Faculty Use of Student Evaluation Feedback

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This study examined faculty formative use of end of semester student rating of instruction (SRI) feedback. Over 600 faculty from three universities responded to a mailed survey. The majority of faculty reported using SRI feedback on a regular basis. Formative use of the SRI feedback was found to relate to faculty perceptions and values. The use of negative practices was reported by a small percentage of respondents. The results provide support to revised version of Geis's (1991) SRI feedback model.

Student evaluation feedback may be used to improve teaching (Murray, Jelley, & Renaud, 1996). The usefulness not only applies to feedback from mid-term evaluation and evaluation during the semester (Carson, Smith, & Olivarez, 2000; Schum & Yindra, 1996), but also to feedback from end of semester student rating of instruction (SRI) (Marsh & Roche, 1993).

Taking evaluation as part of a change process, Geis (1991) used an instructional feedback model to identify elements that had potential influence on feedback use by the recipient (Figure 1).

Figure1: Geis's (1991) Instructional Feedback Model
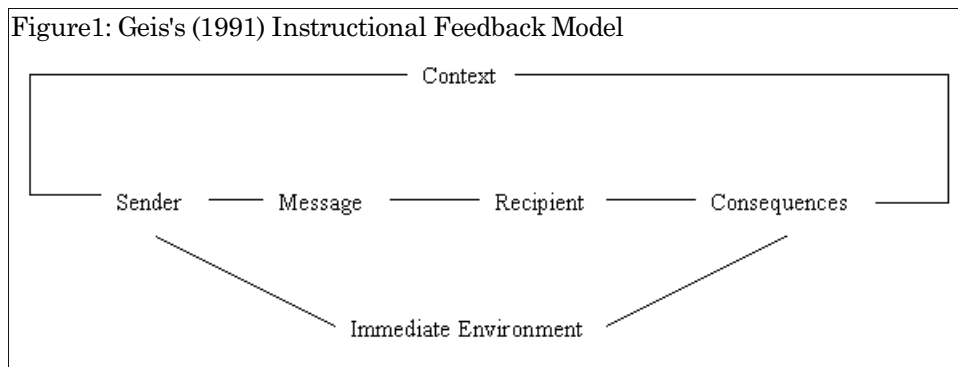
Geis's model has the following features:

- The sender of feedback to a large extent determines the validity of the data (message).
- The recipient in the model has impact on feedback use (consequences) through a number of variables, which were discussed in detail in Geis (1986).
- The variables include the recipient's perceived value of the feedback, the task, and the improvement, the recipient's prior experience, the recipient's ability to discriminate whether or not performance is correct and feedback is required, and what attributes are lacking in the performance, and the recipient's ability to produce the correct response.
- The context and the immediate environment in the model refer to the organization and its evaluation system respectively.

Geis intended his model for formative evaluation, and did not recommend it for an evaluation that was both formative and summative (1991). The authors of this article believed that, with some modification, Geis's model could be used to explain the process of student evaluation that is summative as well as formative. SRI, the most frequently encountered evaluation on campuses today, while being primarily summative by the university administration, also serves the formative purpose for faculty themselves. An SRI feedback model was built and tested using data from a survey, from the perspective of faculty formative use of the feedback.

<h1 style="text-align:center">Method</h1>

Participants

The population of the survey was full-time teaching faculty in a mid-western state university system in the US, including a research university that offered undergraduate, masters and doctoral programs, an urban university that offered undergraduate and masters programs, and a teaching university that was primarily focused on undergraduate programs. The total population was 933 at the research university, 521 at the urban university, and 319 at the teaching university.

Design and instrumentation

The data of the study came from a self-developed survey.

The SRI feedback model used in this study contained five elements in addition to those in Geis's model:

1. 'Tenure and promotion decision' reflected the summative aspect of the SRI, which provided the motivation for faculty to respond to the feedback, while the feedback faculty received made it possible for them to respond to the feedback.
2. 'Negative efforts' refer to potential negative practices faculty might make in response to the evaluation feedback or the results of the summative evaluation (Ryan, Anderson, & Birchler, 1980), such as efforts to please students with a prospective high grade or other unjustified practices, in the hope that the students may reward the instructor with a better rating of the instruction.
3. 'Other positive efforts' included faculty efforts in seeking feedback or help from other sources to improve teaching (Rifkin, 1995).
4. 'Teaching performance' was added to the model as the end product of the formative use of the SRI and other positive efforts by faculty.
5. The fifth component 'The SRI results' was added to the model to distinguish it from 'SRI feedback' that was only used for formative purposes, while the 'SRI results' included also information for tenure and promotion purposes.

This model is shown in Figure 2.

Figure 2: The SRI model used in this study
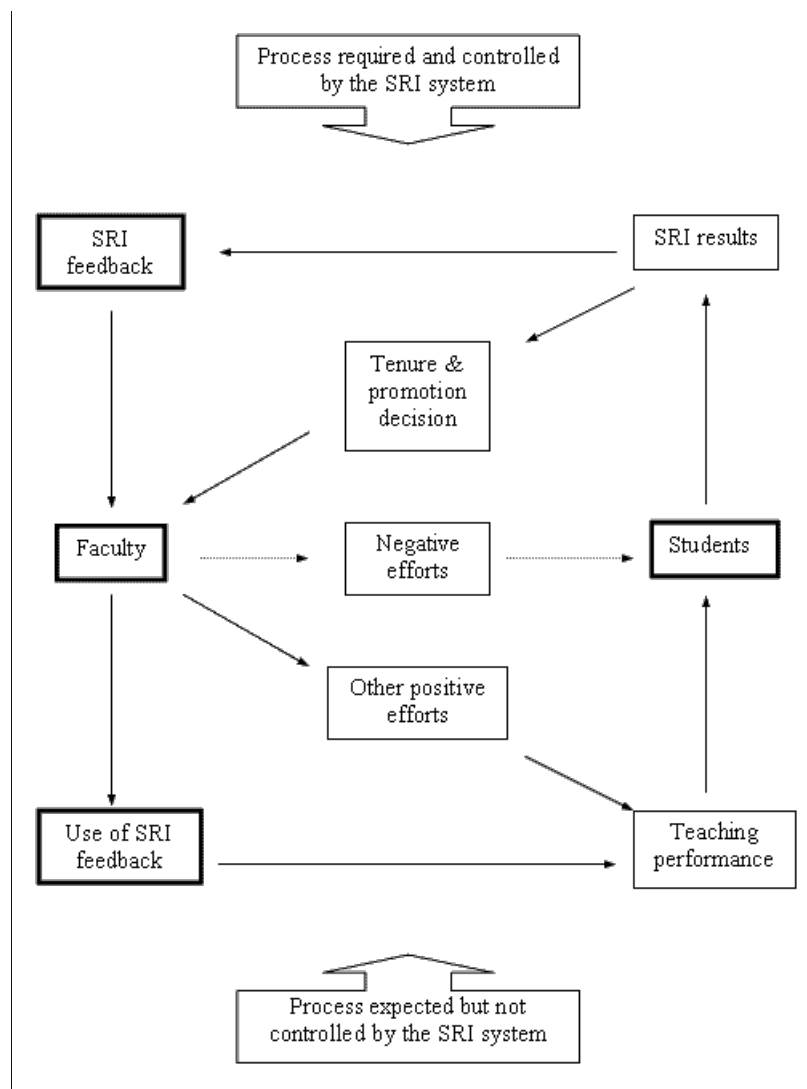
The receipt of feedback by faculty and the use of the evaluation results for personnel decisions constituted a process that was often required and directly controlled by an SRI system. Faculty response to the feedback in the form of formative use of the SRI feedback, however, was not a process that could be easily controlled, although an evaluation system might have certain expectations about it. The focus of the study was to investigate whether this formative process occurred.

The survey consisted of items that were grouped into the following areas: characteristics of courses faculty typically taught, types of feedback faculty used, negative practices by faculty, faculty use of SRI feedback in specific teaching areas, and faculty demographic information. The teaching dimensions as identified in Abrami and d'Apollonia (1990) formed the basis for deriving the 17 items about faculty use of the SRI feedback in various teaching areas.

Procedure

Mailing lists were obtained from the academic office of each campus. Each faculty member on the list was mailed a cover letter, the survey, a return envelope and a card containing a code number for tracking returns (participants were instructed to mail this card back separately to protect their anonymity)**.** Approximately two weeks after the first mailing in May or June 1999, a reminder postcard was mailed out.

These procedures resulted in 636 usable returns overall, with a 36% response rate. Sample sizes and response rates at each campus were: research university 295 (28%), urban university 187 (36%), and teaching university 154 (48%).

The demographic make-ups of the samples were similar across the campuses (Table 1), and appeared to be representative of the populations from which they were drawn on each campus.

Table 1: Demographic Make-ups of the Faculty Sample on the Three Campuses

Campus	Research	Urban	Teaching	Overall

Sample size		295	187	154	636
Gender	Male	60%	66%	66%	63%
	Female	40%	34%	34%	37%
Academic rank*	Lecturers /instructors	12%	7%	18%	12%
	Assistant professors	27%	32%	25%	28%
	Associate professors	30%	26%	36%	30%
	Full professors	32%	35%	23%	31%
Academic field	Math/natural sciences	43%	28%	30%	36%
	Business admin.	5%	9%	14%	8%
	Education	20%	20%	21%	20%
	Arts and humanities	16%	30%	20%	21%
	Social sciences	16%	13%	14%	14%

Note: The distribution of tenure status and years of teaching at the three campuses show similar pattern as that for academic rank.

Results

The respondents were instructed to base their answers to the survey items on a typical course that they taught. The majority targeted a course that was in the student's required or major area, at the undergraduate level, of moderate size (with 16 to 50 students), and taught more than 3 times.

The percentage of respondents reporting regular ('often' or 'always') use of evaluation feedback was 84.7% for feedback from SRI in general, 67.9% for other types of student feedback, 39.8% for feedback from colleagues, and 36.2% for feedback from department chairs.

Faculty self-reported use of SRI feedback in different areas was summarized in Table 2. Except for one area (assigning workload for students), over half of the respondents reported using SRI feedback on a regular basis. Over three quarters of the respondents reported regular use of SRI feedback in the following areas: creating an atmosphere conducive to learning, presenting ideas in a way that engages student's interest, motivating students to do their best, providing challenge, and giving clear explanations.

Table 2: Faculty Use of SRI Feedback in Different Teaching Area

	Never or Seldom	Occasionally	Often or Always
Setting course objectives	13.4%	18.0%	68.6%
Selecting course materials	23.2%	24.6%	52.3%
Assigning workload	20.9%	30.8%	48.2%

Preparing for class	17.0%	15.9%	67.1%
Explaining clearly	9.3%	15.4%	75.3%
Presenting engagingly	7.7%	13.1%	79.2%
Providing challenge	10.8%	13.5%	75.6%
Setting course pace	12.4%	18.0%	69.6%
Coordinating discussions	15.8%	19.0%	65.2%
Creating atmosphere	8.0%	12.3%	79.7%
Motivating students	10.0%	13.8%	76.2%
Covering exam contents	20.2%	17.2%	62.6%
Using fair grading	16.1%	12.1%	71.8%
Getting sensitive to progress	12.8%	17.2%	70.0%
Giving feedback	13.6%	15.6%	70.8%
Establishing rapport	12.6%	16.2%	71.2%
Becoming available for help	13.6%	16.0%	70.3%

Most of the respondents, 82.4%, reported receiving high or very high SRI results. Significant correlation was found between evaluation results and faculty feedback use in 16 areas, with faculty receiving high or very high student ratings most likely making regular use of SRI feedback. However, the correlation was weak, the biggest Spearman's rho being 0.23.

The Kruskal-Wallis Test was used to examine the relationship between faculty characteristics and their formative use of the SRI feedback. Significant difference in faculty feedback use was found due to their rank, field, class size, and class level (Table 3). The highest percentage of respondents reporting regular use of SRI feedback came from instructors/lecturers (assistant professors being the next), education faculty, and those teaching smaller size, graduate level classes.

Table 3: Difference in SRI Feedback Use due to Faculty Characteristics Based on the Kruskal-Wallis Test

	Acad. rank	Acad. field	Class size	Class level
Degree of freedom	3	4	2	2
Setting course objectives	8.42*	18.78*	3.31	4.58
Selecting course materials	2.50	10.72*	6.28*	13.23*

Assigning workload	9.16*	18.41*	6.93*	7.53*
Preparing for class	16.02*	5.81	2.13	0.82
Explaining clearly	13.93*	7.53	1.22	1.32
Presenting engagingly	7.13	11.03*	.87	5.35
Providing challenge	2.80	13.49*	6.33*	8.84*
Setting course pace	6.09	6.21	1.99	5.46
Coordinating discussions	6.22	29.75*	23.31*	10.97*
Creating atmosphere	3.98	14.06*	10.40*	13.54*
Motivating students	6.16	11.81*	4.00	9.33*
Covering exam contents	4.18	5.80	3.65	4.30
Using fair grading	11.00*	4.64	7.37*	0.13
Getting sensitive to progress	9.06*	15.39*	9.56*	3.39
Giving feedback	7.48	10.96*	9.56*	5.24
Establishing rapport	10.67*	20.18*	2.24	7.06*
Becoming available for help	7.68	16.83*	2.44	7.77*

Values are Chi-square values. A significant relationship ($p < .05$) is indicated with an asterisk.

The percentage of respondents who reported making negative efforts on a regular basis was 7.1% for giving lenient grading, 9.2% for making the tests easier, 10.3% for giving easier assignment for students, and 13.4% for making the course content easier. The reported use of negative efforts correlated negatively with SRI results (Table 4).

Table 4: Percent of Faculty Agreeing or Strongly Agreeing to Making Negative Practices Based on Their Student Rating Results

	Low or very low ratings	Neither low or high ratings	High or very high	Spearman's rho (r_s)
Making course content easier	44.4%	23.2%	10.6%	-0.14*
Making assignment easier	33.3%	18.5%	7.9%	-0.14*
Making test easier	31.6%	24.4%	6.1%	-0.20*
Making grading easier	31.6%	20.3%	4.3%	-0.17*

Discussions and Conclusions

SRI Feedback Model Revisited

The underlying assumption of the SRI feedback model was that faculty would use the feedback to improve their teaching. The results supported the assumption, given an SRI system that encouraged formative use of the evaluation feedback. The positive correlation between feedback use and evaluation results suggested that faculty use of SRI feedback resulted in improvement in teaching (Marsh & Roche, 1993).

Another assumption of the model that was stressed by Geis (1991, 1986), the potential impact of faculty perceptions on their feedback use, was also confirmed by the results of the study. The typical view that student ratings were most appropriate for feedback about the delivery and interaction aspects of teaching, and least appropriate for the planning and aftermath phases of teaching was reported in the literature (Ratcliff, 1991; Schmelkin et al., 1997). Ratcliff (1991) found that faculty regard student ratings as most appropriate for feedback about instructor communication and interaction and least appropriate for setting student workload and grading standards. Schmelkin, Spencer, and Gellman found that faculty members tend to pay the most attention to instructional activities and the least attention to planning activities. A possible explanation is that the process of teaching, the very act of classroom instruction and interaction, has much room for faculty to adjust and improve. It is also where the students have much to say and comment. On the other hand, instructional planning and evaluation activities are more or less the domain of the instructor's authority and there is usually little room for change or negotiation.

The study also found that junior faculty members (faculty at a rank lower than associate professors) were more likely to make regular use of SRI feedback than their senior counterparts. According to Geis (1991, 1986), a recipient's perceived value of improvement was a deciding factor in determining the person's feedback use. Junior faculty had a strong motivation for using the feedback in order to get positive evaluation results in the annual review and promotion process. This coincides with the finding that the greatest teaching improvement occurred during a faculty member's first few years of teaching (Centra, 1993).

The potential impact of student characteristics on faculty feedback use as suggested in the SRI model as well as Geis's model was evidenced by the correlation of class level and faculty SRI feedback use. Our finding that faculty teaching graduate classes tended to make more use of SRI feedback coincided with another finding that faculty regarded feedback from graduate students more consistent and reliable than feedback from undergraduate students. The relative reliability in graduate student evaluation of their instructors is supported in the literature (Huang et al., 1995).

The SRI model also included other positive and negative efforts as part of the faculty responses to the SRI results. The study showed that some of the faculty made a regular use of mid-term student evaluation feedback as well as other types of feedback for teaching improvement purposes. This reflected a widely held view among faculty that no single source of feedback would provide all information (Rifkin 1995; Simpson 1995; Lengeling 1996; Feldman & Paulsen, 1999).

The use of negative practices as reported by a small percentage of respondents could be attributed to the pressure from the summative use of the evaluation results (McKeachie, 1979; Ryan et al., 1980). Such practices could bias the evaluation results (Frankin & Theall, 1989). However, the effect of summative use of the SRI feedback did not seem to be totally negative, as the pressure may well become a driving force for faculty, especially beginning faculty, to make more formative use of the evaluation results.

Limitations

A major limitation of the study is that the study was based on the self-report of the respondents about their feedback use. Even though the responses were made anonymous, there was a possibility of social desirability response bias (Gordon, 1987), especially on a topic as sensitive as SRI. More validity may be built into the SRI model if data could be obtained concerning the actual use of feedback by faculty. Direct measure of teaching performance is also needed to verify the results of the feedback use. The model also needs to be tested in other settings, especially where there is a different policy concerning SRI.

The survey contained a section called 'potential barriers' that was meant to assess faculty perceptions of the summative use of the evaluation feedback. The section was eventually dropped out of the study since the items were negatively worded and had potential for misinterpretation by the respondents. Leaving the data for this section out of the study, however, made it impossible to examine the potential relationships between faculty perceptions of the summative use of the SRI feedback and their responses to the feedback, an important component of the SRI model.

The lack of the experimental design in the study suggested a need for caution in making any causal interpretation of the relations among variables in the study. The non-parametric statistics as necessitated by the ordinal data of the survey was not as precise as parametric data, especially in testing the potential significance of relationships between variables.

Conclusions and Implications

In conclusion, the majority of faculty made regular use of the SRI feedback to improve their teaching. Faculty perceptions and teaching values were closely related to their use of the feedback in different teaching areas. Faculty also used other types of feedback to improve their teaching, including mid term evaluation results, although to a lesser extent than they did with SRI results. The use of negative practices to improve ratings, which was negatively correlated to the evaluation results, was reported by a small percentage of the faculty.

The SRI model as validated in this study can be instrumental to university administrators in establishing an SRI system that encourages both formative and summative uses of the evaluation results. The close relationship between faculty feedback use and their teaching values and perceptions as indicated in the model suggests that there is much a university can do to effect a positive use of SRI feedback by faculty. For instance, the university can provide necessary resources for faculty to strengthen their 'discrimination repertoires', by enhancing their ability to determine whether there is a deficiency in their teaching, when there is a need for feedback, and what specific measures need to be taken to meet expectations about their teaching.

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Descriptors: College Faculty; Course Evaluation; Evaluation Criteria; Faculty Evaluation; Feedback; Student Evaluation of Teacher Performance