Using Focus Groups to Establish the Validity and Reliability of a College Student Survey

Judith A. Ouimet

Community College Survey of Student Engagement

Robert M. Carini

National Survey of Student Engagement

George D. Kuh

National Survey of Student Engagement

JoAnne C. Bunnage

National Survey of Student Engagement

Presented at the 2001 AIR Forum

Long Beach, CA – June 4, 2001

Using Focus Groups to Establish the Validity and Reliability of a College Student Survey

Surveys are the preferred approach for collecting data from large numbers of students about their college experiences. Many instruments are locally developed, used a few times and discarded. Others, such as the College Student Experiences Questionnaire (CSEQ) (Pace & Kuh, 1998) and the Cooperative Institutional Research Program (CIRP) instruments (Astin & Sax, 1999), are nationally normed and administered annually. It is not unusual for items used on nationally normed instruments to be adapted for use on local surveys because researchers perceive them to be "good" and "reliable," especially if psychometric analyses demonstrate that the items are sound.

The National Survey of Student Engagement (NSSE) survey instrument, The College Student Report (*The Report*) (Kuh, 1999), was developed in 1998 by a Design Team led by Peter Ewell of The National Center for Higher Education Management Systems (NCHEMS). Most of the items on *The Report* were adapted with permission from the CSEQ, CIRP, and surveys used in the University of North Carolina system. *The Report* was extensively field tested during 1999 with about 36,000 students at 68 four-year colleges and universities. Feedback at dozens of national, state, and campus presentations indicate that the survey has a high degree of face validity with faculty members and academic administrators. Psychometric analyses show that most items are reliable. However, what cannot be known from these kinds of analyses is whether students are interpreting the items consistently and whether their responses accurately represent the behaviors or perceptions the survey designers intended. That is, even when psychometric indicators are acceptable, students may be interpreting some items in different ways. It is very rare that survey researchers ask participants to explain the meaning of items and their responses.

For example, when Pace created the College Student Experience Questionnaire, (CSEQ) he had students define the response set on a handful of items in the CSEQ to help him interpret their responses and conduct psychometric testing on those items (personal communication, 1999). However, most nationally and locally administered surveys given to college students to not have the resources to conduct cognitive testing or focus groups to obtain the qualitative data on specific items and responses.

The purpose of this study is to discover the meaning students make of the items on the NSSE ***College Student Report***. More specifically, do students interpret the questions consistent with what was intended by the NSSE Design Team? What is the frequency of behavior or activity that students associate with various response options, such as "very often," "often" or "never?" Are the queries clearly worded and specific enough to produce reliable and valid information? Finally, do the items and response categories accurately represent students' behaviors and perceptions with how they –in their own words–describe their college experiences? The answers to these questions, especially the last one, are very important to the validity and credibility of college student research because much of what we know about the undergraduate experience is based on student self reports.

Methods

To gain greater insight into and understanding about the survey items on The College Student Report we used a combined qualitative and quantitative approach. The primary mode of data collection was focus groups of first-year and senior students, the two groups of students for which *The Report* was designed and to which the survey is administered each spring.. The focus groups were conducted during March, April, and May, 2000 at eight colleges and universities that participated in the inaugural administration of the NSSE. The eight schools that opened their campuses to us were Colgate College, Eckerd College, New Mexico State University, Randolph-Macon Woman's College, St. Lawrence University, Southwest Texas State University, The University of Texas at Austin, and University of Missouri-Columbia. Overall, the participating colleges were generally representative of all the four-year colleges and universities that participated in NSSE 2000, four are baccalaureate liberal arts colleges one of which is a woman's college, one is a Master's college, and three were doctoral extensive research universities.

A NSSE research analyst coordinated the focus group study and led the group discussions at all eight campuses. Other NSSE project personnel assisted her so that at least two researchers were present at each focus group session. All sessions were tape-recorded and one or more NSSE staff took extensive notes during the discussions. Between three and six student focus groups were conducted on each campus for a total of 35 student sessions.

We recruited participants by providing the NSSE institutional liaison with a list of 200 students from their school who were in the NSSE 2000 sample and asked them to personally invite students to participate in the focus groups. When time permitted, the liaison was encouraged to use reminder e-mails, flyers, and phone calls to insure a strong turnout. In the few instances when this approach did not yield enough participants, we asked the liaison to invite other interested first-year students and seniors. To encourage participation, a $10 phone card or a bookstore gift certificate was provided as a token of appreciation as suggested by Krueger (1994). The number of students participating in each focus group ranged from 1 to 17 students, for a total of

221 student participants. More women (73%) and first-year students (49%) participated than men (26%) and seniors (45%)[1]. Approximately 37% were people of color (see Table 1).

[Insert Table 1 about here]

The focus groups lasted between 75 to 90 minutes. To create a welcoming atmosphere, we provided snacks and beverages during the focus groups. Adapting a format suggested by Krueger (1998), the first 10 minutes consisted of introductions and a brief overview of the background and purposes of the focus group. During the next 10 minutes we read up to 10 items from *The Report* and asked students to record their answers in their own words on an index card. Next, we asked students to complete *The Report* to familiarize them with the items and response categories in order to facilitate a rich, informed, and nuanced discussion. This step was important because not all participants had been selected for their school's random NSSE sample; thus, they had not completed the instrument. This also helped to re-familiarize those who had previously completed the instrument with the items and answer categories. The remaining time was devoted to discussing the cover letter and survey process, the instrument, specifically students' interpretations of the instructions, items, and response categories.

The students were invited to identify any sections or items on the instrument that they found ambiguous, confusing or difficult to answer, including the instructions, items, and the response set categories. We also asked them to compare their answers to the selected items from *The Report* presented orally. This helped us to better understand what students were thinking in terms of the meaning of the various response categories when they

---

1 6% of respondents were either sophomores or junior.

were responding to various items. At times, the facilitator guided the discussion to specific sections of the instrument, such as asking students to clarify what the different response options meant in terms of the frequency of their activity or behavior. Although there was not sufficient time to discuss every item during each focus group, every section of the instrument was addressed in at least one group on each campus.

Data Analysis

Following Krueger (1994), Merriam (1988), and Yin (1984), at the end of each day NSSE staff reviewed the focus group notes in order to identify key issues. After completing the focus groups at the first three schools, the research team met with other NSSE project staff to debrief and to discuss the emerging common issues and concerns related to the instrument. Following the completion of all the focus group meetings at the remaining five schools, a longer debriefing session was held during which time the key issues and potentially problematic items were identified. The number of items that prompted discussion was relatively small, less than ten percent in most focus groups. Differences in the interpretations of item wording was the most common issue that surfaced along with the absence of certain preferred response options some students said would allow them to answer with more precision.

The second step was to compare the results from the focus groups with the psychometric properties of ***The College Student Report***. At this point we paid particular attention to items that were not normally distributed, or had relatively low alphas or R-squares. We then reviewed these items to determine if any of the questions might be improved based on what was learned from the focus group discussions. Finally, we used the focus group data to add texture and richness to our interpretations of the responses to the instrument.

Results

Valuable information was obtained from the focus group feedback in four areas: instrument appearance and ease of completion, survey administration procedures, item clarity, and response categories.

Appearance and Ease of Completion

A common initial impression reported by students was that the survey "looked like a test." That is, the formatting was dense and reminded them of the op-scan forms often used for objective exams. In addition, at first glance it appeared longer than it actually was. Many students who participated in the focus group but did not complete the survey when they originally received it were surprised how quick and easy ***The Report*** was to complete. In fact, many said they would have filled out the survey if it looked less off-putting and more user-friendly.

Also, students who originally completed the instrument via the web found the paper version of *The Report* more cumbersome to complete. This was especially true for left-handed students. These students reported that completing the survey via the web was much easier for them because *The Report* is, as most surveys are, unintentionally designed for right-handed people. The reason cited for web-ease was their arm was not covering up the items when completing via the web. For all students, the web version was quicker to complete because they didn't have to bubble in their answers, as responding electronically required but a simple mouse click.

Survey Administration Procedures

The NSSE project goes to great lengths to personalize the survey process. For example, every letter is individually addressed on the student's school letterhead and signed using the signature block of a high-ranking institutional official (e.g., president, academic dean). For this reason we asked students about their impression of the Invitation to Participate letter that was included in the initial survey packet. We were somewhat surprised and mildly disappointed that many students did not remember much about the cover letter, including who signed it. Moreover, they did not recall reading the letter very carefully.

As with the cover letter, students typically did not carefully read the directions at the beginning of the instrument. During the focus groups we observed many students who started to respond to the questions without taking the time to carefully read the instructions. Students later confirmed that they rarely read instructions on surveys; instead, they glance at the response options and then the questions to get an idea of what the survey is about and whether they will spend the time responding. They did, however, have some suggestions for how we might make the instructions clearer and easier to read. The most important was to substantially condense the number of words used at the beginning of the survey and at the start of new sections.

Item Clarity

Generally, students found the questions to be clearly worded and easy to complete. Even so, when asked to do so, focus group discussions across the eight campuses focused on about a dozen items where students wondered if additional clarity would produce more consistent interpretations and precise information. For some items, the psychometric analysis confirmed that they might be somewhat problematic. Specifically, five College Activities questions were carefully examined:

1) Used e-mail to communicate with an instructor or other students
2) Rewrote a paper or assignment several times
3) Came to class unprepared
4) Tutored or taught
1) Worked with a faculty member on a research project

Students pointed out two potentially confounding problem with the e-mail question. First, the item is double-barreled—asking two questions in one (i.e., emailing faculty members and emailing students). As a result, some students were not always certain whether to estimate the frequency of emailing one group and to ignore the other or to average the use of email across the two groups. The second problem is that the item did not differentiate between the various substantive foci of the correspondence, whether it was primarily academic or social or a combination of the two. Students typically reported using e-mail with other students for personal matters, not academic. Thus, it was difficult to interpret the meaning and implications of student responses.

The item about rewriting papers confused some students. A few said they only revise a paper once, so the 'several times' precluded them from responding. A few others interpreted this item to mean revising written work after they got a grade or feedback from their instructor. A psychometric analysis suggested problems with this item as well. For example, when comparing the fit of this item to 19 other activity items, the item-to-scale correlation was rather low at .21. In contrast, 18 other activity items sported item-to-scale correlations between .30 and .57.

The "came to class unprepared" item was interpreted differently by a few students who thought the question meant such things as not having a pencil or pen with which to take notes (which was not the intended meaning of the item) as contrasted with not having done the assigned reading or assignment (which was the intention). The item to activity scale correlation was -.0037, indicating that this question was unrelated to other educationally purposeful college activities and needed to be changed.

The "tutored or taught other students" item was defined differently by some students, frequently very narrowly. For example, many students did not consider helping a fellow student, whether in their class or not, as tutoring. Instead, students defined tutoring as a formal academic assistance role for which they were compensated.

Two problems were discovered with the "worked with a faculty member on a research project" item. First, several students were uncertain about what constituted a research project. Some wondered if this meant completing a research-based paper in a class or a senior thesis. Or could research be defined as working in a lab as a work-study student? Second, the response format was not well calibrated to the question, which was indicated by the relatively small fraction of students who indicated something other than "never." That is, instead of asking the frequency with which students worked with faculty members on research, a binary response set would be sufficient (i.e., students either had the experience or they did not) (Table 2).

[Insert Table 2 about here]

The Academic Workload section was the most challenging for students to complete for several reasons. It was difficult to quickly recall the amount of reading and writing for the previous semester, so students had to think harder and longer about their answers. Also, the response set for the number of written pages posed problems for more than a few. Some students asked whether one-page papers could reasonably be compared with 19 page papers (the response options were "20 pages or more" and "fewer than 20 pages"). The majority of the focus group participants reported that the typical length of most papers ranged between one and 5 pages, with only a few reporting having written papers spanning 15 or more pages.

Another mildly confusing item was the "number of books read on your own." Some students were not sure if this was meant to imply reading books for pleasure or readings to supplement class assignments. Both are relevant, and most students answered the item with the combination in mind. (see Table 2).

The most frequently omitted item on ***The Report*** (which averages less than 1% missing data per item) was about the nature of exams, with about 6% missing data. During the focus groups we observed that many students skipped this item when students were filling out the instrument. When we asked why, they told us they simply didn't see it, or that they thought it was an example, not a question they were supposed to answer.

Students felt that the Time of Task items were fairly represented of how they spend their time. Some suggested we divide relaxing and socializing, because exercising is not relaxing, nor is socializing always relaxing; other students suggested we add a section to record hours spent sleeping and napping. The most important observation was that students overwhelming recommended that "0" (zero) should be added as a response option. This is because, for example, many students do not work, either on- or off-campus, so responding using the option "5 or fewer" was not a true representation of what they were doing. This was also true of the "providing care for dependents" item.

The survey includes a set of what we call Enriching Educational Experiences, activities or programs that colleges require or make available to students that complement and enrich the academic program, such as internships, community service, and study abroad. One of these items, "interdisciplinary coursework," surprisingly confused most students apparently because they did not understand what the term meant or this experience is not available at their institution.

The last section where some students pointed out potentially confusing questions was Educational and Personal Growth. Students focused on three items in particular: (1) "voting in elections," (2) "being honest and truthful," and (3) "contributing to the welfare of your community." International students in particular had difficulty know how to respond to the voting item. They (and some others) were not sure if that meant campus, local or national elections. Also, some first-year students had only recently turned 18 and, therefore, had not yet had the opportunity to vote. Some students said the 'being honest and truthful" item represented an attribute that they brought with them to college, as it was imbued by their parents and home life; the implication was that college would and should have only a trivial effect in this area. Finally, some students weren't sure if the "contributing to the welfare of your community" item meant the campus community or surrounding community (it was intended to mean both).

Response Categories

In the Activity Section we asked students to interpret the response categories for each item. Specifically, did the categories made sense for the items and, more importantly, how were students interpreting meaning of the categories. Students made it clear that the response categories were item specific. For instance, students who marked "very often" on the item "asked questions in class…" might define their response as approximately three times per week; however, students would use the same response category for another item and defined "very often" to imply everyday. Table 3 displays the items by answer category for the activity items.

[Insert Table 3 about here]

Implications

Once the NSSE research team digested the above findings, we used the information to guide and inform revisions to the 2001 version of ***The College Student Report*** and to assist in the preparation of *The NSSE 2000 Report: National Benchmarks of Effective Educational Practice*. Specifically, we worked closely with survey expert, Don Dillman (2000) to redesign ***The Report*** so that it had a more inviting look and feel.

For example, we revamped the look by substituting check boxes for the traditional bubbles. Because few students read the directions, we removed them from the front page thus opening the survey up. This change creates a more inviting feel to the instrument. We moved to a column layout and reversed the color—that is, the response boxes pop out because they are white with a blue background, to make the instrument less test-like.

Based on the student observations, the NSSE team concentrated on the items that were unclear, difficult to respond to, or too narrowly interpreted. Table 4 summarizes the changes that were made to the items. The vast majority of changes were of the order of rewording to increase item clarity.

[Insert Table 4 about here]

The rationale for the changes tended to be item specific. For instance, students told us that preparing several drafts of a paper or an assignment before submitting it required more reflection and effort than revising a paper in response to specific technical suggestions from a writing instructor. Thus, we changed the writing item to reflect this observation. This is compatible with Light's (2001) suggestions that students may be more engaged overall in their studies when they devote more time and energy to required writing assignments.

Another example of a revamped item is 'came to class unprepared.' Since students had a broad definition of 'unprepared' we chose to define it by substituting unprepared with 'without completing readings or assignments.'

Some items did not need such an overhaul, but instead a prompt guides them in the interpretation. For instance, tutored is defined as paid or voluntary while feedback is given a more clearly defined sense in that it can be oral or written. Similarly, we clarified the double-barreled e-mail item by removing students so as to focus on electronic communication with faculty members.

In other instances, items that had restricted variance seemed to be both a function of relatively infrequent behavior and different interpretations of the meaning of response options. This was the case with the "worked with a faculty member on a research project," because fewer than 10% percent of undergraduates report doing this often or very often and because students engage in this activity much less frequently than most other activities listed on *The Report*. Thus, a binary response option such as "yes'" or "no" would yield the same amount of information as the current "never" to "very often" response option range.

Overall, students interpreted the response categories in a similar manner. The meaning of the response options varied somewhat from item to item. However, students' interpretations of the meaning of the items were fairly consistent. For example, when students marked **"**very often" to the item "asked questions in class or contributed to class discussions" they agreed that this indicated a daily or during every class meeting. When answering the "made a class presentation" item, "very often" meant about once a week.

From the information students provided in the focus groups, we also have a more accurate understanding of what students meant when they answered various items, which helped in preparing the National Report. For instance, when students say they "occasionally" came to class unprepared, we know they mean at least once a month. We also know they interpreted the term, "unprepared" broadly in the "came to class unprepared" item by including a range of such things as not having a notepad and writing utensil in class to not having read the assignment or not having completed homework or papers on time.

Students' suggestions for improving and shortening the instructions also encouraged us to be even more clear about the importance of the survey and what we are asking them to think about. In the Educational and Personal Growth section, students recommended we change the wording of the question "…the extent to which their college education contributed to the progress they made during college" on the various outcomes to "…the extent to which their college **experience** contributed" to their learning and development. Some students tended to narrowly interpret "college education" to mean how they benefited from their classes as contrasted with a broader interpretation of the entire college experience including courses as well as out-of-class experiences, study abroad, service learning, and such.

Conclusion

The results from this study point to two main conclusions. First, students interpreted the response categories on ***The College Student Report*** in similar ways. While respondents varied somewhat in their interpretations, the focus groups revealed a general consensus for the vast majority of items. Second, the meaning of the response categories were item specific; that is, the meaning of "very often" to one question did not necessarily represent the same frequency of occurrence as another item.

It is all too rare that educational researchers employ both qualitative and quantitative techniques to examine what students mean on a particular instrument. This research project combined the two approaches to add an additional layer of richness to the interpretation of the findings. The findings of this study also provide additional insight into the importance of using focus groups to learn how students interpret various items and what they mean when using different response categories. In addition, the results from the focus groups have been used to increase the clarity and measurement precision of the items on ***The Report***, thereby increasing the instrument's validity and reliability. Other survey researchers can use this same approach as a model for how to test the properties of survey items. Perhaps most important, the results of this study show that when survey items are clearly worded and represent activities with which students have recent experience, students consistently interpret items and that the patterns of their responses accurately represent what they confirm to be the frequency of their behavior in various areas (Pace, 1985). This suggests that student self-reports about the nature and frequency of their behavior can be considered accurate indicators of these activities.

Selected References

Dillman, D. (2000). Mail and Internet surveys: The tailored design method. New York: J. Wiley.

Krueger, R.A. (1994). Focus groups: A practical guide for applied research. Thousand Oaks, CA: Sage Publications.

Krueger, R.A. (1998). Moderating focus groups. Thousand Oaks, CA: Sage Publications.

Light, R. J. (2001). Making the most of college: Students speak their minds. Cambridge, MA: Harvard University Press.

Pace, C.R. (1985). The credibility of student self-reports. Los Angeles: University of California, The Center for the Study of Evaluation, Graduate School of Education.

Pace, C.R. (1999). Personal communication ASHE conference meeting, San Antonio, Texas.

Yin, R.K. (1984). Case study research. Beverly Hills, CA: Sage Publications.

Table 1

Number of Focus Group Participants by Gender, Students of Color (SOC) & Class Level

	Number of Focus Groups		Gender			Class Level		
Institution		**Participants**	**Me n**	**Women**	**SO C**	**First-Yr**	**Senio r**	**Othe r**
SWT	6	23	7	16	17	17	4	2
SLU	3	19	8	11	4	11	8	0
UT	4	6	4	2	0	4	1	1
Colgate	4	38	13	25	6	17	21	0
Randolph-Macon Woman's	4	34	0	34	11	16	18	0
MIZZOU	6	38	7	31	15	18	14	6
NMSU	4	20	7	13	17	9	9	2
Eckerd	4	43	14	29	8	17	24	2
Total	**35**	**221**	**60**	**161**	**78**	**109**	**99**	**13**
% Total			*27%*	*73%*	*33%*	*49%*	*45%*	*6%*

Table 2

First-year and Senior Response Dispersions for Selected Items

Item	First-Years	Seniors
Worked with a faculty member on a research project		
Very often	315	1726
Often	1162	2945
Occasionally	5258	7889
Never	23703	20185
Mean SD	1.28 .58	1.58 .86
Number of assigned textbooks, books, or book-length …		
None	157	275
Fewer than 5	3592	6024
Between 5 and 10	11029	11800
Between 11 and 20	10494	8929
More than 20	4918	5293
Mean SD	3.54 .92	3.40 1.0
Number of books read on your own (not assigned)		
None	7834	6378
Fewer than 5	16352	17121
Between 5 and 10	4053	5587
Between 11 and 20	1103	1801
More than 20	818	1364
Mean SD	2.03 .89	2.21 .96
Number of written papers or reports of 20 pages or more		
None	24981	15188
Fewer than 5	4046	13748
Between 5 and 10	599	2376
Between 11 and 20	217	563
More than 20	273	328
Mean SD	1.23 .61	1.67 .77
Number of written papers or reports of fewer than 20 pages		
None	427	803
Fewer than 5	4215	7759
Between 5 and 10	9088	9317
Between 11 and 20	10227	8123
More than 20	6190	6250
Mean SD	3.58 1.01	3.35 1.12

Table 3

Student Response Category Definitions for Activity Items

Item	Very often	Often	Occasionally	Never
Asked questions in class or contributed to class discussion:	Every class all classes; Every day	Every class only some classes, every week; Bi-weekly	Every other class Seems to be more encompassing than other categories	Very rare instances or truly never
Used e-mail to communicate with an instructor or other students	Every day, 2-3 times / wk, 2-3 times / wk	2-3 times / wk, 1-2 times / wk	1-2 times / wk	
Made a class presentation	Once a week 1 / week, large every week	7-10 times; 5 times 7-10 time 1 every two weeks s	Once a semester; Once/twice a semester;1-2 times / semester;1-2 times / month, 1 / month	Truly never
Rewrote a paper or assignment several times rewrote" means to fix it before turning it in. once you turn it in you can't rewrite again.	More than 75% of them; Every paper no matter what assignment; Always rewrite every time I write	50-75%;	1-50% ;Every once in a while, if given opportunity would do it more; once in a great while	Never
Came to class unprepared	Really don't care at all and purposely never come prepared, 1-2 times / wk	Don't care and come unprepared	2-3 times per semester, 1 / month	
Worked with other students on projects during class	Generally defined as weekly; Every time we meet, every class	Every other week to three times per semester.;1 / wk, 1-2 / wk	Once or twice per semester; 1 for big project	Truly never
Worked with classmates outside of class to prepare class assignments	1 / wk	5-6 / semester; 1-2 / week	2-3 / semester	
Tutored or taught other students	Generally meant weekly; Every day	Every other week; Schedule time 1 / wk	A few times during the semester; Not a regularly scheduled time, only as needed	Truly never
Participated in a community-based project as part of a regular course	Lots or all of classes; Generally defined as weekly, but there was considerable difference amongst the group about this questions	In at least one class each semester; Every other week; By yourself without class	A couple of times per semester; 1 / semester with class	Truly never
Used an electronic medium (e-mail, list-serve, chat group, etc.) to discuss or complete an assignment	For assignment every time; daily	Weekly	1-2 / month; less than weekly	Did it once before this year
Discussed grades or assignments with an instructor	Not daily, but I did it a lot;1 / week – someone that is paranoid about their grades, every day	1 / 2-3 weeks – to make sure you are on schedule, 1-2 / week, 1 / 2-3 weeks, 4-5 / semester	2 / semester – only when upset	
Talked about career plans with a faculty member or advisor	Generally meant weekly; 3-4 / wk	Once or twice a semester; 1 / wk	A couple of times per year	Truly never
Discussed ideas from your reading or classes with faculty members outside of class;	2-3 times/ a week; After every class, 3-4 / wk;Daily; 8-10 times; 2-3 times/day	Not going out of my way, but when I see a professor I talk with him/her (maybe once/week); 1 / wk; Once a wk; I ask others about my assignments to try to improve them	Once/twice per month (not never); Around test time, 1 course / wk; Every few weeks/a couple times; Once every other week	Could use cause it only happened a few times
Received prompt feedback from faculty on your academic performance	Weekly; After every class	Two or three times per month; After every quiz, 1 / wk	Once or twice during the semester	Truly never

Worked harder than you thought you could to meet an instructor's standards or expectations.								
Worked with a faculty member on a research project		Daily; Every day, meet weekly		1 / wk		Only once, one individual project		
Worked with faculty members on activities other than coursework (committees, orientation, student-life activities, etc.;		Weekly		Monthly/bi-weekly		More than once		Never
Discussed ideas from your reading or classes with others outside of class (students, family members, co-workers, etc.);		Live with same people taking classes with – all the time, always do it, 2-3 / day		1 / wk, 1 / 2 weeks, 1 / wk		1 / 2-3 weeks		
Had a serious conversation with other students whose religious beliefs, political opinions, or personal values were very different from yours		Every day, friend is another race so all the time		Every other day		1 / wk, 1-2 / month		Small talk but no serious talk
Had serious conversations with student of a different race or ethnicity than your own		Every day		Two times / week, every other day		1 / month		

Table 4

Item Wording Revisions

NSSE 2000 Items	NSSE 2001 Revised Items
Used e-mail to communicate with an instructor or other students	Used e-mail to communicate with an instructor
Rewrote a paper or assignment several time	Prepared two or more drafts of a paper or assignment before turning it in
Came to class unprepared	Came to class without completing readings or assignments
Tutored or taught other students	Tutored or taught other students (paid or voluntary)
Used an electronic medium (e-mail, list-serve, chat group, etc.) to discuss or complete an assignment	Used an electronic medium (list-serve, chat group, Internet, etc.) to discuss or complete an assignment
Received prompt feedback from faculty on your academic performance	Received prompt feedback from faculty on your academic performance (written or oral)
Had serious conversations with other students whose religious beliefs, political opinions, or personal values were very different from yours.	Had serious conversations with students who differ from you in terms of their religious beliefs, political opinions, or personal values
Worked with faculty member on a research project	Relocated item and changed the response category to a dichotomous
Number of written papers or reports of fewer than 19 pages	Made two questions: fewer than 5 pages, and between 5 and 19 pages
Mark the oval that best represents the nature of the examinations you have taken this year…	Mark the box that best represents the extent to which your examinations during the current school year have challenged you to do your best work
Voting in elections	Voting in local, state, or national elections
Being honest and truthful	Developing a personal code of values and ethics