improve course design, communication, and coordination.

SOCR should continue to explore ways to foster creativity and flexibility in CI instruction and should maintain its openness to well-designed experiments like the project-based first-year subjects licensed by the CUP in Spring 2007 and 2008.

3. Improve Students' Experiences

SOCR and the HASS Overview Committee (HOC) should revisit the educational goals and guidelines for oral communication practices in CI–H courses. Together, they should work to ensure that the variety of activities in current CI–H subjects is understood and accepted as communication-intensive by faculty, students, and those who review subjects for approval.

SOCR intends to explore why seniors value communication experiences in CI-M subjects more than other communication-intensive experiences, particularly the CI-H subjects. Seniors' impressions may be due to the fact that they take CI-H subjects early in their time at MIT, or that they see them as "requirements." Seniors may have integrated the skills learned in CI-H classes so thoroughly that they are second nature by their final year. SOCR and HOC should work jointly to articulate the sequential nature of communication skill acquisition across all four CI subjects in a manner that is clear to both faculty and students. Faculty should be encouraged to design CI-H and CI-M classes with these broader communication goals in mind.

SOCR recommends further study to examine why students who were required to take a CI–HW as their first CI subject tend to value revision and instructor feedback more than their peers in subsequent terms and what implications this might have for other CI subjects.

SOCR proposes more work be done to understand how to structure group assignments successfully, particularly in CI–M subjects. In our shared advisory roles, SOCR and HOC should work to ensure that all CI subjects include some individual work.

4. Support Faculty Efforts

SOCR recommends additional study to determine what sort of flexibility in the CR the faculty feel is missing and what obstacles they perceive to be in place. SOCR, in conjunction with HOC, should discuss and work to implement an approval process for CI subjects that places less emphasis on quantitative criteria (e.g., page counts for written assignments in CI–Hs and CI–Ms and minutes of presentation time in CI–Ms) and more emphasis on the intended educational experience for students.

5. Strengthen and Refine Administration of the Communication Requirement

SOCR appreciates the relationship and responsibilities it shares with HOC in overseeing the development and approval of CI-courses that constitute the CR. We would like to continue to strengthen that relationship as well as both committees' working relationships with the Committee on Curricula.

The CR places increased administrative burdens on DUE offices and systems, particularly the Office of Faculty Support, the Registrar's Office, and the Student Information System (SIS). SOCR and the DUE should work to ensure that the CR is integrated as efficiently as possible within the SIS.

This assessment report indicates there have been significant improvements in the culture of communication here at MIT. We are pleased to have found the high regard for the importance of communication in general and acceptance of the CR specifically. With this strong foundation in place, SOCR is eager to move forward and continue our work to promote effective implementation of the Requirement and student learning.