IDEA Student Ratings of Instruction

Interpretive Guide: Diagnostic Form Report

This three-page Interpretive Guide provides information to help you understand your IDEA Diagnostic Form Report. You will find links in each section that provide expanded details about various topics related to IDEA and the use of student ratings.

Effective teaching is a complex art. It requires sensitivity to the unique objectives of the course, the personality and preferred communication/interaction style of the instructor, the background and motivation of the students, and the peculiarities of the discipline. It is these factors and their interactions that determine the degree to which desired outcomes are achieved. Although student ratings cannot provide all of the information needed to evaluate and improve instruction, this guide will help you make more complete and accurate interpretations of results from the IDEA Diagnostic Form Report.

The IDEA Diagnostic Form Report is designed to respond to five questions:

1. Overall, how effectively was this class taught?
2. How does this compare with the ratings of other teachers?
3. Were you more successful in facilitating progress on some class objectives than on others?
4. How can instruction be made more effective?
5. Do some salient characteristics of this class and its students have implications for instruction?

Two kinds of scores are reported: Average scores are based on a 5-point rating scale, while Converted scores all have an average of 50 and a standard deviation (measure of variability) of 10. Both Average and Converted scores are presented in raw (unadjusted) and adjusted forms. Each type of score is important to a complete understanding of your results.

➢ More on Types of Scores

Question 1: Overall, how effectively was this class taught? (Refer to the tables and graph reported on Page 1 of the IDEA Diagnostic Form Report.)

One of the best ways to infer teaching effectiveness is to examine student ratings of progress on objectives chosen as *Important* or *Essential* by the instructor. The average of these ratings provides a good indication of how successfully objectives were reached, especially if at least 10 students provided ratings and if at least 75% of enrollees responded.

Progress ratings are made on a 5-point scale: 1=*No apparent progress*; 2=*Slight progress*; 3=*Moderate progress*; 4=*Substantial progress*; and 5=*Exceptional progress*. In interpreting raw and adjusted averages, these terms can be substituted for the numeric figures; e.g., an average of 4.0 indicates that "substantial progress" is an appropriate term for summarizing student ratings.

An overall index of teaching effectiveness (PRO=Progress on Relevant Objectives) combines ratings of progress on the objectives identified by the instructor as *Important* (weighted "1") or *Essential* (weighted "2").[1] IDEA regards this as its single *best estimate of teaching effectiveness*. Raw and adjusted PRO scores are provided for converted averages as well as for those based on the 5-point rating scale. Converted averages are preferred when making comparisons among faculty members or classes because they take into account the fact that average progress ratings are much higher for some objectives than for others; that is, some objectives appear to be more easily achieved than others. Converted scores assure faculty members that they will not be penalized for selecting objectives that are especially difficult.

Two additional overall measures of teaching effectiveness are shown on the report. These are the average ratings of two items using a 5-point scale (1=*Definitely false*; 5=*Definitely true*):

1. *Overall, I rate this instructor an excellent teacher.*
2. *Overall, I rate this course as excellent.*

As an index of teaching effectiveness, the average of these two ratings is commonly regarded as about equal in value to the "Progress on Relevant Objectives" index

[1] Ratings of progress on individual objectives are provided on Page 2 of the report and can address Question 3.

described above. Therefore, the "Summary Evaluation" reported on Page 1 averages the PRO score with the average of these two ratings. Although many IDEA users find this method of arriving at a "Summary Evaluation" to be meaningful, some may feel that other methods for arriving at a summary judgment better reflects their institution's philosophy and/or priorities; they are encouraged to define a process or use an index that best reflects the local situation.

Question 2: How do your ratings compare with those of other teachers? (Refer to the comparisons shown on the right hand side of Page 1 of the IDEA Diagnostic Form Report.)

Criterion-referenced standards avoid comparisons that can promote an unhealthy competitive atmosphere. Still, many institutions believe a norm-referenced (comparison-based) framework provides a better basis for making judgments about teaching effectiveness. Your report compares your average ratings to results for three different groups of classes. The first comparison group is with all classes in the standard IDEA database, and is always reported. The other two are reported only if enough classes were available to provide a stable basis for comparison. These consist of (1) all classes in the *same discipline* as the class in question and (2) all classes *at your institution*. Institutional and disciplinary norms are updated annually and include the most recent five years of data; the IDEA database is updated on a periodical basis.

- More on Criterion-Referenced Standards
- More on Description of Norms
- More on Technical Considerations

Question 3: Were you more successful in facilitating progress on some class objectives than on others? (Refer to the upper portion of Page 2 of the IDEA Diagnostic Form Report.)

The first portion of Page 2 lists the 12 objectives included on the IDEA form and summarizes student ratings on those you selected as either *Important* or *Essential*. The main purpose is to help you focus your improvement efforts.

The reporting format is similar to that used on Page 1. In addition to raw and adjusted scores, the report shows the percent of students making ratings in the two lowest categories (No apparent progress or Slight progress) and in the two highest categories (Substantial progress and Exceptional progress). "Converted scores" are shown in the right-hand section and compared with the three norm groups previously described (IDEA Database and, if available, Discipline and Institution). In addition to the actual converted average, the report describes the status of each relative to other classes in the comparison group: "Much higher" (highest 10%); "Higher" (next 20%); "Similar" (middle 40%); "Lower" (next 20%); or "Much Lower" (lowest 10%). Using broad categories like these rather than precise numbers is a reminder that ratings are neither perfectly reliable nor perfectly valid.

- More on Class Objectives

Question 4: How can instruction be made more effective? (Refer to Page 3 of the IDEA Diagnostic Form Report.)

The main purpose of instruction is to facilitate progress on objectives that the instructor selects as *Important* or *Essential*. Such progress is affected by a number of factors in addition to teaching methods.[2] But teaching methods are also of critical importance. The chief way in which the IDEA report addresses instructional improvement requires a careful examination of the 20 methods included on the form. These items, listed on Page 3, have been grouped into one of five categories to indicate the main focus of each.[3]

IDEA has conducted many studies that relate ratings on each of these "methods" to ratings of student progress on the 12 learning objectives. Through these studies, 7 -10 methods that are most closely related to progress on each of the 12 objectives for classes of different sizes have been identified. Although there is some overlap, there are distinct differences in the methods that facilitate progress on the 12 objectives; there are

[2] Characteristics of the student (motivation, willingness to work hard, etc.) have an important effect on learning and can be only partially controlled by the instructor. Similarly, course management decisions related to assignments, appraisal methods, organization, etc. affect learning but are different from instructional methods, the focus of this section of the report.

[3] Average ratings of items in each of these five categories, when summed, yield a "Teaching Approach" score. IDEA Research Report #4 describes the relationship between these scores and outcomes. This study found that different combinations of the five scores resulted in six teaching styles, each of which was facilitative of progress on a different set of objectives.

also some differences among class sizes. The objectives for which a given method is especially helpful in promoting learning are identified in the column titled "Relevant to Objectives." The last column proposes an action for you to take, depending on the relevance of the item and how students rated it. If the rating for a relevant item was well above the IDEA average, it is described as a "Strength to retain;" if the rating was well below average, you are advised to "Consider increasing use;" and if it was in the average range, it is suggested that you "Retain current use or consider increasing."

- More on Improving Teaching and Learning

Question 5: Do some salient characteristics of this class and its students have implications for instruction? (Refer to the bottom portion of Page 2 of the IDEA Diagnostic Form Report.)

Course Characteristics. Students described the class by comparing it to other classes they have taken in terms of (1) amount of reading, (2) amount of work in non-reading assignments, and (3) difficulty. Average ratings are compared with all classes in the IDEA database; if sufficient data were available, comparisons are also made with classes in the broad discipline group in which this class was categorized and all other classes at your institution. Because relatively large disciplinary differences have been found on these three characteristics (see Technical Report #13), the disciplinary comparison may be especially helpful.

Student Characteristics. Students described their motivation by making self-ratings on the three items listed at the bottom of Page 2. These characteristics have been found to impact student ratings of progress.

- More on Course Characteristics and Learning
- More on Impact of Student Characteristics

Page 4 of the report provides a detailed statistical summary of student responses to each of the items on the IDEA form as well as any optional locally devised items.

- More on Using Statistical Detail

IDEA Student Ratings of Instruction

Additional Information: Diagnostic Form Report

Types of Scores

A. Average Scores. Averages are simply numerical averages of ratings for the class. All IDEA ratings are made using a 5-point rating scale; but, as described in this guide and on the form itself, the points on the scale have different meanings in different sections of the rating form. You can use the description associated with each point on the rating scale to obtain a verbal characterization of each average.

Although IDEA student ratings have been shown to be both reliable and valid (see Technical Report #12 and Research Report #2), all measures of human characteristics have some "measurement noise." If students rated the class on another day, results might be somewhat different due to "sampling errors." Such errors are higher for low enrollment classes than for those with large enrollments; for classes in the 15-34 range, a sampling error of ±0.2 is typical. It is slightly higher for smaller classes and lower for larger classes.

One limitation of average scores is that they are higher for some objectives than for others. For example, in classes where *Gaining factual knowledge (terminology, classifications, methods, trends)* was an *Important* or *Essential* objective, the average student rating of progress was 4.00; the comparable rating for classes emphasizing *Gaining a broader understanding and appreciation of intellectual/cultural activity (music, science, literature, etc.)* was 3.69. If only raw averages were considered, instructors choosing the "broad liberal education" objective could be disadvantaged.

B. Converted Averages. One way to compensate for the inequality of average scores on the 12 objectives is to compute converted averages. The conversion process results in a group average of 50 and standard deviation (measure of variability) of 10 for each measure. The statistical formula for deriving converted scores is described on page 3 of Technical Report #12. The standard error for converted scores in classes of 15-34 students averages about 3; it is slightly higher for smaller classes and lower for larger classes.

Converted scores make it easier to compare the "Progress on Relevant Objective" rating for various classes. Those with different "average" (5-point) scores may have the same converted average if they have different objectives. Similarly, "Summary Evaluations" based on converted scores (last column in the table on page 1) are more comparable across classes than are "Summary Evaluations" based on raw or adjusted scores; but these differences are relatively slight.

The chief feature of converted scores is that they supply normative comparisons. Numeric scores in the graph compare your ratings with those of all classes in the IDEA database. A score of 50 is average; a score of 63 is in the upper 10% of all classes, while one of 37 is in the lowest 10%. If a large enough group of classes was available to ensure stable results, comparisons with other classes in your *discipline* and with other classes at your *institution* are also reported as converted averages at the bottom of page 1 and on page 2.

C. Adjusted Ratings. Extraneous factors over which the instructor has no control influence student ratings. Adjusted ratings take some of these factors into account. A description of the five factors used to make adjustments on the Diagnostic Form is given below.

1. Student motivation (average response to the item, *I really wanted to take this course regardless of who taught it*). Students who respond positively to this item tend to make favorable ratings on items related to course outcomes. Low ratings on this item are an indication that it is desirable to devote substantial time and effort to improving student interest and involvement before substantive objectives can be successfully addressed. Ratings on this item are a **Major** factor in making adjustments.
2. Student work habits (average response to the item, *As a rule, I put forth more effort than other students on academic work*). Positive responses to this item are related to above-average ratings on items related to course outcomes. This is a **Major** factor in making adjustments.
3. Size of class (as indicated on the Faculty Information Form). In general, there is a slight tendency for students in large classes to make less favorable ratings than students in small classes. This is a **Minor** factor in making adjustments.
4. Course difficulty. This measure is based on the average student rating of *Difficulty of subject matter* after taking into account the instructor's intellectual demands including required reading and/or other work. In general, students in courses where the material is inherently complex or abstract make somewhat less favorable ratings of outcomes; but if the course stresses cognitive objectives, the opposite is true. This is a **Minor** factor in making adjustments.
5. Effort. Adjustments on the Diagnostic Form are based on average student response to the item, *I worked harder in this course than on most courses I have taken* after taking into account the same instructor influences used in estimating course difficulty. Although, by themselves, student ratings of how hard they worked (effort) have low positive relationships with outcomes, after other extraneous variables (student motivation, work habits, disciplinary difficulty) are taken into account, "effort" ratings have a slight negative relationship to outcomes; that is, there is a slight tendency for those who work hardest to report the least progress. This is probably because many students who make an extra effort in a class do so because they regard their academic background as inadequate. This is a **Minor** factor in making adjustments on Diagnostic Form.

Adjusted ratings are intended to "level the playing field" across classes that differ by purpose, audience, level, size, and types of students. They recognize that conditions beyond the instructor's control can increase or decrease student ratings and, to the degree possible, take these conditions into account by adjusting ratings.

Research Report # 6 provides further explanation of the IDEA system extraneous variables.

Criterion-Referenced Standards

An index of teaching effectiveness is called criterion referenced if its interpretation is based on pre-established judgments of the meaning of a given average. Any or all of the three summary measures shown on Page 1 ("Progress on Relevant Objectives," "Overall Ratings," and "Summary Evaluation") become criterion referenced if the institution establishes standards for describing degrees of excellence that don't rely upon a comparison with results for other instructors or classes. The example provided is not intended for adoption. Institutions electing to establish local standards should take into account both the words associated with each point on the rating scale and the consistent tendency for students to make relatively lenient ratings.

An Example of a Criterion-Referenced Index

Average Rating	Effectiveness Category
Below 3.0	Below acceptable standards
3.0—3.4	Marginal, improvement needed
3.5—3.9	Good
4.0—4.4	Excellent
4.5 or higher	Outstanding

Criterion-referenced standards are frequently employed when judging a faculty member's qualifications for tenure or promotion and in determining the priority to be given to teaching improvement efforts during the coming year.

Description of Norms

Reliability estimates of ratings in classes with fewer than 10 respondents are too low to permit dependable conclusions; therefore, they were excluded from all norm groups. The IDEA database includes all classes processed between September 1, 1998 and August 31, 2001; all regions of the country; all types of institutions; all levels of instruction; and all disciplines are included. The database includes approximately 45,000 classes, so these norms are highly stable. Norms for the discipline and for the institution are available only if at least 400 classes were processed during the most recent 5-year period. Norms for progress ratings on individual objectives (page 2 of the report) are available only if the objective was considered *Important* or *Essential* in at least 100 classes.

Technical Report #12 shows that, on an overall basis, there are only slight differences in ratings obtained at various types and sizes of institutions. However, results at a given institution may differ significantly from those obtained at other institutions of the same type. Hence the findings for the IDEA database and Institution norm groups may differ.

Similarly, Technical Report #13 shows that there are significant disciplinary differences in average ratings. It is uncertain whether this is because some disciplines attract especially effective (or ineffective) teachers or if the inherent characteristics of some disciplines (in their complexity, abstractness, or human interest) invite especially lenient (or harsh) judgments. In the absence of such knowledge, each institution needs to adopt its own policy regarding the emphasis to be given to comparison with each norm group.

Technical Considerations

Norm-referenced Results. Even though the vast majority of instructors in higher education are subject matter experts, committed teachers, and experienced professionals, a norm-referenced approach necessitates that half will be identified as "below average" for a given norm group. Such a pejorative designation is understandably resented when criterion-referenced ratings meet or exceed pre-established standards. Nonetheless, for various reasons, many institutions need to differentiate among faculty members on the basis of their instructional excellence; norm-referenced ratings address those needs.

Using Converted Averages. Some institutions prefer to use 5-point scale averages on the grounds that the quality of teaching is best judged by the amount of progress students report on the objectives stressed by the instructor; the fact that these ratings are higher for some objectives than for others may simply indicate that teaching is more effective in classes where such objectives are chosen. Those using converted averages argue that instructors choosing objectives where average progress ratings are relatively low should not be penalized for choosing objectives that are particularly challenging. There is no compelling research evidence to support one or the other of these two possibilities.

Adjusted Scores. Special care should be taken in using adjusted ratings in classes where progress and overall ratings were very high (4.2 or above is a recommended cut-off, but each institution needs to carefully consider this and determine the most appropriate level). In these classes, adjusted ratings will almost always be well below unadjusted ratings, not because the instructor was less effective than suggested by unadjusted ratings, but because extraneous factors played such a large role in fostering student achievement that the teacher's opportunity to influence progress was reduced.

Using Categories. Either criterion-referenced or normative measures are best classified into 3-5 categories defined by a range of scores. This recognizes two important facts: (1) student ratings are neither perfectly reliable nor perfectly valid; (2) students are not qualified to evaluate a number of key aspects of effective instruction. Therefore, IDEA recommends that a comprehensive evaluation process be employed and that student ratings constitute no more than 30-50% of the final judgment.[4]

[4] Suggestions for conducting a comprehensive evaluation of instruction are included in IDEA Paper #36, Appraising Teaching Effectiveness: Beyond Student Ratings.

Class Objectives

Knowing the percent of students making ratings in the two highest and two lowest categories is helpful in identifying classes where student outcomes are bimodal (divided fairly evenly between students who profited greatly and those whose sense of progress was disappointing). Bimodal ratings often occur when a substantial portion of the class lacks the background needed to profit from the course; changes in prerequisites may be desirable, or you may want to consider the possibility of offering a separate section for those with limited backgrounds. A bimodal distribution may also reflect differences in preferred learning styles of students; in such instances, you may want to consider presenting material using multiple methods that respond effectively to those with different learning styles.

To understand the nature of bimodal ratings of progress, it may be helpful to examine the distribution of responses to items 33-35 (course characteristics) and 36-43 (student characteristics). Is there evidence of the presence of distinct groups who differ in their motivation, effort, perception of course difficulty, etc? If so, do these differences have implications for course prerequisites, for assigning students for group work, or for presenting class material?

It is suggested that you focus first on your most important objectives (those you chose as *Essential*). For each such objective, use the information in the report to judge whether improved outcomes should be a priority. A degree of urgency can be assigned to each objective based on your review of (a) raw and adjusted averages, (b) percent of students rating their progress as "1" or "2," and (c) comparisons with other classes where the objective was selected as *Important* or *Essential*. Then apply the same process to objectives chosen as *Important*.

This process of identifying target objectives is a useful first step in developing an improvement strategy. It will help you concentrate on the most important information provided on Page 3.

Research has shown that the number of objectives chosen is inversely related to progress ratings. IDEA encourages faculty members to choose only three to five objectives as *Important* or *Essential*; those choosing more than 6 objectives typically receive lower ratings, perhaps because they are trying to do too much or because the objectives chosen were either inappropriate for the course or not meaningfully addressed. If an instructor fails to identify his/her objectives, a rating of *Important* is assigned to all 12 objectives; this usually results in an unrealistic reduction in overall effectiveness ratings (see Research Note #3).

In reviewing progress ratings on individual objectives, many faculty members are stimulated to reconsider their selection of objectives. Sometimes, disappointing progress ratings can be explained by a discrepancy between the instructor's rating of importance and the amount and/or kind of emphasis given to the objective in class sessions and activities.

Improving Teaching and Learning

Improvements will be easier to make if you turn attention to the objectives where progress ratings were most disappointing to you. Use Page 2 of the report to identify the number (21-32) corresponding to these objectives. Locate these objectives in the column entitled "Relevant to Objectives." For each such objective, examine the last column on Page 3 ("Suggested Action"). The phrases in this column are based on the relative frequency with which you used the method *compared with that for other classes where the objective was chosen as important or essential*. For the methods closely related to progress ratings on a given objective, one of three actions are suggested: (1) "Consider increasing use" is printed if your frequency of using the method was substantially below that for classes of similar size and level of student motivation. (2) "Retain current use or consider increasing" is printed if your frequency of using the method was comparable to that for other classes of similar size and level of student motivation. (3) "Strength to retain" is printed if your frequency of using the method was substantially above that for other classes of similar size and level of student motivation.

To identify the classes with which your results were compared (those of "similar size and level of student motivation"), classes in the IDEA database were sorted into 20 groups, first by considering size (less than 15; 15-34; 35-49; and 50 or above) and then, within each size, the average response to Item 39 (*I really wanted to take this course regardless of who taught it*)—below 2.62; 2.62-3.05; 3.06-3.63; 3.64-4.08; and 4.09 or higher). Your results were compared with those for classes whose size and average for Item 39 were most similar to yours.

Make a list of the methods identified by each of these phrases. Those on the "Strength to retain" list include techniques facilitative of progress on your objectives that you are currently employing with appropriate frequency.

Be careful to retain these methods regardless of other changes you may make in teaching strategy. Methods that are in the "Consider increasing use" list are those that facilitate progress on the objectives you are examining but which you used relatively infrequently. The inference is that, by increasing your use of these methods, you would be more successful in facilitating progress. Items on the "Retain current use or consider increasing" are methods you currently employ with typical frequency; since they are related to progress on objectives where you seek improvement, increasing your frequency of use may have positive effects upon outcomes.

The Professional and Organizational Development (POD) organization, in cooperation with IDEA, has developed POD-IDEA Notes, providing detailed suggestions improving your use of these methods; references to relevant professional literature are cited for each method.

IDEA continues to conduct an active research program designed to learn more about how course characteristics and outcomes are related. One of these studies examined differences between classes stressing mathematical/quantitative background and other classes (see Research Report #3). Others have shown the impact of factors such as the instructor's previous experience in teaching the course, the instructor's judgment of the adequacy of students' backgrounds, and the degree to which the course emphasized group work, critical thinking, or writing (Research Report #2). Future studies will focus on questions related to whether teaching techniques most closely related to progress differ for classes that are lecture-oriented as opposed to those that emphasize other teaching approaches (collaborative learning, distance education, etc.).

Course Characteristics & Learning

The three characteristics rated (amount of reading; amount of other work; and difficulty) each assess, in part, the level of academic challenge presented by the class. Research conducted at IDEA as well as elsewhere has confirmed that there is a positive (though relatively slight) relationship between measures of academic challenge and ratings of teaching effectiveness. Students generally react positively to instruction that "stretches" them. This is especially true of classes where the main emphasis is on cognitive objectives (factual knowledge, principles and theories, intellectual applications and reasoning).

Many classes focus on objectives that differ from traditional academic ones (e.g., expressive courses in art, music, drama, etc.; professional practica; courses stressing originality; etc.). Effective designs for such courses will have little to do with the types of course management decisions assessed by these items. Instructors whose objectives stress traditional academic outcomes are encouraged to review these ratings when exploring the question of whether changes in course management decisions might influence the effectiveness of their instruction.

In addition to the ratings supplied by students, classes differ in such matters as the instructor's experience in teaching the course, his/her desire to teach the course, and the adequacy of student background. These descriptions, together with student ratings reviewed on the bottom of Page 2, provide a perspective for interpreting all other student ratings. Therefore, they are relevant in both summative evaluation (administrative decisions) and formative evaluation (improvement).

Impact of Student Characteristics

Extraneous factors over which the instructor has no control influence student ratings. **Adjusted ratings** take some of these factors into account. Descriptions of the five factors used to make adjustments in the Diagnostic Form are given below.

1. Student motivation (average response to the item, *I really wanted to take this course regardless of who taught it*). Students who respond positively to this item tend to make favorable ratings on items related to course outcomes. Low ratings on this item are an indication that it is desirable to devote substantial time and effort to improving student interest and involvement before substantive objectives can be successfully addressed. Ratings on this item are a **Major** factor in making adjustments.
2. Student work habits (average response to the item, *As a rule, I put forth more effort than other students on academic work*). Positive responses to this item are related to above-average ratings on items related to course outcomes. This is a **Major** factor in making adjustments.
3. Size of class (as indicated on the Faculty Information Form). In general, there is a slight tendency for students in large classes to make less favorable ratings than students in small classes. This is a **Minor** factor in making adjustments.
4. Course difficulty. This measure is based on the average student rating of *Difficulty of subject matter* after taking into account the instructor's intellectual demands including required reading and/or other work. In general, students in courses where the material is inherently complex or abstract make somewhat less favorable ratings of outcomes; but if the course stresses cognitive objectives, the opposite is true. This is a **Minor** factor in making adjustments.
5. Effort. Adjustments on the Diagnostic Form are based on average student response to the item, *I worked harder in this course than on most courses I have taken* after taking into account the same instructor influences used in estimating course difficulty. Although, by themselves, student ratings of how hard they worked (effort) have low positive relationships with outcomes, after other extraneous variables (student motivation, work habits, disciplinary difficulty) are taken into account, "effort" ratings have a slight negative relationship to outcomes; that is, there is a slight tendency for those who work hardest to report the least progress. This is probably because many students who make an extra effort in a class do so because they regard their academic background as inadequate. This is a **Minor** factor in making adjustments on Diagnostic Form.

Adjusted ratings are intended to "level the playing field" across classes that differ by purpose, audience, level, size, and types of students. They recognize that conditions beyond the instructor's control can increase or decrease student ratings and, to the degree possible, take these conditions into account by adjusting ratings.

Using Statistical Detail

For each item, the distribution of responses (number of students choosing each alternative), the average rating, and the standard deviation of ratings (a measure of variability) are provided. Faculty members are not expected to achieve high ratings on every item. Attention should be concentrated on objectives (items 21-32) chosen as *Important* or *Essential* and on methods (items 1-20) that are closely related to progress ratings on these objectives (identified on Page 3 of the report) where high ratings are associated with favorable interpretations. High ratings on Items 40-42 are also regarded as favorable. For the other items (33-39; 43), averages are descriptive of the course or its students but are not useful in making evaluative judgments. Their relevance depends on the nature of the class (its objectives, available learning opportunities, etc.).

Standard deviations of about 0.7 are typical. When these values exceed 1.2, the class exhibits unusual diversity. Especially in such cases, it is suggested that the distribution of responses be examined closely, primarily to detect tendencies toward a bimodal distribution (one in which class members are about equally divided between the high and low end of the scale, with few in-between. Bimodal distributions suggest that the class contains two types of students who are so distinctive that what works for one group will not for the other. For example, one group may have an appropriate background for the course while the other may be underprepared; or one group may learn most easily through reading/writing exercises while another may learn more through activities requiring motor performance. In any event, detailed examination of individual items can suggest possible changes in prerequisites, sectioning, or versatility in instructional methods.