Faculty participants indicated which of the 12 objectives on Research Report #5 and professional-oriented classes, although to a lesser degree. Such effects were taken into account, most indices of teaching effectiveness continued to favor those teaching the most advanced and professional-oriented courses, although to a lesser degree. Exceptions were on the objectives of broad liberal education and Values development where the initial advantage of general/liberal education classes was enlarged after being adjusted for influences not under the instructor’s control.

Conclusions

Faculty preferences for objectives concerned with gaining substantive knowledge contrasted sharply with the popularity of objectives concerned with personal development or learning. These findings raise the question of whether the comprehensive objectives adopted by most institutions are being addressed in a balanced fashion by the curriculum. Faculty members responsible for general/liberal education classes emphasized different objectives than those chosen in professional-oriented classes. And student ratings of progress were substantially lower for objectives stressed in general/liberal education classes than for those stressed in classes directed to the specialization needs of students. Our data were inadequate to determine if these differences reflected an inherent difficulty of objectives stressed in general/liberal education classes, low levels of student motivation or effort in such classes, or both.

Student ratings of instructional outcomes varied depending on the intended audience. They were generally highest in graduate/professional classes and in upper division classes that addressed student interests in developing professional skills and competencies. Classes that enrolled primarily students seeking to meet general education/distribution requirements were substantially lower for objectives stressed in general education classes. Student background. Do the applied interests of most students make them less prepared to make progress on the learning objectives represented in general education classes? Or is there less progress because students are already well prepared for the class?

Even though this study showed differences between effectiveness ratings for general education and professional-oriented classes, the differences are small, and they are somewhat diminished when adjusted scores are used. If the IDEA Center’s recommendation to classify performance into one of three to five categories is employed, then it is highly unlikely that erroneous conclusions about teaching effectiveness would be made, even if adjusted scores are ignored in the meantime. There appears to be no compelling reason to believe that those teaching general/liberal education classes are treated unfairly by student ratings.

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Provisional ratings on the IDEA form were relevant (considered “important” or “essential”). For each of the three guiding questions were then conducted. “extraneous circumstances”). Statistical tests designed to answer these questions found in this study. This study examines the relationship between both faculty and student ratings and the type of student enrolled (intended audience). It excluded the 812 classes whose intended audience combined two or more types of students. Also excluded were classes offering fewer than 10 students and those for which the response rate was less than 75%. Three questions guided the investigation:

1. Do the objectives stressed by teachers of professional-oriented classes differ from those of general/liberal education classes?
2. Do student ratings of progress on instructor-chosen objectives differ depending on the intended audience?
3. After differences in student motivation and other extraneous circumstances are taken into account, do teaching effectiveness ratings differ depending on the type of student enrolled?

A total of 6013 classes were included in this study. Of these, 1945 were directed to undergraduate students seeking to meet general education/distribution requirements and 517 were directed to upperclass students with this same intent. The others were all intended to meet student needs to obtain background and skills related to specialization, of which 1334 were lower division, 1819 were upper division, and 598 were graduate/professional.

For each of these five types of audiences, we determined (1) the percentage of classes in which each of the 12 objectives were identified as “important” or “essential,” (2) the average rating of progress on each objective so identified, and (3) the average “adjusted” rating of progress (after taking into account relevant “extraneous circumstances”). Statistical tests designed to answer each of the three guiding questions were then conducted.

Results

1. The relationship between objectives and type of student audience. Faculty participants indicated which of the 12 objectives included on the IDEA form were relevant (considered “important” or “essential”). For each of the 12 objectives, the 5 types of classes differed significantly in their frequency with which the objective was selected. However, for five of the objectives (Acquiring “team” skills; Developing creative capacities; Applications to improve thinking and problem solving; Interest in learning more; and Finding and using resources to answer questions or solve problems), these differences were relatively slight so that little practical significance could be attached to them.

Of the remaining seven objectives, three were selected as relevant much more frequently in classes directed to those seeking
professional specialization, and four were selected more often in classes oriented to general education/distribution requirements. Results for specific objectives are summarized in Table 1.

Table 1: Frequency of Objective Selection by Type of Class

<table>
<thead>
<tr>
<th>Objective</th>
<th>Freshman/sophomore</th>
<th>Junior/senior</th>
<th>Graduate/professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gaining factual knowledge</td>
<td>84%</td>
<td>65%</td>
<td>4%</td>
</tr>
<tr>
<td>Principles and theories</td>
<td>78%</td>
<td>60%</td>
<td>4%</td>
</tr>
<tr>
<td>Professional skills/ viewpoints</td>
<td>70%</td>
<td>29%</td>
<td>4%</td>
</tr>
<tr>
<td>Broad liberal education</td>
<td>35%</td>
<td>36%</td>
<td>4%</td>
</tr>
<tr>
<td>Communication skills</td>
<td>40%</td>
<td>63%</td>
<td>4%</td>
</tr>
<tr>
<td>Values development</td>
<td>57%</td>
<td>31%</td>
<td>4%</td>
</tr>
<tr>
<td>Critical analysis</td>
<td>36%</td>
<td>57%</td>
<td>4%</td>
</tr>
</tbody>
</table>

The two objectives most clearly reflective of an emphasis on substantive knowledge (Factual knowledge; Principles and theories) were chosen much more frequently in classes directed to specialization. Still, even in classes intended to meet general education/distribution requirements, these objectives were chosen more often than any other. Clearly, facilitating the acquisition of substantive knowledge is a dominating purpose among faculty members regardless of student audience.

Two objectives were chosen as relevant to their audiences which stressed “personal development.” Gaining a broad understanding and appreciation for intellectual/cultural activity (Broad liberal education) and Developing a cleaner understanding of, and commitment to, personal values (Values development) were chosen twice as often in classes directed to general education/distribution requirements as those for classes directed to those with specialization. These comparisons were restricted to classes for which the objective was designated as “important” or “essential” by the instructor. Statistically significant differences were found for all 12 objectives.

Three types of classes were quite distinctive:

- (a) Lower division classes oriented toward general education.
  - This group had the lowest average progress rating on six objectives: Factual knowledge; Principles and theories; Applications; Professional skills/ viewpoints; Team skills; and Interest in learning more.
  - The lower the first four of these, the more the average ratings were significantly lower than for each of the other four types of classes.

- (b) Lower division professional-oriented classes.
  - This group obtained the lowest progress ratings on the six other objectives (Creative capacities; Broad liberal education; Communication skills; Finding and using resources; Values development; and Critical analysis).
  - For the first six objectives, lower average ratings were significantly lower than for the other four types of classes.

- (c) Graduate/professional classes.
  - This group had the highest average on 8 of the 12 progress ratings. On three other objectives, they ranked second; on the other, they were ranked third.

In this analysis, we compared the five types of classes in terms of average progress ratings on instructor-chosen objectives. These comparisons were restricted to classes for which the objective was designated as “important” or “essential” by the instructor. Statistically significant differences were found for all 12 objectives.

The two objectives most clearly reflective of an emphasis on substantive knowledge (Factual knowledge; Principles and theories) were chosen much more frequently in classes directed to specialization. Still, even in classes intended to meet general education/distribution requirements, these objectives were chosen more often than any other. Clearly, facilitating the acquisition of substantive knowledge is a dominating purpose among faculty members regardless of student audience.

Sharp differences of the opposite kind were found on the two objectives most reflective of personal development: Broad liberal education and Values development.

As expected, the sharpest difference was on Professional skills and viewpoints. This was chosen as a relevant objective in 70 percent of the professional-oriented classes, but in only 29 percent of those directed to general/liberal education.

The objectives chosen twice as often in classes directed to general education/distribution requirements than for others included Factual knowledge, Principles and theories, Professional skills/ viewpoints, Team skills, and Interest in learning more. For the first four of these, their average ratings were significantly lower than for each of the other four types of classes.

In summary, progress ratings were generally highest for classes directed to graduate/professional students. They were higher for upper division than for lower division classes, and for professional-oriented classes than for those oriented to general education. It appears that, when student ratings of progress are used to evaluate instructional effectiveness, instructors of lower division classes and those intended to meet general education/distribution requirements are generally disadvantaged.

The conclusions were confirmed by an analysis of the four “adjusted” ratings for each objective (weighted “1”, “2”, or “3”) or “Essential” (weighted “4”). Averages on this measure varied from 5.8 for graduate/professional classes to 5.91 for lower division classes oriented to general education. When classes were combined, by level or by orientation, the following results were obtained:

- Graduate/professional classes: 5.8
- Upper division: 5.4
- Lower division: 5.2
- Specialization classes: 5.4
- General education classes: 5.2

These results confirm the conclusions drawn from an examination of progress ratings on individual objectives.

Results for the other two of the three global measures of teaching effectiveness were consistent with these conclusions. For the other (Excellent teacher), differences among the five types of classes were slight, ranging from 4.15 to 4.26.

Why did both overall ratings and the amount of learning differ among these five types of classes? Two options can be proposed:

- Teaching may be more effective in more advanced, professional-oriented classes than in introductory classes or those directed to general/liberal education.
- There may be something about such classes that provides their instructors with an advantage with respect to student ratings.

The next section of this report explores these options.

The effect of “adjusted” scores. Many studies have documented the impact of “extraneous variables” on student ratings. When such variables are beyond the instructor’s control, they can distort the validity of conclusions about teaching effectiveness. In the IDEA system, there is evidence that several factors not under the instructor’s control have an influence on student ratings. Chief among these is “student motivation” which, in the IDEA system, is assessed by student response to the question, “I really wanted to take this course regardless of who taught it.” Other extraneous variables include such factors as size of class, the amount of effort made by the student, and the difficulty of the course relative to the instructor’s impact on student effort and course difficulty (if any has been taken into account). The IDEA system uses complex statistical procedures to create “adjusted” ratings, which modify “raw” (obtained) ratings to reflect the known impact of extraneous influences. In this part of the report, we compared “adjusted” and “raw” ratings for the five types of classes.

The effects of adjusting scores were consistent. For both lower- and upper-division classes designed to help students meet general education/distribution requirements, adjusted scores were consistently lower than raw scores. Clearly, in these classes, ratings of teaching effectiveness are seriously affected by extraneous circumstances. The opposite was found for upper-division and graduate/professional classes directed to the specialization interests of students in these classes, adjusted scores were consistently lower than raw scores. Teaching effectiveness ratings for instructors of such courses were improved by extraneous circumstances. Results were less consistent for lower-division classes directed to professional preparation; adjusted ratings were slightly lower than raw ratings on seven objectives, but higher on two objectives, and the same on three of them.

Overall ratings paralleled those for specific objectives. For classes oriented toward general/liberal education, all four adjusted ratings of global measures were above the raw ratings. The opposite was found for classes directed to the professional interests of students regardless of the level of the class (lower division, upper division, or graduate).

These findings confirm the suspicion that instructors of general/liberal education classes were generally disadvantaged when student ratings are compared with those of colleagues teaching professional-oriented classes. However, when statistical analyses were conducted of adjusted scores, the differences in the
professional specialization; and four were selected more often in classes directed to general education/distribution requirements. Results for specific objectives are summarized in Table 1.

Table 1: Frequency of Objective Selection by Type of Class

<table>
<thead>
<tr>
<th>Objective</th>
<th>Lower division</th>
<th>Upper division</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factual knowledge</td>
<td>84</td>
<td>60</td>
</tr>
<tr>
<td>Principles and theories</td>
<td>78</td>
<td>60</td>
</tr>
<tr>
<td>Professional skills/ viewpoints</td>
<td>70</td>
<td>29</td>
</tr>
<tr>
<td>Broad, liberal education</td>
<td>35</td>
<td>36</td>
</tr>
<tr>
<td>Communication skills</td>
<td>40</td>
<td>63</td>
</tr>
<tr>
<td>Values development</td>
<td>57</td>
<td>31</td>
</tr>
<tr>
<td>Critical analysis</td>
<td>36</td>
<td>57</td>
</tr>
</tbody>
</table>

Did objectives favored by instructors of these two types of classes differ in their average student rating of progress? When the entire IDEA database was considered, the answer to this question was "Yes." High progress ratings were more common for some objectives than for others.

Between these three objectives, observed differences in ratings were significant. In the following years, the average progress rating was 4.02 on the five-point scale used by the IDEA system. For the four objectives chosen most frequently by instructors of professional-oriented classes, the average student progress rating was significantly lower than that of any other type of class. On Factual knowledge, Principles and theories, Applications, Professional skills/ viewpoints, Finding and using resources, Values, Critical analysis, and Interest in learning more, average ratings were significantly higher than those for at least three of the four other types of classes.

Upper division classes, whether professionally oriented or directed toward general education, were never ranked last. Those oriented to general education ranked first on Broad liberal education, while those directed to professional specialization ranked first on Professional skills/ viewpoints. For other objectives, progress ratings in professional-oriented classes were generally more favorable than those for classes intended to meet general education/distribution requirements. The former ranked second on seven objectives, and fourth on only one; while the latter ranked second on two objectives and fourth on six. Differences from the other types of classes were not always statistically significant.

In summary, progress ratings were generally highest for classes directed to graduate/professional students. They were higher for upper division than for lower division classes, and for professional-oriented classes than for those oriented to general education. It appears that, when student ratings of progress are used to evaluate instructional effectiveness, instructors of lower division classes and those intended to meet general education/distribution requirements are generally disadvantaged.

These conclusions were confirmed by an analysis of the four "global" ratings (averages of the objective ratings) calculated for any course employed by the IDEA system. The most important of these, Progress on Relevant Objectives (PRO) combines progress ratings (reported as T Scores) on all objectives selected as "Important" (weighted 1.1) or "Essential" (weighted 2.5). Averages on this measure varied from 55.8 for graduate/professional classes to 51.9 for lower division classes oriented to general education. When classes were combined, by level or by orientation, the following results were obtained:

<table>
<thead>
<tr>
<th>Level/Professional/Graduate</th>
<th>Average T Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate/professional</td>
<td>55.8</td>
</tr>
<tr>
<td>Upper division</td>
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</tr>
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<td>Lower division</td>
<td>52.2</td>
</tr>
<tr>
<td>Specialization classes</td>
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</tr>
<tr>
<td>General education classes</td>
<td>52.0</td>
</tr>
</tbody>
</table>

These results confirm the conclusions drawn from an examination of progress ratings on individual objectives.

For results of the two other global measures of teaching effectiveness were consistent with these conclusions. For the other (Excellent teacher), differences among the five types of classes were slight, ranging from 4.15 to 4.26.

Why did both overall ratings and ratings of the amount of learning differ among these five types of classes? Two options can be proposed:

- Teaching may be more effective in more advanced, professional-oriented classes than in introductory classes or those directed to general/liberal education.
- There may be something about such classes that provides their instructors with an advantage with respect to student ratings.

The next section of this report explores these options.

3. The effect of "adjusted scores." Many studies have documented the impact of "extraneous variables" upon student ratings. When such variables are beyond the instructor’s control, they can distort the validity of conclusions about teaching effectiveness. In the IDEA system, there is evidence that several factors not under the instructor’s control have an influence on student ratings. Chief among these is “student motivation” which, in the IDEA system, is assessed by student response to the question, “I really wanted to take this course regardless of who taught it.” Other extraneous variables include such factors as size of class, the amount of effort made by the student, and the difficulty of the course. If we attempt to adjust for the instructor’s impact on student effort and course difficulty, then we can use the term “adjusted” and “raw” ratings for the five types of classes.

The effects of adjusting scores were consistent. For both lower- and upper-division classes designed to help students meet general education/distribution requirements, adjusted scores were consistently higher than raw scores. Clearly, in these classes, ratings of teaching effectiveness were generally adversely affected by extraneous circumstances. The opposite was found for upper-division and graduate/professional courses directed to the specialization interests of students; in these classes, adjusted scores were consistently lower than raw scores. Teaching effectiveness ratings for instructors of such courses were improved by extraneous circumstances. Results were less consistent for lower-division classes directed to professional preparation; adjusted ratings were slightly lower than raw ratings on seven objectives, but higher on two objectives, and the same on three of them.

Overall ratings paralleled those for specific objectives. For classes oriented toward general/liberal education, all-four adjusted ratings of global measures of were above the raw ratings. The opposite was found for classes directed to the professional interests of students, regardless of the level of the class [lower division, upper division, or graduate].

These findings confirm the suspicion that instructors of general/liberal education classes were generally disadvantaged when student ratings are compared with those of colleagues teaching professional-oriented classes. However, when statistical analyses were conducted of adjusted scores, the differences in the

Evidence suggests that substantial teaching effort has been taken into account). The IDEA system uses complex statistical procedures to create "adjusted" ratings, which modify "raw" (obtained) ratings to reflect the impact of extraneous variables. In the present report, we computed "adjusted" and "raw" ratings for the five types of classes.

To compensate for such differences, the IDEA system calculates an "adjusted" rating by adjusting the raw rating so that the average for all courses is 50. The IDEA system uses complex statistical procedures to create "adjusted" ratings, which modify "raw" (obtained) ratings to reflect the impact of extraneous variables. In the present report, we computed "adjusted" and "raw" ratings for the five types of classes.
Although students have a variety of motives for attending college and choosing specific courses, there is a considerable body of evidence that gaining knowledge and skills that lead to professional preparation/cREDENTIALING is the most potent of these. Institutions of higher education, whether professional-oriented or general/liberal education, are frequently faced with the question of whether the professional-oriented classes taught more effectively or with more extraneous factors, or were taken into account by the IDEA system, which explain such differences?

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Conclusions
Faculty preferences for objectives concerned with gaining substantive knowledge contrasted sharply with the popularity of objectives concerned with personal development during learning. These findings raise the question of whether the comprehensive objectives adopted by most institutions are being addressed in a balanced fashion by the curriculum.

Faculty members responsible for general/liberal education classes emphasized different objectives than those in professional-oriented classes. And student ratings of progress were substantially lower for objectives stressed in general/liberal education classes than for those stressed in classes directed to the specialization needs of students. Our data were inadequate to determine if these differences reflected an inherent difficulty of objectives stressed in general/liberal education classes, low levels of student motivation or effort in such classes, or both.

Student ratings of instructional outcomes varied depending on the intended audience. They were generally highest in graduate/professional classes and in upper division classes that addressed student interests in developing professional skills and competencies. Classes that enrolled primarily students seeking to meet a "general education" or "distribution" requirement were rated most favorably in this study (graduate/professional; upper division specialized classes). By reason of their experience and their "survival" through the tenure-reappointment processes, it is likely that their instructors will, on the whole, be more effective teachers than their less experienced colleagues. If these specifications are correct, they may account for the differences in student ratings found in this study. Future studies will address related questions about factors that may impact outcomes of student ratings. These studies might consider:

• Experience of the instructor. Do more junior faculty, who have not yet mastered their teaching skills teach more of the general education courses while more senior, experienced faculty teach the professional-oriented courses?

• Motivation of the instructor to teach the course. While the above study presents some evidence that suggests students are less motivated to take courses to meet their general education/distributional requirements, what is the impact of instructor's motivation to teach the courses?

• Inherent difficulty of objectives stressed in the courses. Are the objectives stressed in general/liberal education classes more difficult for students to learn?

• Student background. Do the applied interests of most students make them less prepared to make progress on the learning objectives represented in the general education classes? Or, is there less progress because students are already well prepared for the class?

Even though this study showed differences between effectiveness ratings for general education and professional-oriented classes, the differences are slight, and they are somewhat diminished when adjusted scores are used. If the IDEA Center's recommendation to classify performance into one of three to five categories is employed, then it is highly unlikely that erroneous conclusions about teaching effectiveness would be made, even if adjusted scores are ignored. At this time, there appears to be no compelling reason to believe that those teaching general/liberal education classes are treated unfairly by student ratings.

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