A Model for Comprehensive Reform in General Education: Portland State University

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Portland State University is a comprehensive public university located in Oregon's major metropolitan area. The University has more than 15,000 enrolled students and serves nearly 40,000 individuals in credit and noncredit classes each year, including over one-third of the State system of Higher Education's enrolled graduate students. In November of 1993, the Portland State University Faculty Senate adopted a new general education program that marks a significant and fundamental departure from the existing distribution approach. This new program was developed by a faculty committee (the General Education Working Group) in response to general concerns about the quality and outcomes of undergraduate education at Portland" State University. It is also designed to be part of this University's response to problems of student retention and degree completion.

The General Education Working Group was formed by the Provost in the late fall of 1992 and was charged with developing two sets of recommendations. The first was to set forth a purpose and goals for general education at Portland State University. The second task was to develop a curricular model which would achieve those goals. The work of the committee proceeded in that order. That is, our efforts first concentrated upon defining the purpose of a program of general education at our University. Then we turned to evaluating whether the current distribution requirements or some other model would be best suited to accomplish those ends.

This article presents the recommendations of the Working Group to the Portland State University Faculty along with the research and rationale upon which those recommendations were based. It is these recommendations which were subsequently adopted and which this University is currently beginning to implement. As the Working Group began its deliberations in January of 1993, we discovered that the current distribution requirements are not based on any discernible underlying purpose or articulated goals. We could not find any clear response to the question of what are the expected benefits for students or anticipated learning outcomes. We finally concluded that we could not state with conviction that the current distribution requirements are meaningful.

In general, we found that our current approach to the first year of general education does little to engage students actively in their educations. Often, the first courses our freshmen encounter are large introductory courses designed to introduce students to a discipline, such as biology or history, which also constitute part of the distribution requirements. Classes which encourage student-student interaction and/or student-faculty interaction are the exception. Rather, lectures are given, notes taken, exams (often multiple choice) are administered, and then students proceed to their next large introductory class. The location and utility of the library are often unnecessary pieces of information for our

students until they reach upper division class standing. Science is in large part feared and avoided as are courses with substantial writing assignments.

When our students reach the upper-division level, we expect them to have been prepared through their lower-division work to be able to frame questions, identify and examine relevant original source materials, and produce a paper, project, or experiment which demonstrates advanced academic ability. Yet, our upper division courses are filled with nonmajors seeking to fulfill the distribution requirements but often without sufficient background to grasp the material and meet the performance standards expected. While many of our students do remarkably well, we faculty often express dissatisfaction with the performance of our students. Students, on the other hand, express dissatisfaction, frustration, fear, and occasional anger that they seem to have missed something important along the way and are not always able to meet the expectations placed upon them.

The general education program we recommend was carefully and consciously designed to address these and other problems. As we explored these issues, members of the Working Group became aware of and conversant with trends drawn from the experiences of other universities and colleges, research on student aspirations, on factors affecting learning outcomes, on the effects of different general education approaches, and on the characteristics of PSU students. Our recommendations are not, therefore, the product of an iconoclastic group discussing curriculum in a vacuum. We did not draw goals and curricular approaches out of the air. Our recommendations represent our conclusions of how to best adapt successful and positive curricular innovations to the specific context of Portland State University and its students. The Working Group firmly believes that the goals and the program we recommend point us in a direction that is right for our students, right for the faculty, and right for the advancement of our University.

Trends in General Education

During the late 1970s and throughout the 1980s, American higher education found itself under assault from a number of sources. These attacks included the assertions that "too many students failed to develop the marks of generally educated people-a broad span of knowledge; skills to communicate clearly, to think logically and critically, and to get along with different kinds of people; the capacity to work independently and as a part of a team to solve problems" (Gaff 1989, 11).

At many universities and colleges the challenges posed by the mounting criticisms of undergraduate education led to serious consideration of major changes in existing general education requirements. Some 90 percent of American colleges and universities considered some degree of curricular reform. However, because the issue was typically posed in terms of the bodies of knowledge and/or courses all students should be required to take, a frequent outcome was curricular change based upon alterations in existing distribution requirements. Within the context of institutional structures, resource allocation models, and faculty reward systems, it proved extraordinarily difficult for faculties to achieve even minimal consensus on what ought to be the content of general education. The struggle over what should constitute that part of a university

education common to all students inevitably touches the interests of all faculty, departments, and programs. Because of the context of existing institutional structures and the resulting concern over "turf," and because the issue was often framed in terms of what fields should be included, altering but not abandoning existing distribution models of general education was often the only feasible outcome. In a report summarizing their review of reforms in the 1980s, a group of former university and college presidents and chancellors, the Irvine Group, stated:

> Over the past decade, undergraduate renewal has relied on curricular patterns that have not worked well. Outmoded distribution requirements, for example, where students select courses from broad academic fields have failed to accomplish what is intended. These courses amount to electives, not general education. For too many undergraduates, their educations do not fit into a coherent whole, and the distribution of courses is more frequently the result of campus political considerations than of educational ones. (1990,2)

The Working Group concluded that this described well, the situation at Portland State University.

In spite of the constraints on curricular reform, most institutions did adopt some degree of change in their general education requirements. These ranged from relatively small changes such as adding a writing course or limiting the range of course options to relatively more comprehensive curricular reform. In his major study of trends and consequences of general education reform, Jerry Gaff (1991) found that the effects of adopting new general education curricula have been largely positive for all institutions and even more so for those enacting "large scale," comprehensive reforms. Gaff found that simply adding a course or changing a requirement without considering the total set of requirements is far less likely to impact the institution. Rather comprehensive reform is reported to have a range of positive consequences for the institution, including:

- implementation of "across-the-curriculum" themes including writing, diversity and multiculturalism, ethics, and global studies;
- implementation of major and systematic programs for faculty development;
- improved student services, particularly advising and orientation;
- more favorable attitudes toward general education among faculty, administration, and students;
- faculty renewal and a revitalized institution;
- improved student retention and admissions;
- enhanced institutional identity and fund raising;
- perception of improved quality of education.

In each of these areas and others, Gaff's results are strikingly unambiguous. Institutions which engage in comprehensive change are significantly more likely to report a range of positive outcomes. The program we recommend falls into the category of "large-scale," comprehensive change.

Portland State University was not untouched by the wave of curricular reform efforts of the 1980s. From 1979 to 1985 a faculty committee struggled with the "problems of general education." The proposal offered by this committee included a tightening of the distribution requirements, a competency exam for upper-division work, and strengthened writing requirements. The Faculty Senate largely rejected this proposal and adopted minor changes to the existing distribution approach (PSU Faculty Senate Proceedings 1979-1985). This was a "small change" curricular reform which had relatively little impact on the institution.

This earlier curricular effort provided three lessons to the Working Group. First, general education should be seen as a program of study leading to an expressed purpose and goals rather than as a set of requirements. We consider the generally stated objective of "breadth" of coursework to be but one among several purposes of a general education program.

The second lesson was the intractability of the "problem of general education" when that problem is defined in terms of field coverage. Any change in distribution requirements is likely to be seen as a potential threat to departments. The consequences for enrollment patterns and the assumption that allocation of institutional resources follows the generation of student credit hours make the debate over the distribution of field coverage one of the protection of the vital interests of departments and schools. Shifts in distribution requirements, even more than change from department-based distribution courses to some other model, seem to render the perceived stakes even higher. Some departments stand to gain at other departments' expense. The result of these debates is typically a truce among contending departments wherein none of the combatants either gains or loses appreciably.

The third lesson for the working group was that any reform of general education at Portland State University must explicitly address the transfer problem. Approximately 80 percent of PSU graduates offer at last some transfer credits. Much of the 1985 debate centered on the presumed consequences of those changes for transfer students. Ultimately, these assertions proved severely damaging to the proposals and provided a rationale for their defeat.

The more recent controversy over incorporating a diversity requirement within the general education requirements again illustrated the weakness of attempting to build comprehensive reform on the distribution model. Beginning with the 1992-1993 academic year, students are required to take two "diversity" courses from amongst an approved list of courses, and these courses must be from different departments. Given the reliance upon existing courses and a general distribution framework, this was perhaps the only feasible option to implement an educational experience which ought to be integral to our students' educations. Within this context departments have incentives to have as many of their departmental offerings as possible included on the approved list because of the assumed effects on the generation of student credit hours. The result is that the current (October 1992) list has 102 eligible courses. The consequence for student learning is a diminishing of the coherence and focus intended for this requirement.

The results of the changes adopted in 1985 would seem most appropriately to fall in the "small change" category identified by Gaff's research. Some aspects were tightened, but the number of eligible courses increased. For many PSU faculty the changes enacted in 1985 were hardly noticed, even when it came to advising students. And there was still no clear statement or institutional sense of why these requirements were there at all. Many students and faculty alike continue to view the general education requirement as an imposition, defining a set of obstacles to be overcome in the least strenuous manner.

In sum, general education at Portland State University continued to be perceived and treated as peripheral rather than as a program of integrated learning experiences reinforcing students' career aspirations as they pursue their majors, and as contributing to an educational experience which would place their chosen area of specialization in broader context. The Portland State reform experience appears to confirm Gaff's conclusion that institutions that made small revisions in their general education programs are less likely to experience positive effects.

General Education Goals:
Discussion and Recommendations

In our first report to the faculty (May 1993) we stated:

> Nationwide, general education programs are shifting from the purpose of transmitting specific substantive content to that of assisting students in making the critical transition from being receptors of "facts" to becoming lifelong learners. *The Working Group considers this to be the fundamental premise upon which we have built the more specific goals and strategies and the proposed model.* (emphasis added)

As we worked to revise our report and respond to faculty comment, the Working Group became even more convinced that this ought to be the fundamental premise for our general education curriculum. It also holds the promise of informing a program which will include educational experiences responsive to the expectations of students and faculty alike.

When the problem of general education is addressed from the perspective of "What should students know?" the common response is to identify various kinds of knowledge and to decide which knowledge should be common for all students. The assumption has been and often continues to be that there is a common core of knowledge that should be possessed by all educated persons (Gaff 1991, 15). That is, general education should consist of courses the purpose of which is to transit that knowledge which faculty define as being essential for an "educated person." An "educated person" is thought of as a state of being produced by a student's baccalaureate program. The resultant problem for faculty is to agree upon what that knowledge is, how much of each component is essential, and how to pass that knowledge from professor to student.

As was discussed earlier, American higher education has largely lacked consensus upon what that knowledge should be and often that debate is not entered into because of departmental concern over the generation of student numbers. The Portland State experience between 1979 and 1985 illustrates these points well. Indeed, we suspect that our faculty would be hard pressed to agree collectively upon what books should be included in a "Great Books" approach. It would undoubtedly be even more difficult for us to derive a degree of consensus as to the justifications for our selections. Most often this task is left to the humanities faculty and ignored by the rest of the campus.

As this Working Group began to address the question of what should students know, we added an additional concern. We should be concerned about what students should know but also with what students should know how to do. Once this perspective entered our deliberations, our direction and focus were fundamentally altered. In retrospect the appropriate response was obvious: students should know how to learn. But our meaning is broader than simple acquisition of a list of skills such as how to write a complete sentence or manipulate a spreadsheet.

A 1988 report of the Task Force on General Education to the American Association of Colleges includes a brief summary of research by William Perry on student intellectual development which captures the committee's meaning when we assert that general education should assist students in making the transition from "receptors of facts" to lifelong learners. The intellectual development of students begins with:

> ... an authority bound phase in which students look for the right answer and want to be told, rather than investigate. When they find out that answers to many problems are tentative and controversial, they move into a position Perry terms "multiplicity," in which one opinion seems as good as the other, their own and the teacher's included. Students can be challenged to move beyond this subjectivism through the discovery that there are competent and incompetent ways to gather evidence and develop and test hypotheses. Then they can learn that while there are no final certitudes, there are ways to develop responsible, disciplined, and flexible theories and positions. *At the heart of Perry's work and that of other observers of student intellectual development is a powerful yet simple observation: Students gain intellectual sophistication when they must confront and assess competing and equally well argued perspectives on an issue or solutions to a problem.*
> (Katz, et al. 1988, 11; emphasis added)

It is this understanding of student development that provides the core for the goals we articulate and the curricular approaches we recommend. We faculty must remember that many of our students will be engaged in careers and/or assume job functions that have not yet been invented. Others will experience professionally active lives during which they will change jobs or job functions eight to ten times. Some will face an ongoing task of evaluating and analyzing new information and incorporating new technologies into their professional activities, as well as most aspects of their private lives (Kiechel 1993).

Our objectives for general education, the structure of that program, and our delivery of that curriculum must recognize the intellectual development of students and be consciously directed toward assisting students to gain intellectual sophistication. Furthermore, lifelong learning is not only the ability to engage in sophisticated modes of inquiry but also the propensity to do so. Without the propensity to engage in learning, students do not value the ability to learn as particularly meaningful in their lives. Thus, general education should be directed toward instilling a range of interests and curiosities as well as empowering students to engage those curiosities through sophisticated inquiry.

Our structuring of these arguments, discussions, and understandings into a statement of purpose along with attendant goals and strategies that we recommend to the PSU campus community is set forth below. By stating the purpose of general education at Portland State University to be facilitation of lifelong learning, we are suggesting an understanding of the concept "educated person" that is different from that state of being following completion of the requirements for a baccalaureate.
We recommend instead a vision and a purpose that understands an "educated person" to be one in a state of becoming, engaged in a lifelong enterprise which is never complete.
To achieve this understanding we propose that the following be adopted as the statement of purpose for general education at Portland State University:

> The purpose of the general education program at Portland State University is to facilitate the acquisition of the knowledge, abilities, and attitudes which will form a foundation for lifelong learning among its students. This foundation includes the capacity and the propensity to engage in inquiry and critical thinking, to use various forms of communication for learning and expression, to gain an awareness of the broader human experience and its environment, and appreciate the responsibilities of persons to themselves, to each other, and to community.

From this statement of purpose we developed the following four goals, each with attendant strategies (see appendix):

- *Engage in inquiry and critical thinking.* Provide an integrated educational experience that will be supportive of and complement programs and majors and which will contribute to ongoing, lifelong inquiry and learning after completing undergraduate education at Portland State University.
- *Use various forms of communication for learning and expression.* Provide an integrated educational experience that will have as a primary focus enhancement of the ability to communicate what has been learned.
- *Gain awareness of the broader human experience and its environment.* Provide an integrated education that will increase understanding of the human experience. This includes emphasis upon scientific, social, multicultural, environmental, and artistic components of that experience and the full realization of human potential as individuals and communities.
- *Appreciate the responsibilities of persons to themselves, to each other, and to community.* Provide an integrated educational experience that develops an appreciation for and understanding of the relationships among personal, societal,

and global well-being and the personal implications of such issues as the basis of ethical judgment, societal diversity, and the expectations of social responsibility.

We expect the stated purpose, goals, and strategies to accomplish three objectives. First, they define the philosophy for general education which can be communicated to faculty and students. Second, they establish criteria for course development. Finally, assessment of courses and the program will be based upon the purpose and the four goal areas.

The Working Group was not able to find any statement of purpose or philosophy for general education at Portland State University beyond the general desirability of some degree of experience outside a student's major as expressed in the *PSU Bulletin* (PSU 1993, 24). Faculty often find it difficult to explain to students why they must take courses in the manner prescribed other than it is required that they do so. Both faculty and students tend to see the current requirements as hurdles which must be overcome and many do not perceive the educational purposes and benefits that follow from meeting the requirements and as a consequence do not strongly support them. Building a general education program linked to an articulated purpose with attendant goals and strategies would clarify for students and faculty the rationale for that program.

The program we are recommending does not specify particular courses. Rather, it relies upon faculty and/or groups of faculty to develop either separate individual courses or sequences of courses for the program. Course proposals will have to demonstrate clearly how they touch upon differing combinations of strategies to contribute to student development as set forth in the goals. Among the tasks of a faculty oversight committee will be to review course proposals and assess their promise for contributing toward the purpose and goals of the general education program.

Assessment and evaluation are integral ingredients of the program we are recommending. Individual courses will be reviewed each time they are offered and the overall program will be assessed annually. The standards for that assessment will be grounded in the purpose, goals, and strategies adopted for the program. Again, the question which must be central to our planning for and evaluation of general education is whether we can state with conviction that what we require of students is meaningful. For the program we recommend, the response to that critical question is determined in relation to the articulated purpose, goals, and strategies.

The Working Group understands that within the confines of the recommended program of study it is unlikely that a student will encounter each of the strategies and that students will not equally attain each of the goals. Our students enter Portland State University with a range of abilities, prior educations, as well as differing contexts. We do except that all students will make significant and demonstrable progress toward program objectives as they move through both the general education program and their majors. Graduates of Portland State University will have attained that level of expertise deemed requisite by their majors and will have encountered a structured program of educational experiences which will have contributed to their ability and propensity to engage in lifelong learning.

Students and General Education:
Aspirations, Satisfaction, and Learning

It is often the case when faculty debate curricular requirements, especially general education, that we focus on the form and content of those requirements. Only rarely do we seek to examine what is known about the demand side of higher education as expressed through student expectations and aspirations. Nor is it typical that the effects-of what we require and how it is delivered-on the outcomes of student learning and satisfaction are central to the deliberations of curriculum committees. Rather, those are most often assumed. And rarely is it the case that curricular efforts include consideration of student characteristics and how those may affect the learning goals of curriculum structure, content, and delivery.

In the first part of this section we review research on student aspirations and expectations. Then we examine the extent to which those expressed by Portland State students are similar to findings from other institutions. From this we turn to a presentation of research findings on student satisfaction and learning outcomes and explore the implications of that research for students at Portland State University. Here we briefly consider the implications of this research for the problem of retention. Finally, we review research into the relationships between different curricular approaches to general education and student learning.

These studies were especially influential on the Working Group as we sought to formulate an approach to general education. We are convinced that to be successful, a program of study required of all students must be attentive to student aspirations, positively contribute to student satisfaction with their university experience, and be delivered in a manner which facilitates learning outcomes.

Student Aspirations
It is no secret that most students enter higher education with preparation for a career as their primary goal. A review of the results of several surveys of student goals and reasons for attending college reports that career goals and mastery of specific bodies of knowledge are consistently selected by substantial majorities of the respondents and are generally found to be the top two or among the three goals most frequently cited (Johnston, et al. 1991, 184). Importantly, these studies also found that support for general education is only moderately below that for career preparation. The implication is that students enter college not just to receive career training but also to a significant degree seek to gain "a well rounded education" or a good "general education" (Johnston, et al. 1991, 185-186). Students appear to understand and value the educational and instrumental purposes of general education. They wish to become more broadly educated ('Iwombly 1992).

Students entering Portland State University express goals and aspirations that are quite similar to those found among students at other universities. Students responding to the 1992 entering student survey indicated quite clearly that career goals were considered to

be the most important reasons for attending the University. However, these results also show quite clearly that substantial majorities of both freshman and transfer students place significant value upon becoming more generally educated and the expectation that higher education will include life-enriching experiences.

What is not clear from this survey of entering PSU students and from others across the nation is precisely what students mean by becoming generally educated. What can be inferred is that students aspire to an education that is more broadly conceived than just career preparation.

Student Evaluation of General Education

While students place a high value on general education, they report negative reactions to the general education courses they are required to take. These courses tend to be viewed as impositions rather than as opportunities for intellectual growth. Students often perceive little connection between the courses required to meet general education requirements and education related to their career aspirations. In general, recent studies have found little support for general education understood as the learning of content areas (Johnston, et al. 1991; Twombly 1992).

One study based on a sample of students drawn from 10 very different institutions asked students to rate their satisfaction with courses in their majors, electives, and general education requirements. Fifty-two percent of these said they were very satisfied with courses in their majors, 40 percent were very satisfied with elective courses, and only 20 percent were very satisfied with courses taken to meet general education requirements (Gaff and Davis 1981, 116).

An additional finding was that when students were asked to rate the importance of several factors to their "overall personal and intellectual development at this college" only some 30 percent of junior and senior students rated courses outside their major as being very important to their educational development. These courses were rated below such items as "off-campus social, cultural and work activities; talking or working informally with faculty; and campus activities, clubs or social life." The authors observe that "the striking thing is that students reported that the majority of courses required for graduation outside their majors failed to accomplish each" of the several often stated purposes for general education such as stimulating curiosity or contributing to a broad intellectual foundation (Gaff and Davis 1981, 117).

Another study based on a focus group design found that students had relatively low regard for courses in disciplines outside the major which were required to meet the general education requirements. Students choose less on the basis of interest than on the basis of course availability, tend to be less engaged with the coursework than the majors, and report spending less time studying for courses taken to meet general education distribution requirements. They evidenced a lack of understanding of the purposes of the requirements, and in a related finding many saw little relevance of the courses to either their immediate or future lives (Twombly 1992).

Supportive of those findings are some further results from the Gaff and Davis study. Students were asked to rate the importance of several competencies often included among the objectives in statements of general education purposes. The most highly rated were two noncognitive objectives: understanding of self and the ability to get along with people. Items that can be summarized under the rubric of developing communication abilities and intellectual sophistication comprise a second set of highly valued objectives. Least valued are several of the content areas that are often included in general education requirements. Not one of these content areas-history, science and technology, philosophy, literature, and so forth-was rated as very important by a majority of these students (Gaff and Davis 1981, 114-115).

While it is not clear what students mean when they say that an important reason for entering higher education is to become generally educated, this research suggests some possibilities as well as a somewhat clearer understanding of what students do not value highly. Students do seek educational experiences that sharpen their academic abilities and provide them with the means to pursue their separate curiosities. The significantly lesser degree of importance given to areas of knowledge outside the major runs precisely counter to the assumptions of many faculty and calls into question the value of expending enormous amounts of energy and time trying to agree on what students ought to know. Gaff and Davis conclude that while mastery of the subject matter of the major is deemed very important by students, for general education "the development of thinking skills, communication skills, and personal and interpersonal competence are more important than the mastery of any particular content" (Gaff and Davis 1981, 116).

On the basis of these findings, the Working Group concluded that an essential component of the foundation for building an effective general education program is to be found in the perceptions of students. On the basis of his experience with the Harvard Assessment Seminars, Richard Light observes:

> Students have thought a lot about what works for them. We can learn much from their insights. Often their insights are far more helpful, and more subtle, than a vague "common wisdom" about how faculty members can help students to make good decisions at college. (Light 1992, 6)

Students do have reactions to their university experiences; they know the circumstances in which they were intellectually challenged, motivated to learn, and empowered by the accomplishment of individual discovery. Students are also very clear about the types of experiences which were more negative than positive, something to be gotten through rather instilling the joy of learning. Their views as to the structure, content, and delivery of general education should be part of the design of any program. The general education program we recommend was consciously and deliberately designed to be responsive to student aspirations and consistent with the academic goals of Portland State University.

Factors Affecting Student Learning Outcomes

As the members of the Working Group discussed how to design a general education program that would work toward accomplishing the purpose and goals of general education at Portland State University, we became aware that student learning is significantly affected by a number of factors unrelated to course content. In particular, our deliberations were very much influenced by the research of Alexander W. Astin (1992, 1993). His research is based on analysis of information collected by the Higher Education Institute at UCLA, which has compiled longitudinal data on some 500,000 students from more than 1,300 institutions of all types.

Astin finds that the degree to which students feel themselves to be part of a campus community and the extent to which they are involved (engaged) with their campus and their educations are major influences on student learning outcomes. Both are strongly affected by peer influences. The strongest negative effect on student satisfaction is lack of student community particularly when this is reinforced by peer attitudes (Astin 1993, 279, 426). When students feel themselves to be part of a campus community both socially and academically, not only does satisfaction increase, so also do academic outcomes. Both community and involvement are significantly affected by the frequency and the content of student-student and student-faculty interactions.

While curriculum cannot by itself suddenly create a sense of identity with the campus community and/or enhance student engagement with their educations, conscious attention to these issues can contribute. Curriculum can be designed to encourage faculty-student interaction and facilitate the development of student community and encourage student involvement. For example, many institutions are attempting to encourage the formation of learning communities wherein students progress together through at least some part of their university experience. This structure has been found to promote student connections and engagement through shared educational experiences. It enhances community. A decline in a sense of loneliness and alienation among students and improved retention rates are reported to result from this curricular structure (Gabelnick, et al. 1992).

We understand that full implementation of the learning community approach at Portland State would be problematic at best. The large numbers of transfer students and the reality that many of our students at least temporarily interrupt their programs means that we cannot design a program based upon the assumption that students will continuously enroll. However, we have sought to design the freshman portion of the recommended program in a manner that will encourage the building of learning community experiences for at least those students.

More specific direction for the Working Group was provided by Astin's longitudinal analysis of students at 159 institutions (Astin 1992, 30). Among the environmental, noncontent factors found to enhance general education outcomes significantly are the following:

- student-student interaction
- student-faculty interaction
- a faculty that is very student-oriented
- discussing racial/ethnic issues with other students
- hours devoted to studying
- tutoring other students
- socializing with students of different race/ethnicity
- a student body that has high socioeconomic status
- an institutional emphasis on diversity
- a faculty that is positive about the general education program

Astin (1992, 36) found the following factors to have significant negative effects on general education outcomes:

- living at home, commuting
- watching television
- large institutional size
- lack of community among students
- frequent use of TAs
- full-time employment, off-campus employment

These findings are quite striking and had an important effect on the features of the program we recommend. The list of negative environmental factors describes the context for many of our students. According to the 1992 entering student survey, 79 percent of entering freshmen and 81 percent of entering transfer students indicated that they planned to work while attending PSU. Most of our students do not live on campus and commute to the University, PSU is a large institution, and a consistent complaint expressed by our students is the absence of a sense of campus community.

Over 51 percent of the freshmen and over 40 percent of the transfer students surveyed by the Office of Institutional Research and Planning disagreed or strongly disagreed with the following statement: "I have met a faculty member I can talk to" (OIRP 1993a). These findings suggest that many of our students feel isolated from the faculty.
Another characteristic of our students is that many are first generation university students. Fifty-two percent of the 1992 entering students surveyed report that neither of their parents had completed a two-year or four-year degree program. Twenty three percent indicate that neither parent had attended college at all.

The university experience is often significantly different for those who are breaking a family tradition from those who enroll as an expected continuation of both their own education and family history. Often, these first-generation students are racial or ethnic minorities, which further exacerbates the often difficult transition from secondary to higher education. Peer pressures in the neighborhood, some lack of family appreciation for the pressures of the university experience, and what is often a cultural disjunction place significant stresses on these students. They are at risk. It is for these students that

the need for community and the validation of their decision to enter higher education is most acute (Terenzini, et al. 1993).

Implications for Retention

A serious issue for this University is student retention. Only 23 percent of the students who enter PSU as freshmen continue to complete their degrees at this institution. Further, since 1986 between 33 and 45 percent of entering, full-time freshmen do not return for the second year. Changes in general education requirements are found to have an effect on student retention. Fifty-eight percent of the institutions that adopted comprehensive reform of general education reported positive consequences for the retention of students (Gaff 1991, 95). The question is whether the program we recommend speaks to the problem of student retention at Portland State University.

In two reports to the PSU Committee on Undergraduate Retention, Professor David Wrench, psychology, presented his analysis of 1991 entering student survey items. In his first report, Wrench focused upon items and indices related to retention of students from the fall quarter to the spring quarter. He concluded that a supportive campus social environment is essential to retention and that having a faculty member one can talk to is highly related to whether a student completes the academic year (Wrench 1992). In his second report, Wrench focused upon retention from fall 1991 to fall 1992. Social support and a feeling that the institution is caring again emerge as important factors. Also the number of hours students work, whether PSU offers the programs desired, and advising and information were established as being related to retention from one year to the next (Wrench 1993).

In many respects Wrench's finding conforms with Astin's conclusions about factors related to student satisfaction and learning. The context within which many of our students seek a university education includes several factors that have been found to be negatively related to their success. Reform of general education cannot change that reality. It can, however, seek to provide learning opportunities that emphasize positive influences. It can assist the development of community and increases in faculty student and student-student interaction. The general education program we recommend has been developed to create the opportunity to improve those aspects of the university environment.

General Education Approaches and Learning Outcomes

The general education reform movement of the 1980s resulted in differing curricular approaches being adopted at a number of campuses. Did the changes adopted lead to enhancement of student learning and improvement in their overall satisfaction with the university experience?

On the basis of his research Astin concludes that the "true-core" interdisciplinary approach is the only general education curriculum that appears to have a significant and positive effect on student development outcomes and student satisfaction which is independent of other factors (Astin 1993, 425). Different variations of the distribution

strategy to delivering general education were not found to make much difference when other factors are taken into account.

Ernest L. Boyer argues for a similar direction. He finds general education to be in considerable difficulty across the country and argues that students need to go beyond their majors to a "more integrated view of knowledge and a more authentic view of life" (Boyer 1987, 90). In order to be complete, general education must be structured so that the overlapping of the disciplines can be explored by students. To achieve this he argues on behalf of the integrated core approach which he defines as:

> ... a program of general education that introduces students not only to essential knowledge, but also to connections across disciplines, and, in the end, to the application of knowledge to life beyond the campus. The integrated core concerns itself with the universal experiences that are common to all people, with those shared activities without which human relationships are diminished and the quality of life reduced. (Boyer 1987, 91).

These conclusions are modified somewhat by the conclusions of a study attempting to classify general education programs into different categories and then exploring the relationships of these to a range of measures of student behavior and perceptions of their academic environments (Hurtado, Astin, and Dey 1991). This study is based upon a sample of 17,161 students at 190 institutions. Developing a taxonomy for general education programs is at best a difficult enterprise. The programs adopted by colleges and universities are very much influenced by their individual contexts and often include elements which overlap from one category to another. Some 90 percent of American institutions of higher education are found to base some or all of their requirements on some variation of the distribution model. Only about 5 percent rely on an interdisciplinary, "true-core" program in which all students take precisely the same courses. The remainder include major-determined programs wherein each major determines the general education requirements for its students.

Within the distribution category there is considerable variation. The categories determined by a factor analysis of general education requirements include: "diverse offerings" or programs that generally lack strict requirements and include a number of course offerings, "personalized or individualized curricula" that include required experiences which ask students individually to apply skills and knowledge acquired throughout the program, and "integrative/interdisciplinary" approaches that require students to take a number of integrative and/or interdisciplinary courses such as a "capstone" experience (Hurtado, Astin, and Dey 1991, 142).

The current general education requirements at PSU would appear to best fall into the "diverse" category. The program we are recommending is best characterized as combining elements of the "personalized/individualized" and "integrative/ interdisciplinary" approaches.

The "diverse" approach is found to have several negative relationships not associated with programs falling in the other categories. Students fulfilling "diverse" general education requirements were less likely to report that they had worked on group projects, given class presentations, or spent a lot of time attending classes or labs during the previous year. Further, students in institutions whose requirements fall into this category were also found to perceive less attention to student development. Negative relationships were found for perceived institutional priorities to develop leadership ability among students, help students examine and understand personal values, and facilitate student involvement in community service. The authors conclude:

> actual classroom experiences in a diverse program may be a less unifying educational experience for students than other curriculum types. In sum, the evidence indicates that a "diverse" approach to general education is deficient in providing a unifying educational experience and that students perceive less institutional attention to student development than is the case at institutions with other curricular structures.... Perhaps the bright and motivated students may benefit the most in institutions that have adopted a diverse curriculum structure, since much appears to be left up to the student to find (as in a college honors program) or build their own coherent curricular program in college. (Hurtado, Astin, and Dey 1991, 152)

Research conducted by James Ratcliff and Elizabeth Jones (Jones and Ratcliff 1991; Ratcliff 1992; Jones 1992) builds upon assessment of student learning through analysis of transcripts and the relationships of course patterns to nine broad categories of learning from the SAT and GRE scores. Their findings argue against the establishment of a common core required of all students. Students learn differently and not all courses are best suited for the learning of all students. However, these results also do not support the current wide range of options characteristic of "diverse" general education requirements. Different course combinations are found to contribute to different types of gains in student learning.

> Quantitative abilities are not developed solely in lowerdivision mathematics courses: they are enhanced through an array of select applied science, social science, and business courses as well. General learning is not confined to lower division; upper-division courses contribute strongly to the development of specific learned abilities, particularly analytic reasoning (Jones and Ratcliff 1991, 100).

On the basis of these findings Jones and Ratcliff recommend discrete arrays or clusters of courses from different disciplinary perspectives constructed to build cumulative learning as the approach best suited to contribute to student learning. This is particularly so for students who enter the university with less preparation in terms of knowledge or learning abilities (Jones 1992, 43). This research points out that our students come to us with a range of abilities, interests, and preparations. It is those students who are less well prepared who will benefit the least from a wide range of course options to fulfill general education requirements.

A further body of research that provided guidance to the Working Group was that of Richard Light, drawing from the Harvard Assessment Seminars (Light 1990; 1992). Three findings were particularly influential on our deliberations. First, this research clearly sets forth the importance of frequent, immediate assessment, and detailed assessment. This was found to be crucial for course effectiveness (Light 1990, 31).

The second point is that even though studies of student achievement have shown that class size does not predict actual learning as measured by test scores, small interactive classes do result in increased community, engagement with learning, and faculty-student interaction. In particular, freshmen who are often required to take a number of large introductory classes should have at least one smaller sized class (Light 1990, 70; 1992, 19).

Finally, the Harvard studies highlight the importance of student study groups being explicitly built in as part of the course structure, which leads to increased student involvement. And from the process of working in a group students encounter and learn a number of lessons about exchanging ideas, moving a group forward, and how to disagree in a group setting (Light 1990, 71). Harvard has found that mentored clusters of students have had significant payoffs for their students.

As noted at the outset of this section, research on general education and its delivery as related to student learning and satisfaction outcomes suggest a number of directions to those involved with curricular change. Students aspire to a broad, enriching education but often do not find that goal met by existing delivery structures based on the distribution of courses among selected fields and departments. They prefer more integration and coherence in their programs but also wish to maintain choices among course options (Gaff and Davis 1981, 118). The research supports an interdisciplinary, thematic approach, more tightly structured clusters of courses, and an interdisciplinary core, use of mentored clusters, extension throughout the four years, linkage of the program to articulated goals. Of particular note is that this research provides evidence that student learning is the product of much more than the subject matter "depth" of courses. The goals for general education can only partially be achieved through the lecture exchange between professor and student. Courses and curriculum for general education must take specific cognizance of the range of factors that have been found to be positively and negatively related to student development.

The Working Group came to the understanding that to be effective and to achieve the goals intended, curriculum needs to be structured and delivered in ways that respond to the characteristics of our students and to what is known about factors influencing learning outcomes. Curriculum cannot address the real context of our students, much of which works against attainment of educational goals. We can, however, and indeed must develop a curriculum that emphasizes and consciously strives to enhance those experiences which have been found to positively influence learning outcomes. Emphasis on student-student interaction, faculty-student interaction, student tutoring, emphasis on groups of students progressing through at least some part of their program together, and

constructing a general education program about which faculty can be positive are all points that can be affected by changes in the general education program. The program we are recommending to you includes each of those points.

A General Education Program for Portland State University

Our recommended program for the general education of Portland State students is based primarily upon the purpose and goals for general education articulated in the previous section. Research on student goals and expectations, on factors that affect learning positively and negatively, and research on the relationships of different curricular structures designed to deliver general education to student learning and satisfaction were also important influences. We have sought to develop a program of study that consciously and deliberately applies these findings and recommendations to the particular context of Portland State University.

We begin with a comparison of current requirements and the recommended program. This is followed by separate discussions of each of the components of the program: Freshman Inquiry, course clusters for sophomore through senior levels, and the senior capstone experience. In each section we offer several recommendations that touch on questions of program implementation.

Comparison between Current and Recommended Requirements

The following comparison of current and recommended requirements leaves little question that the program we are recommending marks a significant departure from the long standing distribution-based general education requirements at Portland State University. It is a four-year program of study. Heavy emphasis is placed on faculty-student and student-student interactions throughout the program. Small mentored discussion groups are integrated into sophomore level courses. Students will have choices throughout the program, but these will be structured, integrated arrays or clusters of courses. We have sought to build into our recommendations features that have been found to contribute positively to student development. Other research-based characteristics of the program will be pointed to as we discuss the separate components. Throughout the program the foundation and direction are based on the purpose and goals we recommend for general education at Portland State University.

Current Requirements		Credits	Recommended Requirements	Credits
1. 18 credits from two departments from each of the three academic distribution areas. 18 upper-division credits must be earned in the academic distribution areas with no more than 12 in one department.		54	1. Freshman Inquiry One year-long course	15
2. Two courses (6 credits) of diversity coursework from the approved list. Courses must be taken from two different departments. These credits may be included within the above distribution requirement			2. Sophomore Year Three 4-credit courses selected from different interdisciplinary programs or general education clusters.	12
			3. Upper Division Complete one inter-disciplinary program or general education cluster (four 3 credit courses).	12
3. Writing 121		3		
4. Writing 323		3		
5. HPE 295		3	4. Senior "Capstone" Experience	6
	(Minimum)	63		45

Number of Required Credits

The current 63 credit requirement is equivalent to 34 percent of the 186 quarter credits needed for graduation. The recommended program reduces the credits required to 45 or 24 percent of the number required for graduation. It should also be noted that the current 63 credit requirement is a minimum. Unless students and advisors are careful to coordinate the vertical field distributions with the horizontal upper- and lower division requirements, students may end up having to complete some number of additional credits. Also, most upper-division courses have lower-division prerequisites. Students may be faced with having to complete additional courses to meet these prerequisites or find themselves in upper-division classes for which they are unprepared. Finally, not all courses eligible to meet the diversity requirement can be used to meet the distribution requirements. Some of the courses on the list of approved diversity courses carry omnibus numbers (407, 410, etc.) and these cannot be applied to the distribution requirements. The net effect is that the number of student seats and the number of courses needed to deliver general education to our students will be less under our recommended program.

While it is simply not possible to foresee and plan for all possible student scenarios that may lead to complications, it is the case that the recommended program sets forth credit

requirements that are clearer and pose fewer interpretation problems for students and faculty than is currently the case. Greater clarity and reduced complexity should contribute to improvements in student advising.

Transfer Students

During our deliberations we were made very aware of the reality that between 75 and 80 percent of our graduates offer at least some credits taken at other institutions. The magnitude of the transfer student issue is well illustrated by the fact that for the 1991-92 academic year there were nearly twice as many seniors (3,133) as freshmen (1,596) enrolled at PSU (OIRP 1992, 25). Clearly, any general education program must recognize this underlying characteristic of our University.

A key concern for transfer students is the equivalency of their coursework at other institutions to courses meeting the distribution requirements at Portland State. In addition to creating a substantial workload for those involved with transcript evaluation, the "equivalency problem" appears to generate a good deal of dissatisfaction among transfer students. A preliminary review of open-ended comments from entering transfer students suggests that there is a considerable amount of dissatisfaction with both the evaluation process and the problem of equivalency in relation to the general education requirements. Having to repeat coursework, uncertainty as to which courses fall in which distribution area, a lack of clarity as to the purposes of the requirements, and a general frustration with having to meet requirements that may necessitate delaying graduation are among the general themes of these comments. Faculty, department heads, deans, and other administrators face a constant stream of petitions regarding equivalencies or requesting waivers from the requirements throughout the year with the pace quickening as graduation nears. Transfer students frequently experience difficulties with the present system and may encounter delays in graduation for purposes which often seem to them more bureaucratic than educational.

Representatives from area community colleges contributed greatly to our discussion of this issue. They added significantly to our understanding of the Block Transfer program as well as the concerns of their students who are considering entering PSU. The Block Transfer program requires that the general education work at the community college level be considered to meet university lower-division requirements for those students who complete the A. A. degree. All three area community colleges have revised their general education curricula and require a good deal of their students.

A major concern of the community colleges was that no special requirements, such as a required series of courses or a competency exam, be put in place for students transferring in as juniors. They correctly pointed out that such an approach within the general education program would create yet one more obstacle for these students that would run counter to the intent of the Block Transfer program. Additionally, a special requirement that was not applicable to other PSU students would only encourage these and other transfer students to pursue other options.

Our response to the "transfer problem" is to recommend that the requirements of the general education program begin in relation to a student's class standing at the time they enter PSU. That is, a student entering as a sophomore would begin the general education program at that level. They would not be required to take Freshman Inquiry. Similarly, a junior would begin at that part of the program. Persons transferring in as seniors would be required to meet the upper-division requirements of the program. This approach would respond to many of the concerns expressed by incoming transfers by effectively ending the problem of equivalency for at least the general education portion of their PSU programs.

Several of the written responses to our previous report commented that transfer students would not have had Freshman Inquiry and might therefore be at a significant academic disadvantage. *Our response is to recommend that the Freshman Experience seminars which will begin to be offered this fall quarter be changed to New Student Seminars and that transfer students be strongly advised to take advantage of that opportunity.* Those transfer students who do take this course will have the opportunity to begin building the bonds of community and sense of involvement that appear so important for student learning and satisfaction.

Writing Requirement

The program we recommend does not include a separate set of courses identified as writing courses. The Working Group is strongly committed to the premise that an essential component for all courses included in the program will be a demonstrable and substantial emphasis on communication as a component of learning. We consider the core of communication to be writing, but we also expect serious attention to be given to graphic, numeric, and oral means of learning and expression. This does not mean that each course will be expected to require an extensive research paper. Rather, each course through all four years of the program should include a variety of writing and other communication experiences. Writing, graphic, numeric, and oral modes of learning and expression will be taught and learned within course context rather than being isolated into two required courses which are often perceived as being separate from the subject matter being pursued by students. Writing and other forms of communication will become integrated into and part of the subject matter focused upon by different general education courses through all four years of the program.

Diversity Requirement

Similarly, the program does not include a separate, isolated diversity requirement. As was discussed earlier, the intentions and objectives of the diversity requirement have been diluted by the fact that at least 102 courses can be used to fulfill the two-course requirement. As is the case throughout the current curriculum, there are individual courses which significantly and powerfully contribute to student learning in this area. Yet it is not clear how this list of individual, department-based courses can consistently contribute to a coherent learning experience. Our recommended goals and strategies place strong emphasis upon student learning about diversity from a number of perspectives. Our goal is that Portland State University will begin to be among those universities and colleges that include these issues in coursework across the curriculum. Several of the

curricular initiatives underway include a focus on these concerns, and faculty will be encouraged to develop courses which address these issues. We believe that among the outcomes of the recommended program will be greater awareness and enhanced sensitivity among our students.

Health and Physical Education
Under the recommended program the current three-credit Health and Physical Education requirement will be eliminated with the objectives of that course included within the general education goals and strategies. In response to the previous draft of this report, the faculty of the Department of Public Health Education presented to the General Education Working Group a set of carefully considered and thoughtful suggestions for strengthening the general education goals and strategies. Most of those suggestions were incorporated into the current draft, and the Working Group is appreciative for that contribution to our development of this set of recommendations.

General Education Courses
Courses for Freshman Inquiry will be developed by those faculty who comprise inquiry faculty for a given academic year. All university faculty will be invited and encouraged to develop courses for the sophomore through senior levels of the program. These could be developed by individuals or groups of faculty and could take the form of one separate course or a sequence or even a cluster of courses. A faculty advisory committee will review the extent to which course proposals incorporate the goals and strategies of the program into their subject matter and delivery. These courses would not carry a departmental prefix; rather, they would be identified as general education courses.

This approach to course development for the general education program is a significant break with the distribution model. Currently courses developed primarily for majors by departments within the field areas constitute the curriculum for general education. Many of these existing courses serve two not altogether complimentary purposes. They are intended to contribute to the specialized expertise of majors and are offered as contributing to the general education of all students. It is certainly foreseeable that these courses could be revised to incorporate the goals and strategies and then become part of the general education program.

This does not mean the necessary demise of the many excellent departmental courses that have successfully contributed to student learning. Many of our students will continue to need a large number of credits in addition to general education and major requirements. The number of additional credits needed by students varies considerably from program to program but can be as high as 96. Students will continue to search for courses outside their majors which are interesting and which are seen as contributing to their chosen area of specialization. The difference will be that students will not be taking these courses to fulfill distribution requirements; they will enroll in them because they are indeed interested in the course.

Faculty Development

Faculty are to be requested to participate in team-taught Freshman Inquiry courses and to develop courses for the general education program, then the University must commit itself to an ongoing, systematic program of faculty development. As Gaff's review of general education reform established, faculty development programs are increasingly part of curricular reform.

Historically, faculty development has meant gaining increasing expertise within one's chosen subject matter. The curricular reform movement of the 1980s brought an emphasis on the improvement in teaching and learning (Gaff 1991, 102). Faculty are accustomed to development in terms of improving one's knowledge and recognition within a disciplinary structure. Most are less accustomed to attending workshops, seminars, or conferences that focus not upon subject matter but upon improving one's teaching. Attention to course organization, learning objectives, and classroom activities have not been part of the graduate school experience of most faculty, nor have there been very many incentives or opportunities to consider carefully questions of pedagogy. A systematic program of faculty development is an important ingredient of our recommendations for general education at PSU.

The development program will have at least two major goals. The first is to improve knowledge about the topics that provide the focus for course clusters and for Freshman Inquiry. Faculty from different disciplines will work together to design and deliver courses, and there will need to be the opportunity for faculty to improve their knowledge of the contributions of other disciplines to course topics. For the Freshman Inquiry faculty we recommend establishing an ongoing seminar wherein faculty will read, discuss, and write about the core theme from the perspectives of several disciplines. For faculty organizing individual courses or course clusters for the sophomore, junior, and senior levels of the program, we envision workshops and shorter seminars that focus on expectations of the general education program and upon collaborative course development.

The second objective will be to strengthen pedagogy. Here we expect there to be workshops and short seminars for faculty to become aware of different classroom activities and how those might be incorporated into their own classes. For example, the "one minute paper" assigned at the end of a class session and returned to students with feedback at the start of the next session has been found to have significant benefits for student learning (Light 1991, 35-38).

Another objective will be to provide support for faculty who wish to develop, including more "high-tech" innovations such as interactive video disks or multimedia presentations. Faculty know these possibilities exist but do not have the time or the resources on their own to gain the expertise needed to make effective use of these technologies in the classroom. A program of faculty development that focuses upon strengthening pedagogy will provide at least the beginnings of the support needed.

At universities across the country, faculty have responded to development programs with a good deal of enthusiasm. Increased collaboration across disciplines, enhanced pedagogical effectiveness, and improved student satisfaction with their learning experiences in general education courses have been among the reported results (Gaff 1991, 108-109). Many faculty at Portland State University have reported similar positive experiences resulting from their participation in the current faculty development grant program and other development opportunities. *We recommend that the University expand its current efforts and work toward a sustained, systematic commitment to a program of faculty development.*

Faculty Reward Structure

As the University guidelines are currently written, promotion, tenure, and merit pay decisions are not likely to be significantly affected by one's participation in the general education program. *The Working Group strongly recommends that the guidelines on promotion, tenure, and merit pay be changed to include participation in the general education program as a separately identified component of the evaluation criteria.* We believe that this change is absolutely essential in order to acknowledge and reward the significant commitments of time and expertise on the part of participating faculty and the overall contributions of those efforts to the University.

Phased Implementation over Four Years

We recommend that the components of this program be phased in over a four-year period. Freshman Inquiry would be implemented for all entering freshmen in the fall of 1994. The sophomore courses would be prepared for the following year. Upper division course clusters would begin in the fall of 1996. Finally, the senior capstone would be available beginning with the fall quarter of 1997.

Program Administration

From our review of trends in the reform of general education, it became apparent that the long-term success of the program would require a clear administrative point of responsibility, authority, and support. No such administrative structure presently exists at Portland State University. *We recommend that a person be designated to be the administrator of the general education program and that this be that person's primary administrative responsibility. We further recommend that this person be assisted and advised by a General Education Faculty Advisory Committee, which will have the responsibility for overseeing and proposing changes in the program as it evolves. Finally, we recommend that the administration of the program be independent of the College of Liberal Arts and Sciences and the professional schools.*

The program we are recommending includes the premise that general education is the responsibility of all University faculty. Faculty in the professional schools have not in the past been able to participate by offering courses meeting the distribution requirements. Further, many are involved primarily at the graduate level. We believe that the participation of those colleagues will significantly add to the learning experiences of our students. We believe that an important aspect of the ability of this program to attract

participation from professional school faculty will be the organizational independence of the program.

Freshman Inquiry

The overall goal for Freshman Inquiry is to assist students in making the transition from the "authority bound phase" to becoming increasingly sophisticated learners and thereby enhance their ability to engage successfully their academic programs. As we have seen, our entering freshmen bring with them a range of contexts and abilities. Those contexts often include being a first generation university student, working, and commuting, all of which have been found to have a negative relationship to student learning and satisfaction. For many of our students, their situations include two or more of those negative factors. Curriculum cannot address or alter those contexts; they form the reality for many of our students. However, a planned, coherent, and integrated program of study and the manner in which it is delivered can enhance factors found to be positively related to student development, particularly those related to involvement and community. Freshman Inquiry has been specifically designed to include those components and accomplish those objectives.

Structure
The year-long course required of all entering freshmen will be team taught. As presently planned, there would be four faculty teams each consisting of five faculty, assisted by five student mentors, teaching 2/3 time in Inquiry. Faculty teams will have the freedom to develop the specific topics related to the general theme for their courses. During the year-long course, those topics will be considered in some depth from a variety of disciplinary perspectives.

Clearly, this is not "core" in the conventional meaning of the term. Entering students will not all have classes with precisely the same topical content and reading. What will be "core" about these classes is the constancy of assignments requiring daily or almost daily communications projects, an emphasis on active learning through student participation, exposure to faculty from different disciplines confronting students with differing knowledge systems and disagreements over ways of knowing. Students will be presented with "facts," but they will also be confronted with the reality that some "facts" are matters of contention. They will also be expected to themselves engage in some discovery of "facts."

We are presently planning for 20 sections of Freshman Inquiry. Each five-member team would be responsible for five sections. To insure continuity during the course, one faculty member would serve as the primary instructor for each course. Team members would for a two to three week period each quarter explore the perspectives and insights offered by their discipline to the specific topics under consideration. Among the outcomes of this organizational structure is increased student awareness of the distinctions and commonalities among disciplines and their contributions to the richness of the university experience.

Inquiry classes will be kept relatively small (30-40 students) though this will vary depending upon how many admitted freshmen actually enroll at PSU. These classes will be broken down into three smaller groups for two hours per week. These small group sessions will be assisted by the student mentors who are part of the overall course team. By design the structure and organization of these courses is intended to create in each a learning community including the faculty members, the student mentors, and the students.

Inquiry Course Content
While structure and organization are essential, it is content and delivery that will ultimately determine whether the goals for Freshman Inquiry are achieved. After some considerable discussion, we concluded that a thematic approach was simply the best basis upon which to build academically rigorous courses that are sufficiently interesting to engage students and have the depth necessary to contribute to their academic development.

The foundation of these courses will be a core of knowledge and academic abilities. Students will be confronted with "facts," concepts, and theories related to the course topic as presented from the perspectives of several disciplines. Each class session will include an assignment that asks them to engage in one of the modes of communication, asks them to gather information, and/ or challenges them to consider a problem from a different perspective. Among the guiding principles for these courses is that students will have frequent assignments and immediate feedback. The research by Light (1990, 31-33) has shown that this approach is extremely important and positively contributes to student learning.

By the end of the year-long courses, students will be expected to know how to frame questions, gather information, engage in analysis, and communicate conclusions applying written, numeric, and graphic forms of communication. That is, students will be expected to use the library to gather information from original sources, to have the sophistication to integrate different types of information as they attempt to analyze a problem, and to present that analysis in an appropriate form that demonstrates their capacity to employ written, numeric, and graphic means to communicate their work. Most often this will take the form of a research report of moderate length to be completed during the spring quarter.

The result will be that in addition to learning a great deal about the topic under consideration, students will have spent the year gradually becoming more sophisticated in their ability to learn through constant, almost daily assignments structured to develop different skills and abilities. Additionally, they will have been exposed in some depth to several different disciplines, their ways of framing questions, gathering information, and standards for making knowledge claims. Students will be better prepared to meet successfully the expectations of upper division work in their majors than is often the case at present.

Inquiry Courses under Development

Two groups of faculty have begun to develop model courses within this general theme. Neither effort is as yet fully developed, but both hold the promise of offering precisely the kind of learning experiences envisioned for entering freshmen. We present a brief description of each to illustrate what is intended for Freshman Inquiry.

"Discovering Metropolitan Portland" is the tentative topic for one of the courses. This year-long course of study proposes to direct student efforts toward discovery of the evolution of the physical and human landscapes and toward consideration of processes of change and the future. Throughout the course attention would be given to models offered by different disciplines to describe current conditions and predict processes of change as a means for understanding current and future conditions and problems.

In addition to being presented with a range of facts about the metropolitan area, students would be asked to engage in data collection of various types (e.g., physical measurements of the environment, demographic statistics, mapping neighborhoods, human surveys) and be expected to present those data in appropriate forms as they analyze different problems. Throughout this course students would be expected to work with facts in the context of descriptive and process models that assist in organizing and analyzing the world around them. In addition to enhancing their academic abilities, students would gain substantial insight into the relationships between physical and human characteristics as these interact to shape this metropolitan community.

The second course under development proposes to explore discovery through a focus on the social, cultural, and historical context of Albert Einstein's theories of relativity. Tentatively titled "Shifting Realities: Albert Einstein's Relativity," this year-long course would begin with a consideration of the social and intellectual climate of Europe at the beginning of the twentieth century. The context within which Einstein learned and grew to maturity included considerable intellectual ferment as scientists and artists worked and contributed toward significant changes in the definitions of objectivity, perception, space, and time. Students, in the winter quarter, would examine the theory of relativity and the consequences of its publication specifically on the study of physics and on more general areas. Why was it that a theory of physics so strongly captured public imagination, making Einstein a world-renowned hero? To what extent is discovery contextually constructed? These issues would carry the course into a consideration of current societal and cultural contexts of scientific discovery.

Throughout this course students would be asked to research and write several short essays exploring the historical, cultural, and scientific issues raised. They would also be expected to explore mathematics as a means of communicating ideas. Some data collection, analysis, and presentation would be required throughout the course.

These model courses clearly offer students two very different topical maps to discovery, but in many ways they share similar concerns and will offer students many similar experiences. Written and other forms of communication, using mathematics as a means of learning and expression, considering topics through several disciplinary lenses,

collecting data and reporting analytic results are experiences that run throughout both courses. Both offer students interesting, even exciting opportunities, engaging them in a variety of learning experiences. At the end the three quarters we expect students to have made considerable progress in their journey toward becoming lifelong learners.

The Library and Freshman Inquiry

Both of the courses under development envision students being involved in a number of information gathering activities, often from primary sources. This will be the case for every Freshman Inquiry course. This means that by design as well as necessity Inquiry will include access and retrieval of information from the PSU library as a significant part of the curriculum.

At present, many of our students do not often confront the need to make use of the library until they begin the upper division portion of their course of study. Then, they urgently need to avail themselves of the many resources available but typically must do so without even a minimal introduction to the library, understanding of how information is organized, or awareness of the most appropriate means to access information. Rather than being a component of student learning throughout their education, the importance and role of library resources do not emerge until late in their education, and then students often have incomplete knowledge as to how to take full advantage of those resources.

Beginning with Freshman Inquiry, students will learn how to access and retrieve information from the library in a manner that is integrated with their coursework. Inquiry faculty will work with library faculty to incorporate those goals within the curriculum. We expect the goals to be based upon those articulated by the Association of College and Research Libraries' "Model Statement of Objectives for Academic Bibliographic Instruction" (ACRL 1991). This extensive program of objectives and competencies focuses upon a student's ability to gather information, which is seen as four separate but interactive processes:

- identifying how information is created and communicated
- understanding how information is organized into recorded and unrecorded sources
- being able to select information using a number of access points and sources
- being able to actually retrieve an item from a collection

The goals for this part of the curriculum include much more than simply discovering the on-line catalog or knowing which floors house material from which disciplines. Students should gain an appreciation for the information structures, understand the range of ways to begin identifying particular sets of information, as well as the basis for distinguishing among different types of information. By the end of Freshman Inquiry, students will be expected to be able to use efficiently electronic modes of searching including on-line options and electronic databases, demonstrate confidence in the use of indexes and abstracts as access points by identifying and retrieving articles from journals and periodicals, be able to identify sources from citations, and follow through the search to physical retrieval of that item (Wright 1991). This list of objectives is certainly preliminary and will need to be carefully developed with the assistance of library faculty,

but the intent should be clear. By the end of their first year at Portland State University, our students will be able to use the library with confidence and view access to that information as integral to their academic experience at PSU. The ability to access and use information well and wisely is essential to facilitating lifelong learning.

Evaluation
Freshman Inquiry classes pose a number of challenges for the evaluation of student performance. Frequent communication assignments, data collection activities, and class presentations are among the activities that will be expected of students. The traditional pattern of a midterm and final exams perhaps supplemented by a paper or essay will not be adequate to meet the learning goals of these courses, allow for the identification of student problems, or offer the opportunity for a more complete examination of student development.

An approach which offers the promise of using evaluation as part of learning and allowing for a more comprehensive review of student progress is that of portfolio review. Individual assignments will be evaluated and commented upon almost immediately. During the quarter, students will be expected to build a portfolio of the work completed and will present that to the faculty team at the end of each term. The faculty in consultation with the student mentors will evaluate each student's performance on the basis of total work completed and evidence of learning progress. Given the nature of these courses, portfolio evaluation offers the best opportunity for a student assessment program that effectively contributes to student learning.

Inquiry Faculty
Our current plans call for a 20-member Freshman Inquiry faculty drawn from departments across this University, each devoting two-thirds of their teaching to the program. Participants would retain their departmental affiliation. We do not envision the development of a permanent Inquiry faculty. Rather, some portion would leave to return full-time to their departments at the end of each year to be replaced by new faculty participants. In this way the program will retain some continuity from year to year but will also benefit from the expertise and insights of the new members.

Faculty can indicate their interest in participating in the program through self-nomination or nominations by their departments. The general education faculty advisory committee will be charged with selecting the participants for the next academic year. The determination of inquiry faculty membership should be accomplished during the fall quarter for the next academic year.

During the winter and spring quarters, these faculty will be expected to begin learning to work together by participating in course development workshops and the ongoing Inquiry faculty seminar. This would continue through the summer, which leads to our next recommendation. *We recommend that incoming Inquiry faculty receive a summer stipend to support course preparation.* Faculty will be asked to make at least a two-year commitment to the program. No person will serve on Inquiry faculty for more than three years.

While we expect Inquiry faculty to be drawn from across the University, we do plan for some areas of expertise to be consistently present. Inquiry faculty should include persons with expertise in writing and its instruction, mathematics, and graphics. Because new faculty will be brought into the program each year, we expect that over time all members of the PSU faculty who wish to participate will have the opportunity to do so.

Student Mentors
Our current organization of Freshman Inquiry calls for 20 student mentors who would be responsible for assisting students working on their assignments in small group sections. Students wishing to participate in the program as mentors should have upper-division standing and will be nominated by their departments or self-nominated by early in the winter quarter. Students nominated should have demonstrated exceptional abilities in at least one of the communication areas, the curiosity and the capacity to pursue research questions, and the ability to work with people from a variety of backgrounds and contexts. Inquiry faculty will review the applications and select the mentors prior to the end of winter quarter. During the spring these students will be expected to work closely with their faculty team in course preparation and to attend workshops to help prepare them to meet the expectations of faculty and students. We anticipate that these students will become integral members of the team. *We recommend that student mentors be compensated by receiving tuition remission for that academic year in the same manner as is done for graduate assistants.*

In addition, the educations of the student mentors will be greatly enhanced. Astin has shown that being a student tutor contributes in significant ways to student learning. Thinking through, researching, and preparing a year-long course and then being part of the delivery of that experience should greatly contribute to the university experience of these students.

Expected Outcomes
In addition to consideration of course topics in some considerable depth, we expect that the outcomes of Freshman Inquiry will include measurable growth in the areas of communication, question framing, information collection, ability to use numeric information for analysis and communication, and facility in accessing and retrieving information from the library. Students should be able design and complete a modest research project and use written, numeric, and graphic means to communicate the results.

Additional outcomes should include enhanced facility with scientific thinking, mathematics, and writing. At present, courses which emphasize these abilities tend to be avoided by students who often feel a lack of competence in those areas and who are therefore quite apprehensive about their prospects in such courses. We expect that students will feel empowered by their contact with these and other competencies in the Inquiry program and that they would as a result be more likely to pursue their curiosity about those areas through additional course work.

We expect that this experience will result in students making substantial progress toward the overall goal of becoming lifelong learners. Further, we expect that Freshman Inquiry will contribute in significant ways to the abilities of students to pursue their chosen majors.

The pedagogy of Freshman Inquiry will include extensive student-student and student-faculty interactions. Additionally, students will be encouraged to stay in the same class section throughout the year. Ideally, each section and its mentored discussion groups will form learning communities. The expected result is that students will build a sense of community and involvement with each other as well as with this University and its faculty. Students will know a member of the faculty with whom they can talk, they will have built some strong bonds with other students during the sustained yearlong experience, and they will have had experiences working with other students from differing backgrounds and contexts. The sense of isolation which results from many of our students working, commuting, having family responsibilities, being first-generation students, and attending a large university will begin to have been deliberately addressed by the features of this part of the general education program. As the research of Astin has shown, each of these contributes to increased student satisfaction, enhanced learning outcomes, and improved retention. While it is of course true that these courses cannot in and of themselves fully address the issues of retention, learning, and satisfaction, Freshman Inquiry has been consciously developed to respond to those issues, and it will be a significant component of this University's efforts to respond on a more comprehensive basis.

Sophomore, Junior, and Senior Courses

The program for sophomore level students will continue to include small group, mentored sessions to assist students to improve upon the foundation provided by Freshman Inquiry. Each of the three 4-credit courses will also continue to include frequent communications assignments with immediate evaluation and feedback. We expect the objectives and content of these courses will begin a more direct focus upon topics and strategies related to the Human Experience and Ethical Issues and Social Responsibility general education goals.

Our initial planning for these courses is that they will be overviews of or introductions to junior and senior level course sequences or clusters. Students will choose three such courses and then move into one of the clusters. Again, students will have choices, but these will be structured and integrated sets of courses.

The four-course, 12-credit junior and senior level requirement will be designed to offer students choices among sequences or clusters of courses. Faculty may propose individual courses, but these will be joined with others to form an integrated educational experience. The research by Ratcliff and Jones discussed earlier strongly supports this curricular structure.

Faculty offering courses grouped into a cluster or sequence will be expected to work together as the content and objectives of these courses evolve and to coordinate such matters as sequencing and scheduling. The faculty development program will serve to assist this necessary coordination. This will mean that faculty offering courses in the program will engage each other in discourse across departments and disciplines as they work toward developing their individual courses in relation to the other offerings within the cluster. The commonalties and conflicts among differing ways of knowing will become part of the course structure rather than a matter that is left to students to divine.

The expectation of frequent and significant communications assignments will continue and the pedagogy should include active learning on the part of students. The subject matter will include expanded consideration of the strategies related to the goals of Human Experience as well as Ethical Issues and Social Responsibility while continuing to build on the foundations in the areas of Inquiry and Communication. Students will be expected to demonstrate increasingly sophisticated research and communication abilities.

Senior Capstone

The discussion of the 6-credit senior capstone experience in our previous report elicited a number of responses ranging from "irresistible, worth trying" to "good idea, but how will we do this," to "this terrifies me." In general, the responses were quite favorable to the idea that this metropolitan area could serve as a learning laboratory for our students to apply the expertise learned in their majors. The concern expressed both softly and stridently was whether it would be feasible. In this discussion of the capstone we seek to address at least some of those concerns and suggest ways in which the capstone could be structured and supported.

The senior capstone has three main objectives:

1. to provide an opportunity for students to apply the expertise learned in the major to real issues and problems
2. to give students experience working in a team context necessitating collaboration with persons from different fields of specialization
3. to provide the opportunity for students to become actively involved in this community

A capstone requirement is typically put in place to provide students with a learning experience that brings to completion their university education. Certainly that is part of the intention with this capstone experience, but we are also an urban university part of whose mission is to interact with the community and to provide opportunities for the community to access the resources of the University. This version of the capstone is more broadly conceived to be responsive to the urban context and resources of Portland State University.

Students will take the capstone near the end of their educations at Portland State University. By this point they will have nearly completed their major requirements and

will have acquired some degree of expertise and competency. The capstone will provide an opportunity for students to begin the transition from university to profession or further education by experiencing and testing their expertise in a structured environment.

The team project element of the capstone is a direct response to observations from persons in the private and public sectors. They have indicated with some clarity that our students are well trained for a specific area of expertise. The major weakness is that they have had little if any experience working in a group context to address collectively problems and goals. Even more to the point is the observation that students trained within specialized fields need to be able to communicate and work with persons trained in other specialized fields. Those who can successfully do so are the ones who are more likely to be retained and advanced within the organization. The capstone asks our students to do more than read and take notes about team approaches; it asks them to actually do it.

The community involvement component of this part of the program will place Portland State at the forefront of the service learning movement in American higher education. An increasing number of colleges and universities either require or make available opportunities for community service. The Campus Compact, a national organization formed by a group of college and university presidents to promote community service as an integral part of undergraduate education, has grown to include some 300 presidents and their campuses (Stanton 1990). In 1990 Congress incorporated service learning into the National and Community Service Act, and in 1992 over $5 million was distributed in 58 grants to colleges and universities. All of this is by way of establishing that the general education capstone is not entirely new or out of step with national trends. Rather, service learning has been found to have significant benefits for student learning and is now a part of the curriculum at a number of campuses.

The types of projects included within the capstone will encompass a wide range of activities. Some projects may involve library research leading to an analytic paper while others may involve data collection or observations in the field. What we expect is that the projects will be finite rather than open-ended and will be significantly directed toward the capstone objectives.

Two related issues seem to comprise the core of the concerns raised about this recommendation: how many students and how many projects. The number of students who would be seeking to complete this part of the general education program during each academic year is most likely somewhat over 2,000. Since 1988-89 Portland State has awarded about 1,900 bachelor's degrees per year. For those same years the number of students classified as seniors has been about 3,100. That this difference between number of undergraduate degrees awarded and the number of seniors has been consistent raises a number of questions. For purposes of the capstone, these figures suggest that the annual number of students seeking to participate in these projects would be somewhere between the two and probably closer to the number of degrees awarded.

This does not mean, as some have inferred, that more than 2,000 projects will be needed for each year. We estimate that number of projects needed for each year will be

approximately 200 to 250. First, these are to be team not individual projects. While the size of the team will vary depending upon the nature of the project, we have built our estimates on the basis of 10member teams. Second, some majors and programs currently require a senior level experience which is similar in intent and design to the capstone. At the previous set of open meetings we were asked if those students would also need to complete the general education capstone. *Our recommendation is that students in those majors and programs that currently have or subsequently develop senior level experiences similar in intent and design to the capstone not also be required to complete the capstone requirement.* For the Working Group, it is the intention and the goals that are primary, not which institutional component offers the experience. Those programs and majors will be asked to meet with the general education advisory committee to explore how to implement this recommendation. The result is that the initial number of students who will be required to complete the general education capstone will be reduced.

We envision that several of the projects will be ongoing over a number of years and that the number of new projects needed each year will be fewer than the 200 to 250 total projects. For example, several organizations are right now in need of annual data collection and summary but do not have the resources to accomplish this. The relationship between the University and organizations with this need would be to establish an ongoing mutual commitment to participate in that project.

The Portland metropolitan area contains some 55,000 businesses, over 60 governments with their attendant agencies and bureaus, and uncounted nonprofit groups, neighborhood and community groups, and private associations. We begin with the assumption that more than 200 projects per year can be found in this metropolitan area. Further, we expect that once the capstone is in place, with the resultant expansion of institutionalized relationships between the University and community there will be more projects submitted from the community than we will be able to accommodate each year.

Equally important will be institutional support for the capstone. Projects will need to be identified. The parameters and expectations for both the community organization and the University must be negotiated and understood, with that understanding communicated to students. Student teams will need assistance, logistical support, and advice. The performance of both the community organization and the student team will need to be monitored. It is quite clear that faculty could not be expected to carry this additional workload without significant support.

The Working Group has discovered that the foundations for that support are already being constructed by faculty acting individually and in groups, as well as emerging in the activities of some programs and institutes. Individual faculty and programs have for some time been negotiating with public and private sector organizations to provide learning experiences for their students.

More systematic, University-wide efforts have been begun by the Institute of Portland Metropolitan Studies. This institute is designed to link University resources with metropolitan issues and is governed by a 21-person board composed entirely of

community members from the five county metropolitan area. Among the activities envisioned is Project Match, which will seek to connect community organizations with the University. Project Match is intended to identify community issues and problems that are consistent with the mission and the resources of the University, to make organizations aware of the resources of the University, and to "broker" the connections between the University and the community. These initiatives by the Institute are an important component of the necessary foundation of ongoing relationships between community organizations and the University.

Another organization which is already in place and functioning to establish sustained connections with the metropolitan community is the Portland Educational Network (PEN). The activities of PEN have primarily focused upon creating a consortium of regional educational institutions for the purpose of designing educational experiences for students at all education levels. These already established relationships should result in a number of opportunities for capstone projects.

The efforts of individual faculty and programs, the Institute of Portland Metropolitan Studies, and the Portland Educational Network are illustrative of the range of connections between the community and the University that are already in place. Planning and preparation for the capstone will take place within an institutional context wherein many contacts and relationships have already been established. What will be needed during the four years prior to the phasing in of the capstone is the expansion of that foundation.

At present one grant proposal has already been submitted to the Fund for the Improvement of Postsecondary Education (FIPSE) that requests support for the creation of a Metropolitan Collaborative. The Collaborative would be a vehicle for identifying, supporting, and developing community-based projects. This grant proposal specifically builds upon our recommendations for the capstone and would be a significant step toward providing the necessary support for faculty and students.

Another group of faculty has been awarded a grant from the PSU Faculty Development Program for the purposes of facilitating service learning at Portland State University and positioning the University to receive external funding to support an extensive service learning program. More specifically, the intention is to apply for funds from the National and Community Service Act.

During this coming academic year, faculty development in the area of service learning will be facilitated by several workshops and seminars. By the end of 1993, the intention is to seek external funding to support a service learning center. This center would not only work to expand University-community linkages but would also identify projects and provide support for monitoring the projects and assisting student teams.

An additional source of support for the capstone could result from an examination of and rethinking how this University applies resources to the activities of adjunct faculty. It is our understanding that at present some 40 percent of our courses are taught by adjunct faculty. *We recommend that some portion of the resources currently spent on adjunct*

faculty for the purposes of classroom instruction be reallocated to support the capstone. These resources would support practitioners who have the expertise and experience to support different capstone projects. Student teams would be able to work with and learn from persons who have been confronting project issues on a professional basis. This approach would, we believe, significantly contribute to the goals for capstone and would be a productive use of adjunct faculty.

The intent of each of these efforts is to have in place the structures and necessary support for the capstone by the fall of 1997 when the capstone is phased in. Faculty will not be expected to bear the entire workload. Rather, we will build on the foundation already in place at PSU and extend those resources toward constructing what will be an important ingredient of our students' educations.

Other Issues

At the open faculty meetings and in the written comments, a number of additional issues were raised, many of which concern the consequences of the program as well as implementation concerns. We begin with brief discussions and recommendations responding to some of the particular concerns that have been expressed by faculty and students. The discussion then turns to three larger issues: assessment, productivity, and cost. We understand that at this stage of program development we do not have full responses to each of those issues. Further, additional concerns will undoubtedly emerge should our recommendations be adopted and we move toward full implementation.

Implementation Task Force
As we worked this summer on more completely developing our recommendations, we came to understand that implementation of this general education program will touch on many aspects of this University and its current practices. *We recommend that an implementation task force be established.* This task force would be established jointly by the Office of Academic Affairs and the Faculty Senate. It would most likely include members from the Working Group, other faculty, the Office of Student Affairs, the library, Office of Academic Affairs, Scheduling, and other persons whose responsibilities and areas of expertise would affect the implementation of the program.

Summer Program for Freshman Inquiry
We recommend that Freshman Inquiry be offered during the extended summer session. Two concerns raised as a result of our previous report prompt this recommendation.

First, some professional and pre-professional programs have freshman course requirements that amount to as many as 12 credits per term (e.g., music). A great deal is expected of those students and the concern was raised that the 5 credits per term Inquiry courses in addition to those requirements may impose too heavy a load. These students would greatly benefit by being able to complete Freshman Inquiry during the summer.

Second, for a variety of reasons some of our students do not take courses during all three quarters of the academic year. Having this part of the general education program

available in its entirety during the summer should assist those students to complete the three-term course in the manner intended.

Additional Discussion Group
We recommend that an additional 1-credit mentored discussion group be scheduled and made available to students enrolled in Freshman Inquiry.

This recommendation is prompted by two concerns. First, several students responding to our previous report raised the issue of the fit between the 5-credit Inquiry courses and the 12credit requirement to be eligible for financial aid. For some students, particularly single mothers and those with heavy outside work commitments, having to carry three courses in addition to Freshman Inquiry may be too heavy an academic load. Yet, this is what they would have to do in order to be eligible for financial aid. While the financial aid requirements should be examined by the implementation team, change would be unlikely to occur in time for the freshmen entering in the fall of 1994, if it occurs at all. The additional discussion section carrying 1 credit would mean that these students would with two additional courses have access to financial aid.

Some responses raised the issue of the availability of additional help for those students who may need assistance to meet the expectations of the Inquiry classes. The additional mentored small group sessions would be available to those students and could in significant ways address this concern. We fully expect that these additional groups will be included in the scheduling of Freshman Inquiry.

Assessment
At present Portland State University does not have a systematic program for assessing student development. *We recommend a group of faculty be convened to work toward the development and implementation of an assessment program for Portland State University.*

Assessment of student development is increasingly a part of the landscape of American higher education. The public has come to expect that colleges and universities will be accountable for the outcomes of the educational programs they provide, and states have moved to require systematic programs of student assessment for all public universities and colleges. Washington state now has such a requirement, and work toward implementation is in progress. New Jersey has developed the New Jersey General Intellectual Skills Assessment, which was developed in consultation with the Educational Testing Service. This is now required of all public universities and colleges in New Jersey and was administered for the first time in 1990 (Kloss 1992). We should not be too surprised if Oregon also moves to join this trend.

Assessment engenders substantial and significant debates. What should be assessed? How should one measure student development and/or learning? How will the results be used? These questions frequently lead to the more fundamental concern with what should students know (Astin 1991). For the general education portion of the Portland State University curriculum, those objectives are set forth in the statement of purpose and the goals.

At this point we envision assessment of student performance in each class, the purpose of which would be to assist learners. Earlier we argued for portfolio-based assessment of student learning in Freshman Inquiry. The sophomore and upper-division levels would presumably employ different means. The capstone poses a very different set of problems that remain to be resolved as the planning for that portion of the program evolves.

The second level is the assessment of the contribution of each course toward the general education goals. Each course will be evaluated every time it is offered. Student evaluation will be one part of that assessment. We also anticipate that a review and analysis of gains in student performance will become integral to the assessment. The purpose will be to offer suggestions for changes in content and/or pedagogy where appropriate. Elsewhere, assessment has generated serious discussion among faculty about what should go on in the classroom (Kloss 1992, 188). We fully expect discussion to be an ongoing characteristic of Inquiry faculty and those faculty who are offering courses for the other components of the program.

The third level is the overall assessment of student learning outcomes at the conclusion of their academic programs. Several instruments and approaches are presently available, and several have been the subject of extensive research (Astin 1991; Banta 1991). However, we cannot say at this point which, if any, of these would be appropriate for Portland State University. For assessing the general education program, the criteria will need to be based upon the purpose and goals. It will be important, even essential, to have an information base upon which to build the future evolution of the program. Additionally, it will be a means by which this University begins to address the issues of accountability and productivity.

Productivity

Among the concerns raised about the recommended program are its consequences for the "productivity" problem. Freshman Inquiry classes will be comparatively small and will be team taught. The argument is that these faculty will be less productive than their colleagues in terms of the numbers of students filling seats in classes. While that in itself may not be entirely correct and certainly not always correct, it represents a miscasting of the problem. The focus on the generation of numbers of students in classes as defining "productivity" indicates rather strongly that we in the academy have acquiesced to this particular meaning of the term. To a considerable extent we appear to have lost the debate because we did not enter the discussion in a manner which was responsive to the underlying concerns.

The criticisms of higher education in the 1970s through more recent attacks have focused upon the quality of undergraduate education. The premise for many of these assaults on the academy is that faculty do not devote sufficient attention to undergraduate education with the result that our undergraduates are less well educated than the public expects. In general, productivity is an issue that has emerged from these concerns and has merged with increasing demands for accountability on the part of publicly supported higher education. The issue is undergraduate learning, not numbers of students in seats.

In Oregon the state legislature, the state Board of Higher Education, and the Chancellor have each remonstrated colleges and universities to place increased emphasis on improving undergraduate education. Curricular reform initiatives for the improvement of undergraduate education are now expected. All faculty are to become more involved with the teaching of undergraduates.

The recommended program offers an immediate and important increase in productivity understood as meaning devotion of faculty resources to undergraduate education. Faculty from all units of the University, even those whose programs are either primarily or exclusively at the graduate level, will be participating in the undergraduate general education program.

The second way in which the recommended program responds to the productivity issue and its underlying theme of accountability is through the development of courses and learning experiences which are clearly and purposefully related to instilling in our students the abilities and the propensity to engage in lifelong learning. The program offers this University for the first time an articulated purpose which identifies the expected outcomes of education at Portland State University. And it is responsive to the concerns of undergraduate students and the community.

Finally, the assessment of student progress toward the goals articulated offers this University an opportunity to reframe the debate over productivity. We should be clear that adopting the recommended program means that this University is establishing itself as accountable for achieving those objectives. Productivity will then to a significant degree be based upon assessment of student development and learning outcomes in relation to criteria derived from the recommended purpose, goals, and strategies. The extent to which our undergraduates demonstrate learning will become part of this University's response to the demands for accountability and productivity. The result will be that this term, which has caused so much dismay in the academy, will come to be understood in a way that captures the meaning of the concept in a manner that is more responsive to public concerns than a simplistic inventory of numbers of students, classes, and faculty.

Cost

Not surprisingly some considerable degree of concern has been expressed about the cost of the recommended program. As far as we are aware there has not as yet been an analysis of the comparative costs of delivering general education through the current distribution requirements and those for the recommended program.

As the Working Group has considered this issue, we have concluded that a good estimate is that the cost of delivering general education under the current distribution model and the cost of the recommended program will be roughly the same. The current requirements necessitate that enough student seats in enough courses be funded so all students can enroll in the number of courses needed to complete at least 63 credits. The recommended program will necessitate funding enough seats in courses totaling 45 credits. The six-

course, 18-credit reduction represents a significant savings. However, parts of the recommended program, particularly Freshman Inquiry and the capstone, will be more expensive to deliver than is the case for large lecture classes. To this more expensive delivery of learning experiences would be added the costs of the student mentors, faculty development, and the single administrator. After reviewing this rough comparison of the costs for both approaches to general education, we concluded that it could not be argued that the recommended program would be significantly more expensive, nor could it be argued that it would lead to significant cost savings.

The greater impact of the program will be the reallocation of faculty resources. Twenty faculty teaching 2/3 time in Freshman Inquiry, the number of faculty teaching one or two courses a year in the sophomore and upper-division courses, and those faculty who are involved with the capstone will be teaching fewer courses in their home departments. However, since these persons will be drawn from across the campus and because their participation in the program will not be on a permanent basis, the impacts on departmental resources should be neither substantial nor long-term.

Summary

The General Education Working Group has offered a set of recommendations for a general education program that draws from current research, is responsive to the context and aspirations of our students, and is guided by a clear purpose that underlies its goals and strategies. We are convinced that this program addresses several institutional problems, not the least of which is retention. It was consciously and deliberately developed to address the characteristics of our students and to emphasize approaches which have been found to be positively related to student learning and student satisfaction.

This is not to say that every student will benefit similarly from the program. Our students come to PSU with a wide range of abilities and diversity of contexts. Not all will succeed. However, this program will offer to all an improved opportunity to accomplish their educational objectives.

When this general education program is combined with a systematic assessment effort, Portland State University will be able to respond more meaningfully to the challenges posed by community demands for accountability and productivity. Assessment of student learning in relation to articulated and understood criteria will contribute to our ability to reframe the understanding of productivity so that it includes learning outcomes.

We believe that this program and our several recommendations will not only lead to significant enhancements in our students' educations but will also speak to many of the goals of our faculty. Faculty place a high value on educational excellence, and some become frustrated and alienated when they perceive little support or reward for their individual efforts and little prospect of comprehensive institutional efforts to bring about positive change. This recommended program is clearly committed to educational excellence and offers faculty across this campus the opportunity to contribute and will

provide the support to do so. Further, if the recommended addition to the University guidelines for promotion and tenure is adopted, it will also be the case that participation in this program will become part of the reward system of the institution.

If the evidence from other universities is replicated at Portland State University, the visibility and standing of our University in the community will be improved. The implementation of this program will contribute to the overall advancement of our University and to our collective goal of becoming an institution widely known as a place where students receive superior educations from talented scholars who are committed to assisting students make the often difficult journey to becoming lifelong learners. Portland State University will have made significant strides toward becoming an institution of choice in the state of Oregon.

Appendix
Purpose and Goals for General Education at Portland State University

Purpose

The purpose of the general education program at Portland State University is to facilitate the acquisition of the knowledge, abilities, and attitudes which will form a foundation for lifelong learning among its students. This foundation includes the capacity and the propensity to engage in inquiry and critical thinking, to use various forms of communication for learning and expression, to gain an awareness of the broader human experience and its environment, and appreciate the responsibilities of persons to themselves, to each other, and to community.

Goals

Goal 1. Inquiry and Critical Thinking

To provide an integrated educational experience that will be supportive of and complement programs and majors and which will contribute to ongoing, lifelong inquiry and learning after completing undergraduate education at Portland State University.

Strategies

1. Assist development of critical reasoning and the ability to engage in inquiry.
2. Assist development of the capability to evaluate differing theories, modes of inquiry, systems of knowledge, and knowledge claims.
3. Achieve an intelligent acquaintance with a range of modes and styles of inquiry and social construction.
4. Assist development of the ability to understand and critically evaluate information presented in the form of graphics and other visual media.
5. Assist development of the ability to use writing as a way of thinking, of discovering ideas, and of making meaning as well as expressing it.
6. Assist development of the ability to critically evaluate numerical information.
7. Enhance student familiarity with science and scientific inquiry.
8. Enhance student familiarity with and capabilities to employ current technologies to facilitate learning and inquiry.

9. Enhance awareness of and appreciation for the interconnections among the specialized areas of knowledge encompassed by disciplines and programs.
10. Provide awareness of choices among academic disciplines and programs.
11. Provide students with an opportunity to explore applications of their chosen fields of study.

Goal 2. Communication

To provide an integrated educational experience that will have as a primary focus enhancement of the ability to communicate what has been learned.

Strategies

1. Enhance student ability to express what is intended in several forms of written and oral communication.
2. Assist students to develop the ability to create and use graphics and other forms of visual communication.
3. Enhance student ability to communicate quantitative concepts.
4. Develop student ability to employ current technologies to assist communication.

Goal 3. Human Experience

To provide an integrated education that will increase understanding of the human experience. This includes emphasis upon scientific, social, multicultural, environmental, and artistic components to that experience and the full realization of human potential as individuals and communities.

Strategies

1. Enhance awareness and appreciation of societal diversity in the local, national, and global communities.
2. Explore the evolution of human civilization from differing disciplinary and cultural perspectives.
3. Explore the course and implications of scientific and technological change.
4. Develop an appreciation of the aesthetic and intellectual components of the human experience in literature and the arts.
5. Explore the relationship between physical, intellectual, emotional, and social well-being including the means by which self-actualization is developed and maintained throughout life.
6. Explore and appreciate the aesthetics of artistic expression and the contributions of the fine and performing arts and of human movement/sport/play to the quality of life.
7. Develop the capacity to adapt to life challenges and to foster human development (including intellectual, physical, social and emotional dimensions) amongst self and others throughout the life span.

Goal 4. Ethical Issues and Social Responsibility

Provide an integrated educational experience that develops an appreciation for and understanding of the relationships among personal, societal, and global well-being and the personal implications of such issues as the basis of ethical judgment, societal diversity, and the expectations of social responsibility.

Strategies

1. Appreciate the impact of life choices on personal, social, and environmental health.
2. Gain an understanding of ethical dilemmas confronted by individuals, groups, and communities and the foundations upon which resolution might be possible.
3. Practice and test one's capacities to engage the ethical, interactive, and organizational challenges of the present era.
4. Explore the personal implications and responsibilities in creating an ethical and safe familial environment, neighborhood, work environment, society, and global community.
5. Explore and appreciate the role of diversity in achieving environmental, social, and personal health.
6. Gain familiarity with the values, foundations, and responsibilities of democratic society.

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