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# IDEA Benchmarking for Learning: Discipline Report

Summary for:

IDEA College

Discipline: Physics

Report date: 10/6/2011

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## 1: How to Use This Report

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The *IDEA Benchmarking for Learning: Discipline Report* allows campuses to compare their student ratings results to a group of at least 20 institutions, who also use the IDEA Student Ratings System within the same discipline. Each institution contributes a minimum of 50 classes where at least one objective was selected as “Essential” or “Important” and two or more students responded. Rather than using averages to provide comparative data, the percentage of students or faculty offering positive ratings (usually the two highest categories of each response scale) is used.

This report is different from other IDEA summary reports because it summarizes the learning of individual students rather than summarizing class results.<sup>1</sup>

### Other Considerations

Comparative information, while useful, needs to be interpreted with caution. Important things to consider that may impact results include:

- Response rate. It is important to review the response rates for your institution and for all of the comparison groups to see if differences exist. One advantage of using IDEA data is response rates to student ratings are typically higher than other on-campus surveys. Nonetheless, response rate differences may still exist.
- Representativeness. Differences may exist between how institutions use IDEA. Some campuses may administer IDEA to all classes every semester while others may administer to a subset of classes. Consequently, the relative influence of each institution may vary within the comparison group. In an effort to maintain confidentiality, the percentage of ratings contributed by each institution is not provided.

### Using the Information

The large number of cases included in a benchmarking report make finding statistical significance a frequent occurrence. However, these differences may not be of practical significance. Differences of 5% or less are likely of little importance. Differences between 5% and 10% may merit closer investigation. Differences of more than 10% are relatively rare and should be further examined.

It is always important to review findings from the IDEA benchmarking service with other sources of information that address the same or similar topics (local surveys, National [or Community College] Survey of Student Engagement, etc.). If similar differences are found from multiple sources of information, confidence of it being a meaningful finding is substantially increased. If findings in this report are unique, taking the time to develop possible explanations is warranted.

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<sup>1</sup> By using the student as the unit of analysis, every student response counts equally. In contrast, when the class is the unit of analysis, a class with 100 students responding, and a class of 10 have equal weight. This report focuses on individual student learning and therefore it was viewed to be more appropriate to consider individual student responses.

## 2: Report Summary

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Classes are summarized into comparison groups which are defined as follows:

**Discipline (Local):** Classes processed by IDEA in the last five academic years from your discipline and institution. (Your classes)

**Discipline (IDEA):** Classes from other institutions within the same discipline as yours that were also processed by IDEA in the last five academic years.

**All Classes (Local):** All classes processed by IDEA in the last five academic years from your institution. (Your institution's classes)

Number of classes included:	Total	Diagnostic	Short
■ Discipline (Local)	245	233	12
■ Discipline (IDEA)	5,714	3,987	1,727
■ All Classes (Local)	9,744	4,205	5,539

Number of ratings provided by students:	
■ Discipline (Local)	3,412
■ Discipline (IDEA)	105,970
■ All Classes (Local)	116,755

Response rate:	
■ Discipline (Local)	73.3%
■ Discipline (IDEA)	73.1%
■ All Classes (Local)	72.1%

Average number of objectives selected per class:	
■ Discipline (Local)	2.6
■ Discipline (IDEA)	4.5
■ All Classes (Local)	4.2

### 3: Overall Progress on Learning

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This section addresses the amount of overall progress on learning students believed they made in their classes and allows you to compare your local discipline's results to the two comparison groups. The percent of students reporting "Exceptional" or "Substantial" progress on learning objectives that were selected as "Essential" or "Important" by their instructors is provided.

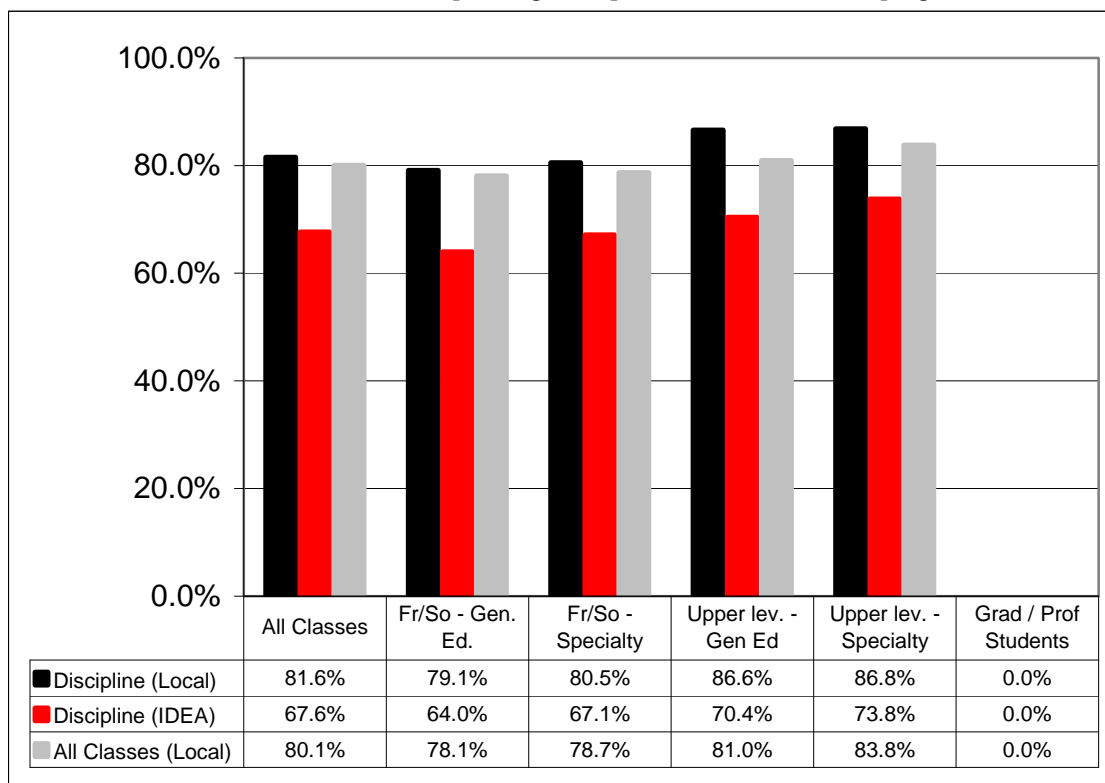
Graph 3.1 summarizes the results for all classes and by course level and purpose (e.g., general education, major/certificate) as reported on the IDEA Faculty Information Form.

The information in this section can be used to explore such questions as:

- How do my results compare to the comparison groups?
- Are results for certain levels and purposes different from the overall results?
- When comparing my results to the comparison groups', is the pattern similar regardless of course level and purpose?

### Graph 3.1 Progress on Relevant Objectives

% of students responding "Exceptional" or "Substantial" progress



**Number of classes**

Discipline (Local)	245	70	45	45	23	n/a
Discipline (IDEA)	5,714	1,150	1,325	541	774	n/a
All Classes (Local)	9,744	1,079	842	517	1,143	n/a

Note: n/a indicates that 5 or fewer courses were identified in the Course Level and Purpose for the Discipline (Local) comparison group. Therefore data from other comparison groups are not included.

*Course level and purpose are identified in Table 3.1.*

<b>Table 3.1</b>	<b>Course Level and Purpose</b>
Fr/So - Gen. Ed.	First-year students/sophomores seeking to meet a "general education" or "distribution" requirement
Fr/So - Specialty	First-year students/sophomores seeking to develop background needed for their intended specialization
Upper level - Gen. Ed.	Upper level non-majors taking the course as a "general education" or "distribution" requirement
Upper level - Specialty	Upper level majors (in this or a related field of study) seeking competence or expertise in their academic/professional specialty
Grad/Prof Students	Graduate or professional school students

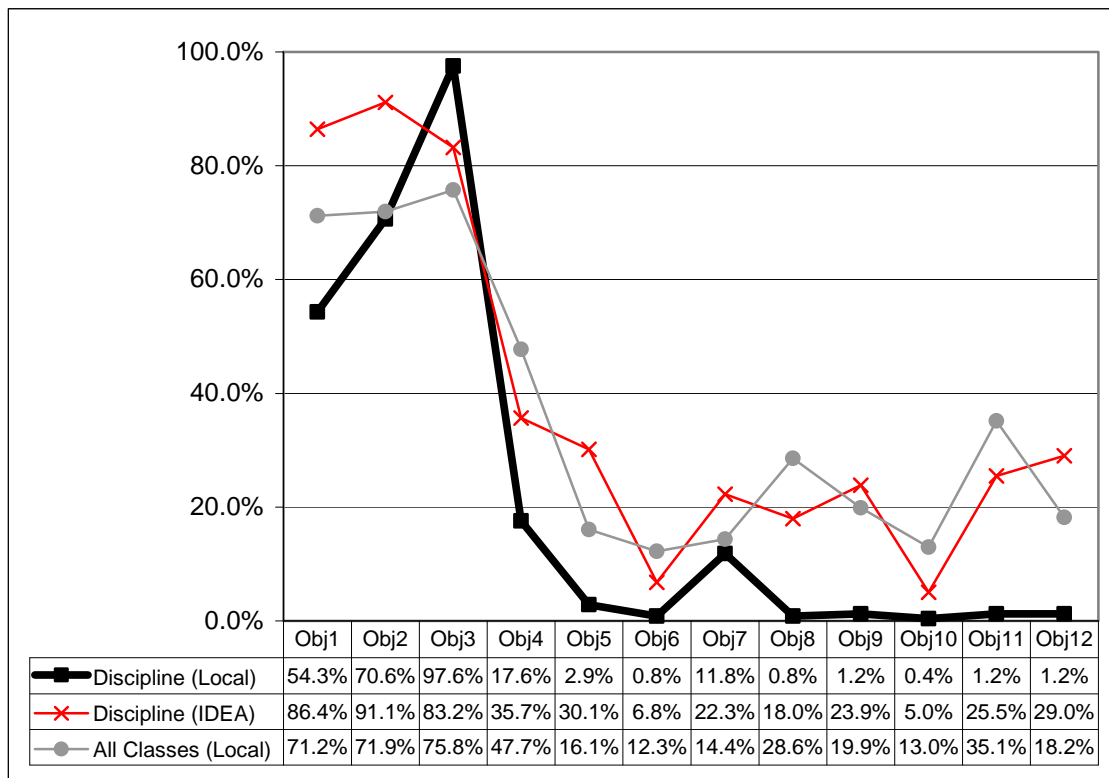
## 4: Frequency of Learning Objective Selection

The graph (4.1) below describes how frequently instructors selected each objective for classes in the discipline at your institution and how those results compare to the other comparison groups.

This graph explores the questions:

- Do we emphasize certain kinds of learning more or less frequently than others?
- Are there objectives that are not selected as frequently as desired?
- Is the learning emphasis consistent with our mission?

**Graph 4.1**  
**Objectives Selected vs. Comparison Groups**  
% of total classes where instructor selected objective as “Essential” or “Important”



Objectives are identified in Table 4.1 on the following page.

Obj1	Gaining factual knowledge (terminology, classifications, methods, trends)
Obj2	Learning fundamental principles, generalizations, or theories
Obj3	Learning to apply course material (to improve thinking, problem solving, and decisions)
Obj4	Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course
Obj5	Acquiring skills in working with others as a member of a team
Obj6	Developing creative capacities (writing, inventing, designing, performing in art, music, drama, etc.)
Obj7	Gaining a broader understanding and appreciation of intellectual/cultural activity (music, science, literature, etc.)
Obj8	Developing skill in expressing oneself orally or in writing
Obj9	Learning how to find and use resources for answering questions or solving problems
Obj10	Developing a clearer understanding of, and commitment to, personal values
Obj11	Learning to analyze and critically evaluate ideas, arguments, and points of view
Obj12	Acquiring an interest in learning more by asking questions and seeking answers

## 5: Progress on Learning

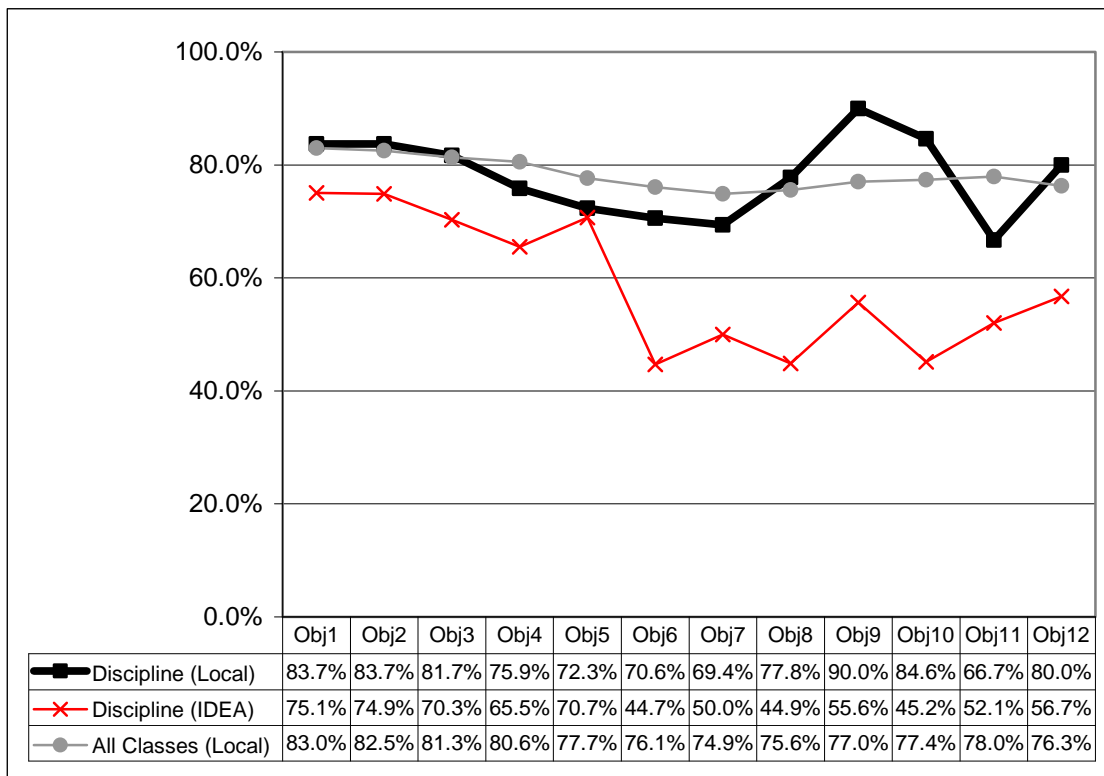
The graph (5.1) below reports the percentage of students who report making “Exceptional” or “Substantial” progress on each of the 12 IDEA Learning Objectives when an instructor identified them as “Essential” or “Important” to the course.

Questions that may be addressed include:

- Are we more successful in addressing certain kinds of learning than others?
- Are student self-reported outcomes similar to the comparison groups?
- Is there a learning objective where improvement efforts might be focused?

**Graph 5.1**  
**Progress on Relevant Objectives**

% responding “Exceptional” or “Substantial” progress



Objectives are identified in Table 4.1 on the previous page.

## 6: Teaching Method Emphasis

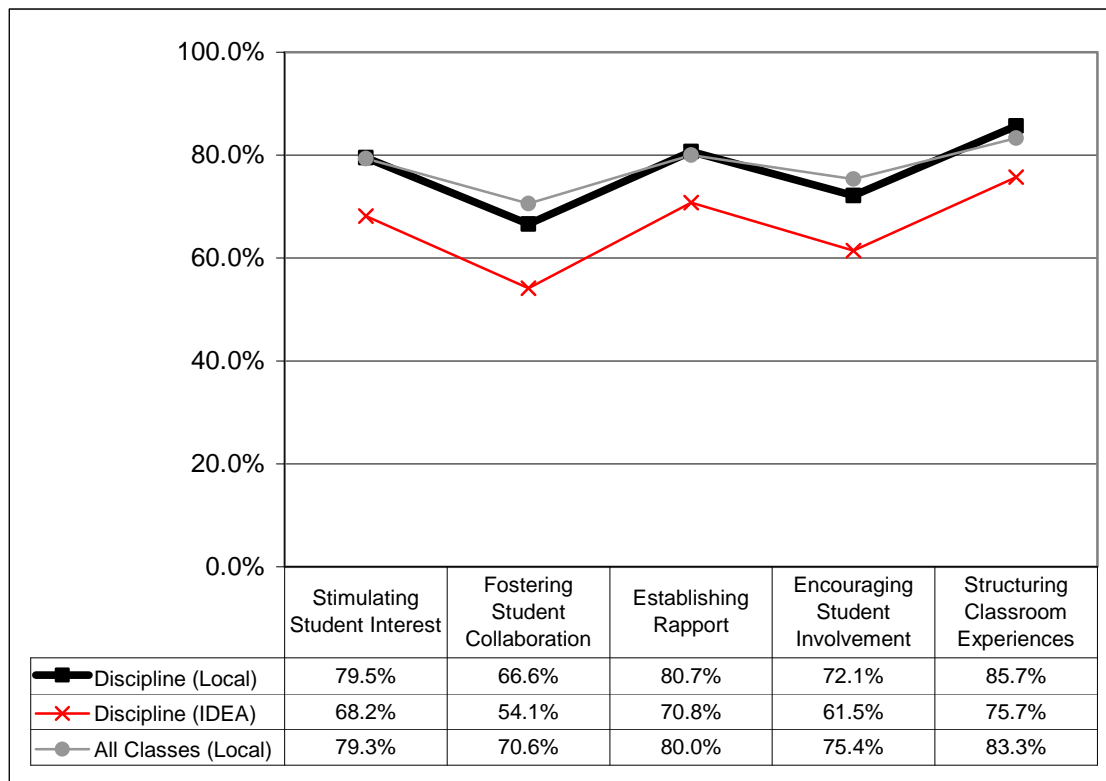
The graph (6.1) below provides a comparison between your discipline, your institution, and the discipline comparison group for each of the five teaching style scales. Each scale contains three to five of the teaching methods listed on the IDEA Diagnostic Form. The IDEA Center recognizes that the importance of any particular method is dependent upon the kind of learning you wish to accomplish. However when the data are aggregated the results serve as an indicator of how frequently your discipline employs important teaching methods compared to other comparison groups. The IDEA model suggests that the more frequently relevant teaching methods are employed, the more learning will occur.

Questions this graph may address include:

- Do we employ all types of methods similarly?
- Do we employ methods more or less frequently than the comparison groups?

### Graph 6.1 Teaching Methods and Styles

% responding that instructor employed methods "Almost Always" or "Frequently"



**Note:** Teaching Methods and Styles exist only on the IDEA Diagnostic Form. The number of classes evaluated using this form can be found on page 3.

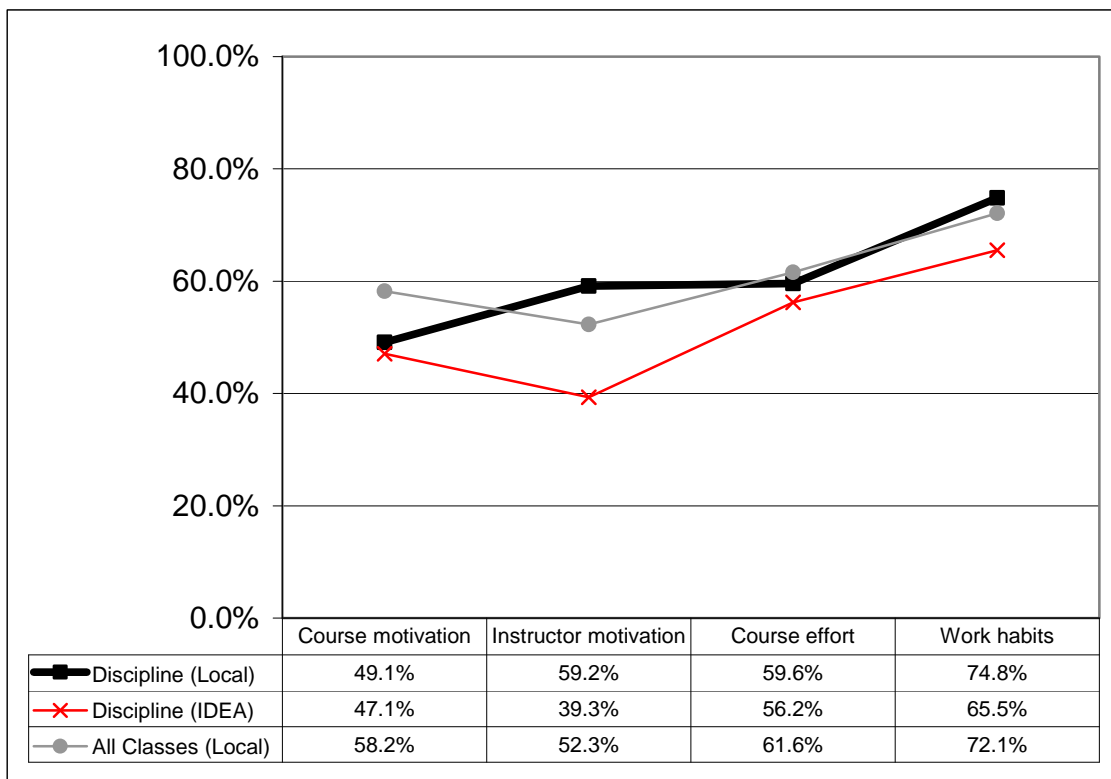
## 7: Student Characteristics

The IDEA Center’s research suggests that student characteristics such as motivation, work habits, and academic effort influence student learning. Graph 7.1 examines these three areas.

Some questions that could be addressed regarding student characteristics can be found in Table 7.1 on the following page.

**Graph 7.1**  
**Student Characteristics**

% responding "Definitely True" or "More True than False"



**Note:** The Instructor motivation and Course effort items exist only on the IDEA Diagnostic Form. The number of classes evaluated using this form can be found on page 3.

<b>Table 7.1</b>	<b>Student Characteristics</b>
<b>Course motivation</b>	<b>I really wanted to take this course regardless of who taught it.</b> <ul style="list-style-type: none"><li>• How motivated are our students to take the courses in which they are enrolled?</li><li>• How similar is the motivation of our students compared to the comparison groups?</li></ul>
<b>Instructor motivation</b>	<b>I really wanted to take a course from this instructor.</b> <ul style="list-style-type: none"><li>• Is instructor popularity different between our discipline and the comparison groups?</li></ul>
<b>Course effort</b>	<b>I worked harder on this course than on most courses I have taken.</b> <ul style="list-style-type: none"><li>• How do our students report their course related effort compared to those in the comparison groups?</li></ul>
<b>Work habits</b>	<b>As a rule, I put forth more effort than other students on academic work.</b> <ul style="list-style-type: none"><li>• How do students in our discipline report their academic effort in relation to the effort of other students compared to those in the comparison groups?</li></ul>

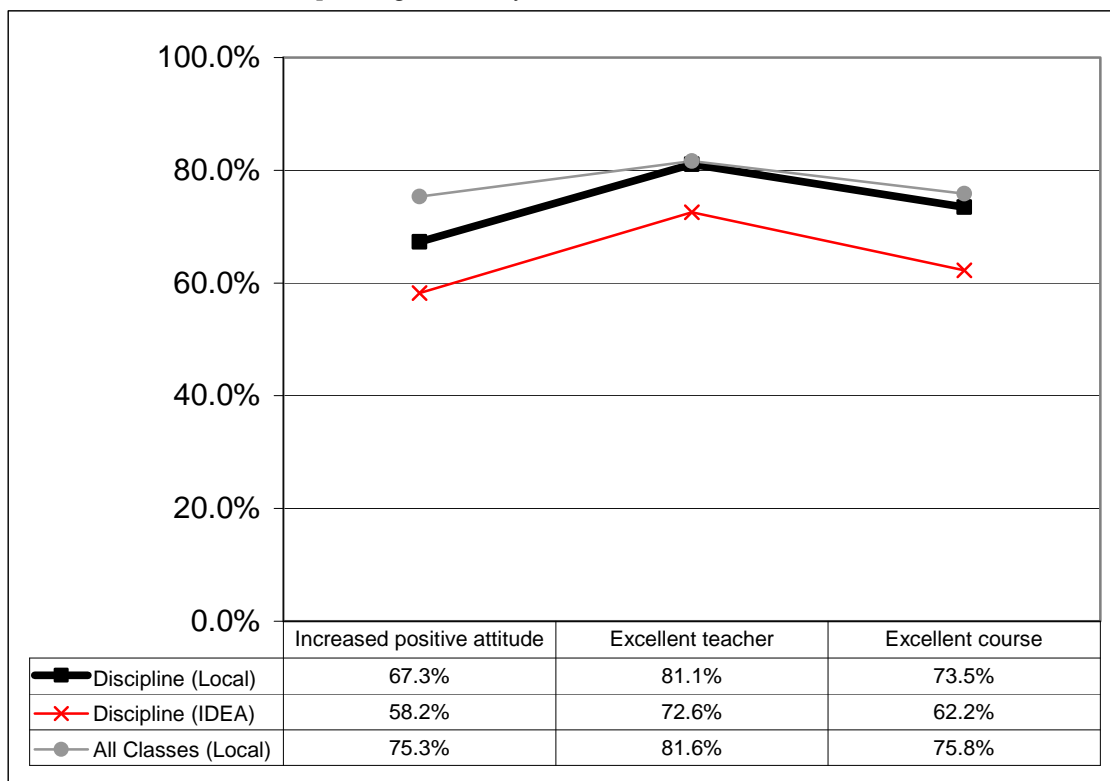
## 8: Summary Ratings of Effectiveness

The IDEA Student Ratings of Instruction system contains three global summary evaluation items:

- *As a result of taking this course, I have more positive feelings toward this field of study.*
- *Overall, I rate this instructor an excellent teacher.*
- *Overall, I rate this course as excellent.*

The following graph (8.1) summarizes responses to those items for your discipline and the other comparison groups.

**Graph 8.1**  
**Summary Ratings of Effectiveness**  
 % responding "Definitely True" or "More True than False"



## 9: Faculty Ratings of Other Impacts on Learning

The IDEA Student Ratings of Instruction system asks faculty to rate the impact (positive, negative, or neutral) that various circumstances had on learning in their class.

Five of those circumstances are summarized in the following graph (9.1). They are:

- Physical facilities and/or equipment (Facility/Equip)
- Technical/instructional support (Tech/Instr spt)
- Adequacy of students' background and preparation for the course (Student prep.)
- Student enthusiasm for the course (Student enth.)
- Student effort to learn (Student effort)

This information is useful in assessing faculty perceptions of instructional support (facilities, equipment, technology) and student characteristics. It allows you to address questions such as:

- Are our facilities and technology viewed to positively support student learning?
- How do our results compare to those of the comparison groups?

**Note:** Instructors are not required to respond to these items on the IDEA Faculty Information Form; the percent of faculty who opt to complete them may vary substantially across institutions. When you review the following graph please take into consideration that faculty in the "Discipline (Local)" group responded 55% of the time to items in this section of the Faculty Information Form.

Graph 9.1

### Faculty Ratings of Other Impacts on Learning

% responding "Had a positive impact on learning"

