

Student Response to Instruction (SRTI)

Interpreting SRTI Results: A Guide for Instructors

SRTI Development: A Brief Overview

The Student Response to Instruction (SRTI) form is the product of a collaboration between the Office of Academic Planning and Assessment and the Center for Teaching with guidance from and review by the Faculty Senate Council for Teaching, Learning, and Technology and on- and off-campus measurement experts. The following three goals guided item selection and question format for the evaluation instrument – to develop an instrument that:

1. focuses on aspects of teaching that students are capable of judging and that are highly related to student learning and satisfaction,
2. is appropriate for the wide variety of instructional styles and courses taught at UMass Amherst,
3. provides information for both the improvement of teaching and the evaluation of instructors for merit, promotion, and tenure processes.

The instrument is designed to provide faculty members with useful feedback on students' experiences in the classroom. The items for the instrument were selected after an extensive review of the literature on student learning and teacher and course evaluation as well as a review of current evaluation practices on other campuses. In addition to these items, there is space provided on the instrument for you to add questions specific to your course.

This guide is designed to help you interpret the Individual Section Report that summarizes your SRTI results for a specific course section. Keep in mind that *student ratings of instruction are only one piece of any evaluation of teaching*. While students can effectively judge aspects of teaching that reflect student experiences with an instructor (e.g., student-instructor relationships, instructor ability to communicate clearly, fairness of grading), they are not the best judges of aspects of teaching that reflect instructor subject matter expertise (e.g., knowledge in major field, course syllabus and reading list, selection of course objectives and materials). These elements can best be evaluated by an instructor's peers. The Center for Teaching (CFT) maintains a collection of materials on peer review and teaching portfolios for individual and departmental use.

Who to Contact for Further Assistance

The Office of Academic Planning and Assessment (OAPA) and the Center for Teaching (CFT) offer different types of help with respect to your SRTI results. For assistance with the technical aspects of your results (e.g., confusing and inconsistent data, inaccurate information, etc.) please contact Noreen LeMieux in OAPA at 5-2564 or by email: nlemieux@admin.umass.edu. For help on to follow-up on what the results tell you about your teaching (e.g., references for readings, learning about different teaching strategies) please contact CFT at 5-1225 or visit their website at www.umass.edu/cft.

SRTI Individual Section Report

Course Information and Response Rate

At the top of each page of the report (**Figure 1**) you will find the semester and year in which forms were collected, instructor name, department, course and section numbers, and class number. This section also indicates how many students returned a SRTI form, how many were enrolled in the course, and the rate of return or *response rate*. If the response rate is below 50%, a warning indicating such is printed on the report.

Figure 1: SRTI Individual Section Report Header

University of Massachusetts Amherst Student Response to Instruction (SRTI)
Individual Section Report
Item Frequencies

Semester: SPR 2008	Instructor: INSTRUCTOR, JOE
Course: DEPT 101 Section #:1	Class #: 22333
Forms returned: 88	
Total enrollment: 180	
Response rate: 49%	
WARNING: SAMPLE MAY NOT BE REPRESENTATIVE DUE TO LOW RESPONSE.	

What to note

Addressing the items in the following checklist will help you determine if the sample of students who responded to the survey is reliable and representative of all students enrolled in the class. Certain course characteristics beyond the instructor's control that may slightly influence ratings are also highlighted and should be taken into consideration.

- **What is the response rate for the course?** If at least two-thirds (response rate of 66%) of the students enrolled in a course responded to the survey, the results can be considered representative of the entire class (Cashin, 1999; Centra, 1993). If fewer than two-thirds of the students responded to the survey, use caution interpreting the results, especially for courses with fewer than 50 students enrolled. A response rate of less than 50 percent indicates the possibility of serious bias and results should not be considered a valid sample of student opinion. In general, the smaller the class, the higher the percentage of responses needed to consider the sample representative.
- **How many students responded to the survey?** If there are fewer than 10 students who evaluated a course, the reliability of the results is in question and caution should be used in interpreting the results (Cashin, 1999; Centra, 1993). In courses with at least 10 respondents, the reliability of results is acceptable and the effects of a few divergent opinions are limited.
- **How many students are enrolled in the course?** Class size can affect student ratings (Centra, 1993). Students tend to rank instructors teaching small classes (fewer than 30) higher than instructors teaching larger courses.
- **What is the subject matter of the course?** Subject matter may affect ratings to a small degree. Courses in the humanities receive slightly higher ratings when compared to those in social or natural sciences.

Student Demographic Data

Demographic data for students who completed the SRTI form (elective vs. required course status, expected course grade, and class level distribution) are presented at the bottom of page one of the report (**Figure 2**). These characteristics may have a small effect on student ratings independent of teaching effectiveness.

Figure 2: SRTI Individual Section Report Demographic Information

This course is a		Student class level		Expected grade	
Major requirement	15%	Freshmen	31%	A	24%
Gen. Ed. requirement	64%	Sophomore	40%	A-	28%
Other requirement	10%	Junior	14%	B+	9%
Elective	3%	Senior	7%	B	22%
Missing	8%	Graduate	0%	B-	5%
		Other	0%	C+	1%
		Missing	9%	C	2%
				C-	0%
				D+	0%
				D	0%
				F	0%
				Other	0%
		Missing	9%		

What to note

- **Did the majority of students in the course take it as a requirement or an elective?** Students tend to give slightly higher ratings to courses in their major and electives than to courses taken to fulfill a college or general education requirement.
- **What is the distribution of class levels represented in the class?** Higher student ratings are associated with a higher class standing. Lower division students tend to give the lowest ratings and graduate students tend to give the highest ratings.
- **What is the distribution of student expected grade?** Research studies have found a very small positive relationship between student expected grade and ratings of instruction (Centra, 1993; University of Arizona, 2001). Higher ratings tend to be associated with a higher expected grade.

SRTI Evaluation Results

On page one of the Individual Section Report you will find the frequencies or counts of students' responses to each SRTI question (**Figure 3**). The first five columns contain the numbers and proportion of students selecting each response category for a particular question. The "N" and "Omit" columns show the number of students who did and did not respond to each question.

Figure 3: Item Frequencies – SRTI Individual Section Report Page One (Excerpt)

Item #	SRTI Item	5	4	3	2	1	OMIT	N
1	The instructor was well prepared for class. (5=Almost always, 1=Almost never)	51	28	9	0	0	0	88
		58%	32%	10%	0%	0%		
2	The instructor explained course material clearly. (5=Almost always, 1=Almost never)	30	25	24	7	2	0	88
		34%	28%	27%	8%	2%		
3	The instructor cleared up points of confusion. (5=Almost always, 1=Almost never)	30	25	24	7	2	0	88

What to note

- **Note the number in the “Omit” category.** It is important to have a valid sample for each item. If a fourth or more of students fail to respond to a particular item, interpret results with caution.
- **Focus on the distribution of responses for each item.** If the majority of responses are clustered together, there is a general agreement among students. However, if responses are strongly divided between high and low ratings or dispersed evenly across the entire response scale, then students vary in how they evaluate the instructor or course on that item. These types of results might also indicate that the instructor is better at dealing with some types of students than with others in this particular class.

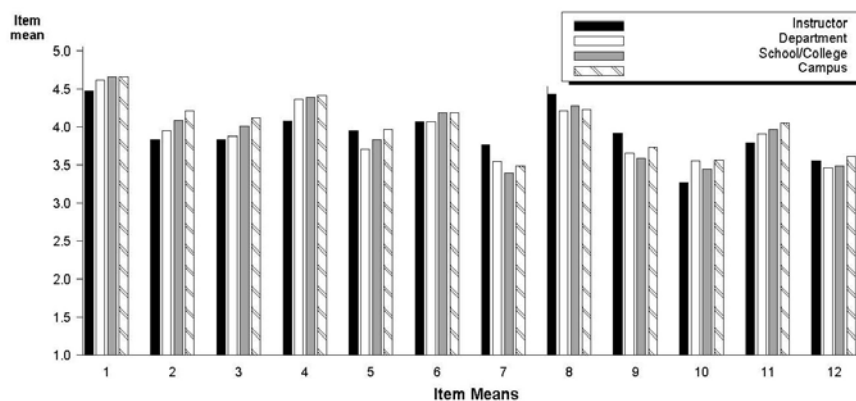
On page two of the report (**Figure 4**), the means or averages of students’ responses to each SRTI question are presented. The column labeled “St. Dev.” contains the standard deviation for each question - an index of agreement or disagreement among student respondents. If all students agreed exactly (e.g., 100 percent answered “2” on a particular question), the standard deviation would be zero. For forms like SRTI - with five response categories for each question - standard deviations close to 1.0 are normal. A standard deviation greater than 1.20 indicates responses may be split between high and low ratings, or evenly distributed across response categories for that question and the item mean may not be a good indicator of student opinion. (University of Arizona, 2001).

Figure 4: Item Means – SRTI Individual Section Report Page Two (Excerpt)

				COMPARISON GROUP: Undergraduate sections with 120 or more enrolled *					
				Dept: DEPT # Sections: 55 Resp. rate: 52%		College: COL # Sections: 171 Resp. rate: 50%		Campus # Sections: 662 Resp. rate: 54%	
		Instructor							
Item #	SRTI Item	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
1	The instructor was well prepared for class. (5=Almost always, 1=Almost never)	4.5	0.68	4.6	0.25	4.7	0.29	4.7	0.29
2	The instructor explained course material clearly. (5=Almost always, 1=Almost never)	3.8	1.06	3.9	0.52	4.1	0.53	4.2	0.48
3	The instructor cleared up points of confusion. (5=Almost always, 1=Almost never)	3.8	1.06	3.9	0.55	4.0	0.54	4.1	0.48

In the columns labeled ‘COMPARISON GROUP’, results for courses in the same class level and enrollment category as the section being evaluated (e.g. Undergraduate sections with 120 or more enrolled) are reported at three levels: department, school/college, and campus. These data are calculated from combined SRTI data for the three most recent academic years and are only reported for groups with five or more sections. The data do not include courses with fewer than 2 credits, noncredit labs/discussions, independent study/practicum/dissertation sections, applied music sections, or music and dance ensembles. The instructor and three comparison group means are displayed in a bar chart at the bottom of the page (**Figure 5**).

Figure 5: Item Means – SRTI Individual Section Report Page Two (Excerpt)



☑ What to note

- **Is the mean for an item a good indicator of general student opinion?** Use the standard deviation to evaluate the usefulness of the mean. When the standard deviation is high (over 1.20) and student responses are divided among response categories, then the mean does not reflect group consensus because the “average” score masks the great variability in student responses to that item. In such cases, it would be better to focus on the item frequencies (the percent of responses in each response category) for a more accurate description of student opinion.
- **How should you interpret the means?** In general, students rate instructors favorably. Because of this “positive response bias” typical in student ratings, the midpoint of the five-point response scale (3.0) should not be interpreted as an “average” rating of instruction. (For more information on ratings distributions, see [Student Response to Instruction and Performance Appraisal: A Guide for Using SRTI Results to Inform Merit, Tenure, and Promotion Decisions](#).)

So, What Do My Results Mean?

Strengths and Areas for Possible Improvement

The 12 questions on the SRTI form fall into two broad categories "Diagnostic Items" and "Global items". What follows is a description of these two types of questions, the concepts underlying each, and how they should be used.

Diagnostic Items

Diagnostic items (items 1-9) reflect six teaching constructs important to facilitating student learning and achievement: skill and clarity, course structure, teacher availability and rapport with students, feedback to students, classroom interaction, and stimulation of student interest (Astin, 1993; Braskamp & Ory, 1994; Centra, 1993; Pascarella & Terenzini, 1991). Students' responses to these items highlight specific strengths and areas for improvement in a teacher's performance, as perceived by students. As such, items 1-9 primarily serve a *formative* evaluation purpose (i.e., results are used to improve current practices). Each of the nine diagnostic items reflects one of six teaching constructs:

Teaching Constructs	Corresponding Items
Skill and Clarity	Items 1, 2, 3
Course Structure/Organization	Item 4
Stimulation of Student Interest	Item 5
Teacher Availability/Rapport	Item 6
Helpful Feedback to Students	Items 7 and 8
Classroom Interaction	Item 9

You may find patterns in your results that fit these teaching constructs. For instance, you may find that you have very high scores on the skill and clarity items, but a weaker score for availability/rapport. These patterns will help you identify what areas of your teaching are your particular strengths as well as those aspects of your teaching that might need additional attention. Again, these items are most appropriate in helping you improve your teaching practices.

Global Items

The three global items (items 10-12) ask students to provide an *overall* evaluation of how much they have learned in the course, the effectiveness of the instruction, and the course as a whole. Research shows that global items, such as these, are highly correlated with student achievement and satisfaction and are applicable and comparable in nearly all teaching and learning situations (Centra, 1993).

Most sources agree that these are the kinds of items which are best used for administrative reviews (i.e., *summative evaluation*) of teaching performance (Abrami, 2001; Arreola, 1995; Centra, 1993). For more information on using SRTI results for summative purposes see [Student Response to Instruction and Performance Appraisal: A Guide for Using SRTI Results to Inform Merit, Promotion, and Tenure Decisions](#).

Occasionally, results of the overall items will appear somewhat inconsistent with the results of some of the other, more specific aspects of instruction reflected in the diagnostic items. This is expected since not all aspects of instruction are of equal weight or importance in a given class.

What Do I Do Now?

The SRTI form was designed to provide information on students' experiences in the classroom to help you improve teaching performance and to collect information on one aspect of teaching to inform promotion and tenure processes. The Center For Teaching (CFT) can help you understand what your SRTI results say about your teaching and what you can do with the information SRTI results provide. They can provide you with key print resources on teaching practices and with several methods for getting additional feedback on your teaching and students' learning.

Teaching Resources: Print

The CFT has a library of nine **teaching improvement packets (TIPs)** that use each of the nine SRTI diagnostic items as a starting point. Each guide is brief, but substantive, and includes concrete descriptions of a range of teaching practices that have been shown to be successful. TIPs supply you with relevant ideas you can use to improve your teaching.

Options for Student Feedback

Student feedback can be obtained through a process of **small group Teaching and Learning Feedback (TLF)** or through a **Teaching and Learning Feedback questionnaire**. The feedback method chosen depends upon the instructor and the nature of the class from which information is being sought. Either method requires that the instructor set aside approximately 30 minutes of class time during the semester (usually at mid semester).

If you choose the small group TLF method, a consultant will ask students to form small groups and try to reach consensus on what about the course is working best for them and what elements may merit attention. The consultant then facilitates a whole-class discussion to clarify and prioritize small group responses. If you choose the TLF questionnaire, a consultant will explain the rationale and procedure to the students and administer and collect the questionnaire. Following the questionnaire or the small group session, a consultant will meet with you, usually within the week, to discuss the results.

Options for Consultant Feedback

Invite a CFT consultant to **observe one of your classes** as a means of helping you to analyze classroom interactions, teaching strategies, and the nature of student learning. You will find observation most helpful

if you inform the consultant in advance of your goals for the class or the particular strategy you are trying out. You can meet with the observer soon after the class visit to discuss the experience while it is fresh in both your minds.

Another option is to request a **videotaping of your class**. Watching a videotape of yourself is an extremely valuable experience. Videotaping allows you to view and listen to the class as your students do; you can also revisit your students' reactions and responses to your teaching. You can review the tape on your own or with a CFT consultant.

You can also ask the CFT staff **to review your course syllabus, assignments, exams or other materials**. Often it helps to ask an observer outside your discipline to take a look at your teaching materials. The consultant can make overall suggestions or answer specific questions you might have. *Feedback from students, class visits, and videotapes are shared only with the participating instructor.* The purpose of such midterm assessment options are to give you insight into student or consultant reactions to your course so that you may make any desired adjustments while the semester is in progress. The CFT may suggest follow-up activities, but the decision to act on those suggestions or make changes of your own rests with you.

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