

# The Impact of a Learner-Centered, Mid-Semester Course Evaluation on Students

**Carol A. Hurney, Nancy L. Harris, Samantha C. Bates Prins, & S. E. Kruck**  
James Madison University

---

*This study explored the impact of a learner-centered, mid-semester course evaluation process called the small group instructional diagnosis (SGID) on student perceptions of dimensions of teaching that promote effective learning. Classes where instructors requested the SGID were randomly assigned to either traditional or learner-centered SGIDs and then students from these classes were surveyed at the end of the semester. Results reveal that the SGID process, independent of format, favorably affects student perception of the overall learning environment. However, the learner-centered SGID had a significantly higher impact on student perceptions of select dimensions of teaching including understanding of course assignments and tests, interactions with classmates, course preparation, motivation to excel, and enthusiasm. Moreover, students in the learner-centered group were significantly more likely to report positive changes in their own behaviors following the SGID.*

---

Incorporating opportunities for students to provide mid-semester course evaluations allows instructors to collect formative feedback from students, which can provide valuable insights regarding the impact and efficacy of course components on student learning. Administering traditional paper or on-line surveys to collect student feedback provides some useful information about the learning environment but lacks the opportunity for rich, informed dialogue with students. Thus, it is no surprise that one of the staple programs offered by most centers for teaching and learning is the interactive, mid-semester course evaluation process termed the small group instructional diagnosis (SGID). Three characteristics distinguish the SGID from other strategies used to collect student feedback on the learning environment (Abbott, Wulff, Nyquist, Ropp, & Hess, 1990). First, the SGID occurs during the middle of the semester, which allows the process to be formative rather than summative. Second, a consultant facilitates a guided, group discussion with the students, focusing the feedback session on issues pertaining to learning or other aspects of the course. Finally, the SGID gives the instructor the opportunity to provide an extended, thoughtful reaction to the current students in response to their feedback.

Generally, the SGID process involves a consultant meeting with the class without the instructor present to engage students in a dialogue about what is helping and hindering their learning, and suggestions they have for improving their learning in the course (Redmond, 1982). The students discuss answers to these questions in small groups, write their responses on the board, and then the SGID consultant facilitates a discussion with the entire

class about their collective responses. Under the guidance of the SGID consultant, the large group discussion remains focused on issues related to the course. After the SGID, the consultant meets with the instructor to discuss the results and explore ways that the feedback can be used to improve the course. Rather than assembling a collection of statistical scores or vague written comments, the SGID engages the students in a guided dialogue about the course, providing the instructor with rich written and verbal feedback contextualized by the SGID consultant. In turn, the instructor can use this information to close the feedback loop by promoting a constructive dialogue with the students, addressing their concerns.

Faculty and students report a high level of satisfaction with mid-semester evaluation opportunities like the SGID (Abbott et al., 1990; Finelli et al., 2010; Heppner & Johnston, 1994). Faculty and students also report that the SGID process is more useful than other feedback strategies and often results in meaningful changes to the course (Clark & Redmond, 1982; Craig, 2007; Coffmann, 1991). Diamond (2004) reports that faculty who participated in SGIDs made changes including amending course grading policies, adapting new pedagogies, clarifying course expectations to students, and adjusting the focus of course content during the current semester and in future semesters. The SGID process also positively impacts end-of-semester course ratings (Penny & Coe, 2004). Additional studies indicate that the SGID experience positively impacts student motivation (Clark & Redmond, 1982; Redmond, 1982), provides a forum for students to ask difficult questions (Bowden, 2004), improves communication between students and instruc-

tors (Bowden, 2004), and increases student satisfaction with the instructor (Abbott et al., 1990). When students provide feedback during the SGID most of their comments focus on the instructor, class activities, course policies, and course materials (Coffman, 1998).

The goal of our SGID program is not focused directly on the faculty; rather it is focused on improving learning, which involves the instructor and students. Thus, we modified the SGID items described in the literature and utilized by other faculty development centers to focus the SGID experience on learning instead of satisfaction (Redmond 1982, Angelo & Cross 1993). However, although students who experienced our traditional SGID, (T-SGID, Table 1) did provide feedback on what helped and hindered their learning, we felt that too much responsibility was placed on the instructor to make changes to the course and that students were seldom provided the opportunity to reflect on their role in the learning process. To address this, we developed a learner-centered SGID (LC-SGID) to help students reflect on ways to improve their learning in a course. Specifically, we included three additional questions into the T-SGID process (Table 1): (1) *What are YOU doing to help your learning in this course?* (2) *What are YOU doing to hinder your learning in this course?* (3) *What could YOU do to improve your learning in this course?* We tested the hypothesis that students who participated in the LC-SGID would take more responsibility for their learning than students who had T-SGIDs by comparing student perceptions of how the SGID process influenced the learning environment of the course and behavioral changes due to the SGID experience using a voluntary online survey administered at the end of the semester.

## Methods

### Setting and Study Design

Each semester approximately 50-60 instructors at a large, comprehensive public university elect to participate in the SGID program offered by the Center for Faculty Innovation. Faculty participants in this study requested 143 SGIDs during the fall 2009 and spring 2010 semesters. SGID requests were randomly assigned into the Traditional-SGID (T-SGID) or Learner-Centered SGID (LC-SGID)

groups. Overall, 72 courses received the LC-SGID protocol, while 71 courses received the T-SGID protocol resulting in approximately equal number of students in each group, 2451 in the LC-SGID group and 2552 in the T-SGID group.

### Measures and Procedures

A voluntary online survey was administered to student participants at the end of the semester, approximately seven to eight weeks after the SGID (Appendix I). The survey contained 11 categorical items based on the essential elements of teaching defined by Marsh (1982), as well as student motivation and enthusiasm. Items were scored using a six-point scale (Very Favorably, Favorably, No Change, Unfavorably, Very Unfavorably, Not Applicable). The survey also contained one qualitative item asking students to explain how their behavior in the course changed as a result of the SGID experience (IRB# 09-0046).

### Composition of Students in Study

Of the 5003 students who received the SGID experience during the fall 2009 and spring 2010 semesters, 789 (16%) participated in this study by completing the online survey deployed at the end of each semester. The control group of 471 students experienced the T-SGID, while the experimental group of 372 students experienced the LC-SGID. All students who participated in the SGID process were invited to participate in the study via email. Students agreed to participate by providing consent when they activated the hyperlink directing them to the survey.

## Data Analysis

Quantitative survey item responses were collapsed into two categories, favorable and not favorable by combining the very favorable and favorable responses into the favorable domain and the very unfavorable, unfavorable and no change responses into the not fa-

**Table 1. Traditional vs. Learner-Centered SGID Format**

Traditional SGID Questions	Learner-Centered SGID Questions
<ul style="list-style-type: none"> <li>• What helps your learning in this course?</li> <li>• What hinders your learning in this course?</li> <li>• What suggestions do you have to improve your learning in this course?</li> </ul>	<ul style="list-style-type: none"> <li>• What helps your learning in this course?</li> <li>• What hinders your learning in this course?</li> <li>• What suggestions do you have to improve your learning in this course?</li> </ul>
	<ul style="list-style-type: none"> <li>• <b>What are YOU doing to help your learning in this course?</b></li> <li>• <b>What are YOU doing to hinder your learning in this course?</b></li> <li>• <b>What could YOU be doing to improve your learning in this course?</b></li> </ul>

avorable domain. Percentages of the responses in each domain were used to determine whether the LC-SGID received a statistically significant higher percentage of favorable responses than the T-SGID by applying one-sided Chi-Square Goodness of Fit tests.

Qualitative responses from both groups were combined and mixed to allow blind coding by the authors into three categories: *learner-centered*, *non-learner centered*, and *no change*. *Learner-centered* comments reflected actions or changes in behavior taken by the student, use of the word "I" in the response, or other responses that reflected essential elements of the learner-centered philosophy outlined by Weimer (2002). *Non-learner centered* comments were comments that suggested ways the instructor adjusted the course based on the SGID feedback or proposed other ideas that the instructor could implement to improve the learning environment of the course. Comments where the students indicated that they had not changed their behavior as a result of the SGID were

coded as *no change* comments. Blank responses were not coded. Use of the coding software, NVivo8, allowed the authors to combine the comments, while preserving the data source, thus allowing the coded results to be sorted into the two categories for quantitative analysis. Response numbers in each of the three categories were used to determine statistical significance by applying the Chi-Square Goodness of Fit test.

## Results

Marsh (1982) defined nine dimensions that contribute to effective teaching and learning. The instructor has control over six of these dimensions (instructor enthusiasm, course organization, breadth of coverage, rigor, clarity of assignments, and assessment), while two are dependent on the students for success (interactions with classmates and rapport with instructor). The most important dimension, learning, depends on both the students and instructor

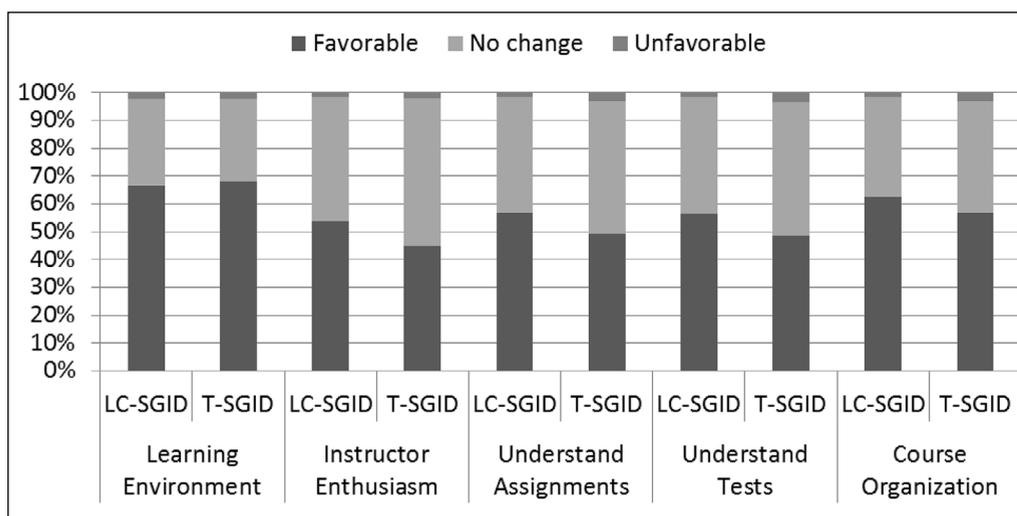
and is the most difficult dimension to measure. Additional dimensions of effective learner-centered courses include student motivation and enthusiasm as these contribute to students taking more responsibility for their learning (Blumberg, 2008; Cheang, 2009; Weimer, 2002). Our study explored the impact the SGID had on the overall learning environment of the course and on dimensions of the course the instructor controls, dimensions that the students control, and learner-centered dimensions. We also examined behavioral changes students made due to the SGID experience.

A majority of students in both the LC-SGID group and the T-SGID group reported that the SGID experience had a positive

**Table 2. Favorable Responses to Impact on Learning Environment and Dimensions of Teaching Controlled by Instructor**

Dimension	Percent Favorable in LC-SGID	Percent Favorable in T-SGID	P-value
Learning environment	68.1%	66.8%	0.6584
Instructor enthusiasm*	53.7%	45.0%	0.0077
Understanding of assignments*	56.8%	49.4%	0.0196
Understanding of tests*	56.3%	48.5%	0.0163
Course organization	62.4%	56.9%	0.0588

\* Indicates a statistically significant difference at the 0.05 level. All tests have one degree of freedom.



**Figure 1. Impact of SGID on learning environment and dimensions of teaching controlled by instructor.**

impact on their impression of the learning environment (Figure 1; Table 2). Chi-square analysis of the responses to this item revealed no statistically significant difference between the two groups (Table 2). However, a significantly higher percentage of the students who received the LC-SGID indicated that the SGID had a favorable impact on three of four elements of teaching controlled by the instructor (Table 2). Specifically, a higher percentage (53.7%) of the students in the LC-SGID indicated that the SGID experience had a favorable impact on their perception of instructor enthusiasm than students in the T-SGID group (45.0%; Table 2). Approximately 56.8% and 56.3% of the students from the LC-SGID group and 49.4% and 48.5% of the T-SGID group reported that the SGID process favorably influenced their understanding of instructor expectations regarding assignments and tests, respectively (Table 2; Figure 1). Results in these categories were significantly higher in the LC-SGID group (Table 2). Consistent with other studies that explored the impact of the SGID process, a majority of students from both groups indicated that the SGID had a favorable impact on their perception of course organization (Coffman, 1998; Diamond, 2004; Table 2; Figure 1). However, this difference was not statistically significant (Table 2).

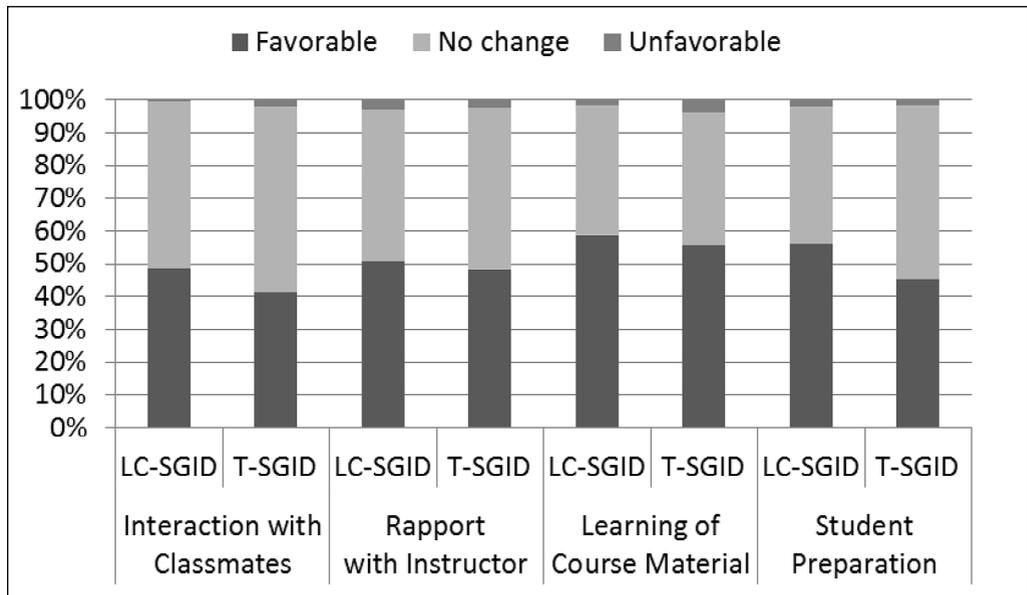
We also asked both groups of students to indicate how the SGID influenced

aspects of the learning environment that they control. Specifically, we asked the students how the SGID influenced interactions with classmates, rapport with instructor, learning of course material, and course preparation. Although the majority of both groups reported that the SGID did not change their interactions with their classmates, a significantly higher percentage of students in the LC-SGID group (48.6%) indicated that

**Table 3. Favorable Responses to Dimensions of Teaching Controlled by Student**

Dimension	Percent Favorable in LC-SGID	Percent Favorable in T-SGID	P-value
Interaction with classmates*	48.6%	41.6%	0.0253
Rapport with instructor	50.7%	48.3%	0.2535
Learning of course material	58.6%	55.8%	0.2212
Course preparation*	56.0%	45.4%	0.0017

\* Indicates a statistically significant difference at the 0.05 level. All tests have one degree of freedom.



**Figure 2. Impact of SGID format on dimensions of teaching controlled by the student.**

**Table 4. Favorable Responses to Learner-Centered Dimensions of Teaching**

Dimension	Percent Favorable in LC-SGID	Percent Favorable in T-SGID	P-value
Motivation to excel*	48.6%	41.6%	0.0253
Student enthusiasm*	46.9%	42.2%	0.0913

\* Indicates a statistically significant difference at the 0.05 level. All tests have one degree of freedom.

the feedback experience had a favorable influence on this element (Table 3; Figure 2). A majority of students in the LC-SGID group (56.0%) suggested that the SGID process had a favorable impact on their course preparation, which was statistically higher than the 45.4% of the T-SGID group responding similarly (Table 3; Figure 2). While not a significant difference, at least 55.8% of the students in both groups suggested that SGID had a favorable impact on their learning of course material (Table 3; Figure 2). The LC-SGID group did not report a

significantly higher impact on rapport with the instructor than students in the T-SGID group (Table 3).

Finally, we explored the impact that the SGID format had on student motivation to excel, enthusiasm, and learning behaviors. While students had a strong favorable impression of the impact of the SGID on the learning environment, this did not translate into an equally favorable response regarding the impact the SGID had on their motivation to excel in the course. Only 38.4% of the students in the T-SGID group indicated that the SGID had a favorable impact on their motivation to excel, while a significantly higher percentage (45.4%) of the LC-SGID group suggested they were more motivated to excel as a result of the SGID (Table 4; Figure 3). Similarly, only 42.2% of the students in the T-SGID group indicated that the SGID had a favorable impact on their enthusiasm, while a significantly higher percentage (46.9%) of the LC-SGID group indicated that the SGID positively influenced their enthusiasm (Table 4; Figure 3).

We received 230 qualitative responses from the LC-SGID group and 212 responses from the T-SGID group to the prompt “Identify some things that *you* did as a result of the SGID.” Responses were coded into three categories: learner-centered responses, course-centered responses, and responses indicating that the student made no change or a negative change based on their experience with the SGID. Examples of comments coded into each of the three categories are given in Table 5. Chi-square analysis of the responses in each category indicated that the percentage of responses from the LC-SGID group reflecting learner-centered behavioral changes (50.9%) was significantly higher than the similar percentage for the T-SGID group (39.2%) (Table 5; one-sided p-value=0.0397, df=1).

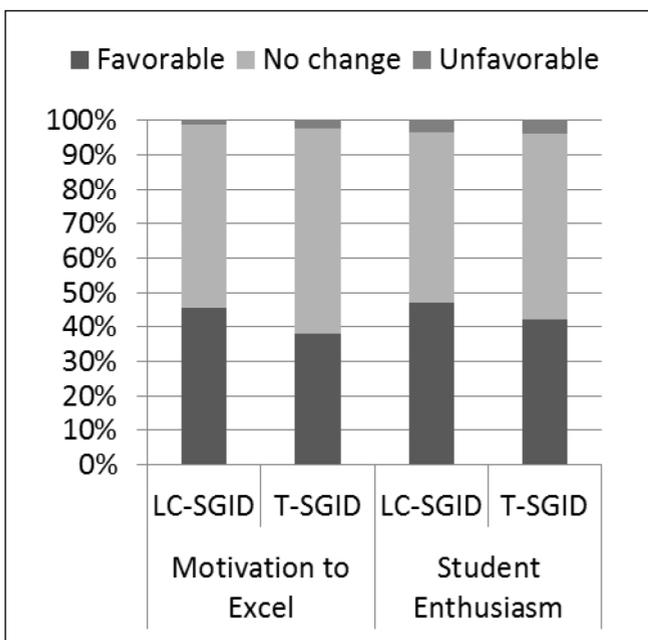


Figure 3. Impact of SGID format on learner-centered dimensions of teaching.

Table 5. Post-SGID Changes in Student Behavior

Category	LC-SGID (230 Responses)	T-SGID (212 Responses)	Sample Comments
<b>Learner-Centered Change</b>	50.9%	39.2%	<ul style="list-style-type: none"> <li>I started reading my book more and taking more thorough notes.</li> <li>I tried to be more proactive with my studies and participation in class.</li> <li>I became more efficient in time management.</li> </ul>
<b>Course-Centered Change</b>	19.1%	25.9%	<ul style="list-style-type: none"> <li>We had an Exam Review day where we played team games with the course material.</li> <li>We were allotted 5 extra minutes for online quizzes, which really helped.</li> <li>She makes sure she gives us a break.</li> </ul>
<b>No/Negative Change</b>	30%	34.9%	<ul style="list-style-type: none"> <li>I did nothing different.</li> <li>Was even less interested in the class</li> </ul>

## Conclusions

Our study tested the hypothesis that adding student self-reflection items to the SGID would result in students taking more responsibility for their learning than students who were only asked to reflect on the course and instructor. This simple, yet powerful, strategy of asking students to engage in self-reflection resulted in self-reported, statistically significant changes in aspects of learning controlled by the students – course preparation and interactions with classmates (Table 3). Additionally, students in the LC-SGID expressed statistically significant differences in their motivation to excel and their enthusiasm, which reflect dimensions of effective learner-centered experiences (Blumberg, 2008; Weimer, 2002; Table 4). Although, Gunderman and Wood (2004) question whether students can be trusted to play a substantial role in determining how they will learn, our results suggest otherwise. Asking students to reflect on their behavior during the SGID had a favorable impact on how they view their role in the learning process in that students who experienced the LC-SGID were significantly more likely to mention changes they made to their own behavior following the SGID (Table 5). Sample comments suggest that students started reading and participating more frequently, which indicates a shift toward taking more responsibility for learning.

The results from our study also support that the SGID course evaluation process, independent of format, positively impacts dimensions of teaching controlled by the instructor (Table 2). However, students in the LC-SGID group reported significant changes in favorability regarding instructor enthusiasm, and understanding of assignments and tests (Table 2). Moreover, over 60% of the students in the LC-SGID group indicated that the SGID positively impacted their perception of the course organization and the learning environment (Table 2). While these aspects of the learning environment are not directly related to the research hypothesis regarding whether students take more responsibility for their learning, they do provide support for the SGID process, and LC-SGID process, in particular.

Learner-centered educational experiences challenge students to view their role in the learning process from a much different perspective. Notably, students to take more responsibility for their learning, actively engage with course content, assess their learning progress, and make connections to other courses and content (Blumberg, 2008; Weimer, 2002). Getting students to make these shifts requires the careful integration of opportunities, such as the LC-SGID, that allow students to question their typical learning behaviors (Coffman, 2003; Felder & Brent, 1996). Ultimately, the LC-SGID promoted thoughtful, guided reflection that influenced

how students view their role the course, which resulted in meaningful behavioral changes that empowered the students to take more responsibility for their learning. Although the SGID promotes professional development for faculty, our study underscores the role the SGID can also have on students and their role in the learning environment. The results from the LC-SGID questions enhanced the overall feedback process by providing instructors with insights regarding how students were helping and hindering their own learning. Student feedback to the LC-SGID questions coupled with responses to the course-centered SGID questions allowed instructors to provide a more comprehensive, learner-centered response to the students when closing the feedback loop after the SGID.

## References

- Abbott, R. D., Wulff, D. H., Nyquist, J. D., Ropp, V. A., & Hess, C. W. (1990). Satisfaction with processes of collecting student opinions about instruction: The student perspective. *Journal of Educational Psychology, 82*(2), 201.
- Angelo, T. A., & Cross, K. P. (1993). Classroom assessment techniques.
- Blumberg, P. (2008). *Developing learner-centered teaching: A practical guide for faculty*. Jossey-Bass.
- Bowden, D. (2004). Small Group Instructional Diagnosis: A Method for Enhancing Writing Instruction. *Council of Writing Program Administrators, 28*(1-2), 115.
- Cheang, K. I. (2009). Effects of learner-centered teaching on motivation and learning strategies in a third-year pharmacotherapy course. *American Journal of Pharmaceutical Education, 73* (3), Article 42.
- Clark, D. J., & Redmond, M. V. (1982). Small Group Instructional Diagnosis: Final Report.
- Coffman, S. J. (1991). Improving your teaching through small-group diagnosis. *College Teaching, 39*(2), 80-82.
- Coffman, S. J. (2003). Ten strategies for getting students to take responsibility for their learning. *College Teaching, 51*(1), 2-4.
- Coffman, S. J. (1998). Small group instructional evaluation across disciplines. *College Teaching, 46*(3), 106-111.
- Craig, M. (2007, March). Facilitated student discussions for evaluating teaching. In *ACM SIGCSE Bulletin* (Vol. 39, No. 1, pp. 190-194). ACM.
- Diamond, M. R. (2004). The usefulness of structured mid-term feedback as a catalyst for change in higher education classes. *Active Learning in Higher Education, 5*(3), 217-231.
- Felder, R. M., & Brent, R. (1996). Navigating the bumpy road to student-centered instruction. *College teaching, 44*(2), 43-47.
- Finelli, C. J., Ott, M., Gottfried, A. C., Hershock, C., O'Neal, C., & Kaplan, M. (2008). Utilizing instructional consultations to enhance the teaching performance of engineering faculty. *Journal of Engineering Education, 97*(4), 397-411.
- Gunderman, R. B., & Wood, B. P. (2004). Trusting the student: learner-centered education. *Journal of the American College of Radiology: JACR, 1*(12), 897.
- Heppner, P. P., & Johnston, J. A. (1994). Peer consultation: Faculty and students working together to improve teaching. *Journal of Counseling & Development, 72*(5), 492-499.

- Marsh, H. W. (1982). SEEQ: A Reliable, Valid, and Useful Instrument for Collecting Students' Evaluations of University Teaching. *British Journal of Educational Psychology*, 52(1), 77-95.
- Penny, A. R., & Coe, R. (2004). Effectiveness of consultation on student ratings feedback: A meta-analysis. *Review of Educational Research*, 74(2), 215-253.
- Redmond, M. V. (1982). A Process of Midterm Evaluation Incorporating Small Group Discussion of a Course and Its Effect on Student Motivation
- Weimer, M. (2002). *Learner-centered teaching: Five key changes to practice*. Jossey-Bass.

---

**Carol A. Hurney, Ph.D.** is the Executive Director of the Center for Faculty Innovation and Professor of Biology at James Madison University in Harrisonburg, VA. Her research interests are in learner-centered teaching, holistic faculty development, and salamander tail development.

**Nancy L. Harris, M.S.** is a lecturer in the Computer Science Department and Faculty Affiliate in the Center for Faculty Innovation. Her research interests are in database consulting, computer science education, and effective practices to keep and retain women in computing.

**Samantha C. Bates Prins, Ph.D.** is an Associate Professor of Mathematics & Statistics and Faculty Associate in the Center for Faculty Innovation. Her scholarly interests are environmental statistics, statistical consulting and the scholarship of teaching & learning.

**S. E. Kruck, Ph.D.** is an Associate Professor of Computer Information Systems and a Faculty Affiliate in the Center for Faculty Innovation. Her research interests include: spreadsheet data quality, information systems education, student motivation and performance, course design and curriculum issues, computer security, and social and ethical issues in information technology.

# Appendix A

## Student Survey Instrument

### Opening Prompt

Sometime earlier this semester, a faculty member visited one of your classes to perform a mid-semester evaluation. During this evaluation, you broke up into groups to discuss course issues and then the faculty member engaged the entire class in a discussion. After the evaluation, the faculty consultant met with your instructor to discuss the results.

**Rate the degree to which you think the evaluation influenced the following items.**

	Very favorably	Favorably	No change	Unfavorably	Very unfavorably
1. Instructor enthusiasm					
2. Course organization					
3. Your understanding of assignments and projects					
4. Your understanding of exams, tests, and quizzes					
5. Your interactions with classmates					
6. Your rapport with the instructor					
7. Your learning of course material					
8. Your preparation for this class					
9. Your enthusiasm for this class					

**Rate the impact the evaluation had on the learning environment in this class.**

Very favorably	Favorably	No change	Unfavorably	Very unfavorably
----------------	-----------	-----------	-------------	------------------

**Overall, how did the evaluation influence your motivation to excel in this course?**

Very favorably	Favorably	No change	Unfavorably	Very unfavorably
----------------	-----------	-----------	-------------	------------------

**Identify some things that you did in this class as a result of the evaluation.**