

Research Reports

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Boise State University

*Active Learning In and Out of the Classroom:
Results from the
National Survey of Student Engagement*

Research Report 2003-02
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ABSTRACT

This is the third in a series of reports on the National Survey of Student Engagement (NSSE). It covers 22 items from the survey which measure active learning within and outside the classroom. Comparisons are provided by the NSSE to other urban institutions who participated in the survey process. In addition, results were compared to the last administration of the survey in 2000 to see if any changes had occurred.

Working on papers or projects that required integration of ideas from a variety of sources, asking questions in class, and discussing ideas from their classes with others outside of class were reported by both freshmen and seniors as some of the most frequent activities that impacted learning. In addition, first-year students frequently prepared two or more drafts of a paper or assignment before turning it in and had serious conversations with students who were very different from them (e.g., religious beliefs, political opinions or values). Seniors frequently put together ideas or concepts from different courses when completing assignments and often used e-mail to communicate with their instructors as their other top activities.

Both first-year students and seniors were least likely to participate in a community-based project as part of a regular course, work with faculty members on activities other than coursework, tutor other students, discuss ideas with faculty outside of class, and talk about career plans with a faculty member or advisor.

Seniors clearly engaged in more active learning behaviors than did first-year students. This is probably due to increased expectations by faculty as students move closer to graduation and complete more background courses. Seniors also enjoyed more interactions with faculty, probably due to smaller upper division classes, as well as a variety of other factors related to the more mature/educated student. Boise State results were generally similar to those for other urban institutions. Where differences

occurred, they typically were for freshmen and included less use of an electronic medium to complete an assignment or e-mail to communicate with instructors, and less discussion of career plans with faculty or other advisors. Both freshmen and seniors were less likely to hold serious conversations with those of a different race or ethnicity compared to students at other urban institutions.

Boise State made strides in several areas compared to two years ago when the NSSE was last administered here. Students were rewriting their papers more before turning them in, using electronic medium more frequently to complete assignments and e-mail to communicate with instructors. In addition, more interaction between senior students and faculty was occurring, particularly in the areas of discussing grades and assignments and working with faculty on activities outside the classroom. On the down side, more students were coming to class unprepared. Freshmen also reported less discussion of their career plans compared to two years ago.

ACTIVE LEARNING IN AND OUT OF THE CLASSROOM: RESULTS FROM THE NATIONAL SURVEY OF STUDENT ENGAGEMENT

INTRODUCTION

The National Survey of Student Engagement (NSSE) is grounded in the proposition that the frequency with which students engage in activities that represent effective educational practice is a good proxy for collegiate quality. It is administered annually, and Boise State University was one of 366 institutions who participated in 2002. As part of the process, a random sample of 700 Boise State freshmen and seniors were selected; 305 or 44% responded to the survey.

Previous reports on the 2002 NSSE results have covered student demographics (RR 2002-07) and student perceptions of institutional climate (RR 2003-01). This report covers the extent to which students reported engaging in a variety of behaviors that research has generally indicated lead to increased and deeper learning. The 22 items included can be divided into three general categories: individual classroom participation and assignments, interactions with other students and/or the community, and interactions with faculty. Under each category the following questions were addressed:

- How frequently do students report the behaviors related to active learning?
- What differences exist between what freshmen report and what seniors report?
- Do Boise State results differ from other urban institutions?¹ From other institutions generally?
- Have changes occurred since the 2000 administration of the survey?²

RESULTS

The following findings are based on data contained in Table 1 (means and standard deviations) and Table 2 (frequencies of each response) shown at the end of this report. Individual classroom assignments and participation are covered by nine items, student interactions by seven items, and faculty interactions by six items.

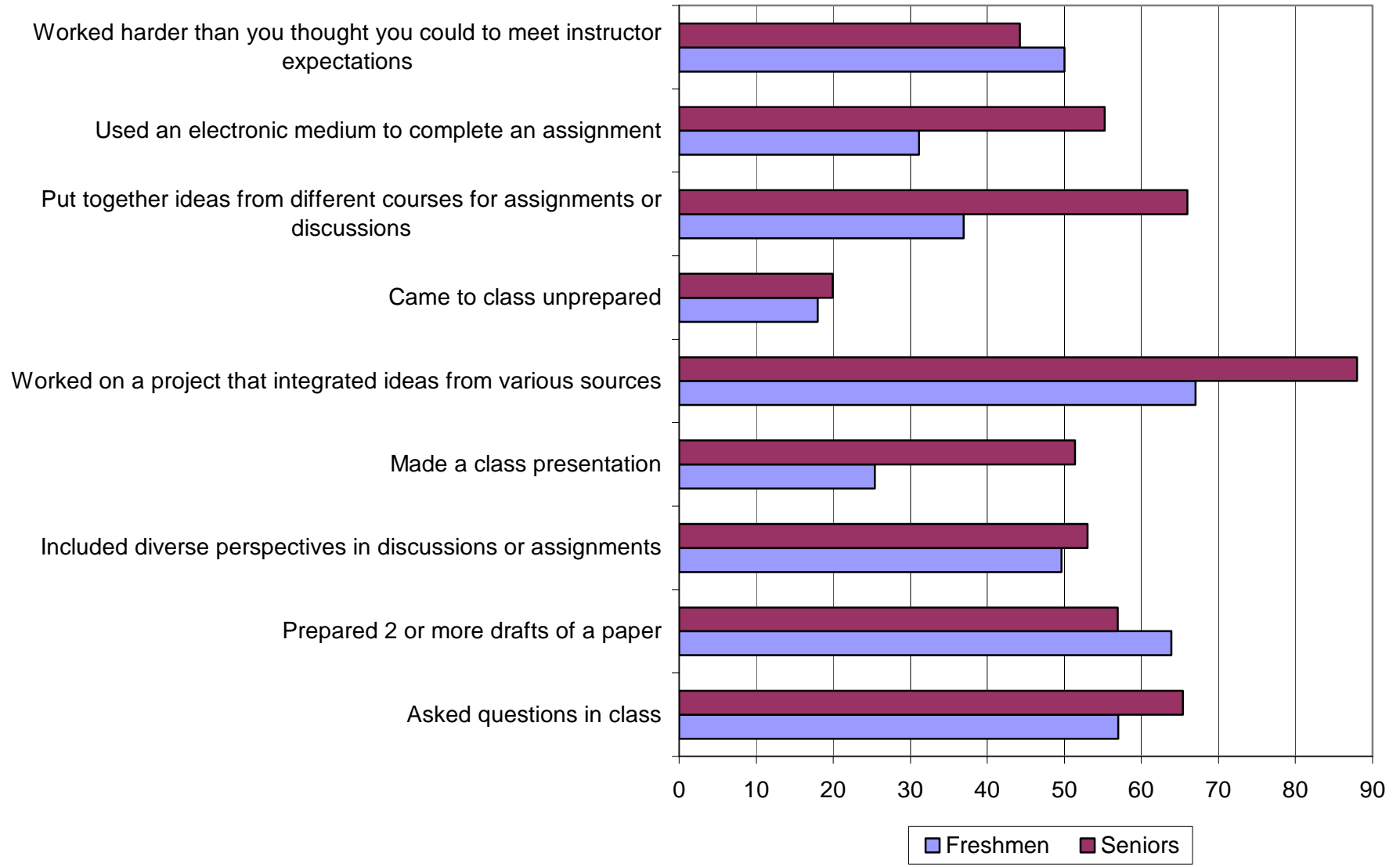
Individual Classroom Assignments and Participation

What students do as they attend class and complete assignments is the first indicator of active learning. On the NSSE, students were most likely to report that they had worked on a paper or project that required integrating ideas or information from various sources (see Figure 1). Almost two-thirds of freshmen and almost 90% of seniors reported engaging in this activity

¹ Throughout this paper, comparisons to other institutions will be considered significant if the effect size is at least $\pm .30$.

² To test for significance across multiple items for both year and class rank (freshmen/senior), MANOVA was employed using an alpha level of .05.

Figure 1. Individual behaviors often or very often engaged in



either often or very often. Other activities that at least 50% of freshmen and seniors reported engaging in often were:

- Asking questions in class or contributing to class discussions
- Preparing two or more drafts of a paper or assignment before turning it in
- Including diverse perspectives (different races, religions, genders, political beliefs) in class discussions or assignments

Clearly, first-year and senior students had different classroom experiences in a variety of areas. Seniors were significantly more likely to have asked questions in class, made a class presentation, worked on a paper or project that required integrating ideas or information from various sources, worked with classmates outside of class to prepare class assignments, put together ideas or concepts from different courses when completing assignments or during class discussions, and used an electronic medium (list-serv, chat group, internet, etc.) to discuss or complete an assignment. Though still not a frequent occurrence, seniors were also more likely to report that they came to class without completing readings or assignments.

Boise State results were similar to those of other participating urban institutions. The only significant difference was found for first-year students' use of an electronic medium to discuss or complete an assignment; Boise State freshmen were much less likely to use an electronic medium compared to freshmen at other urban institutions.

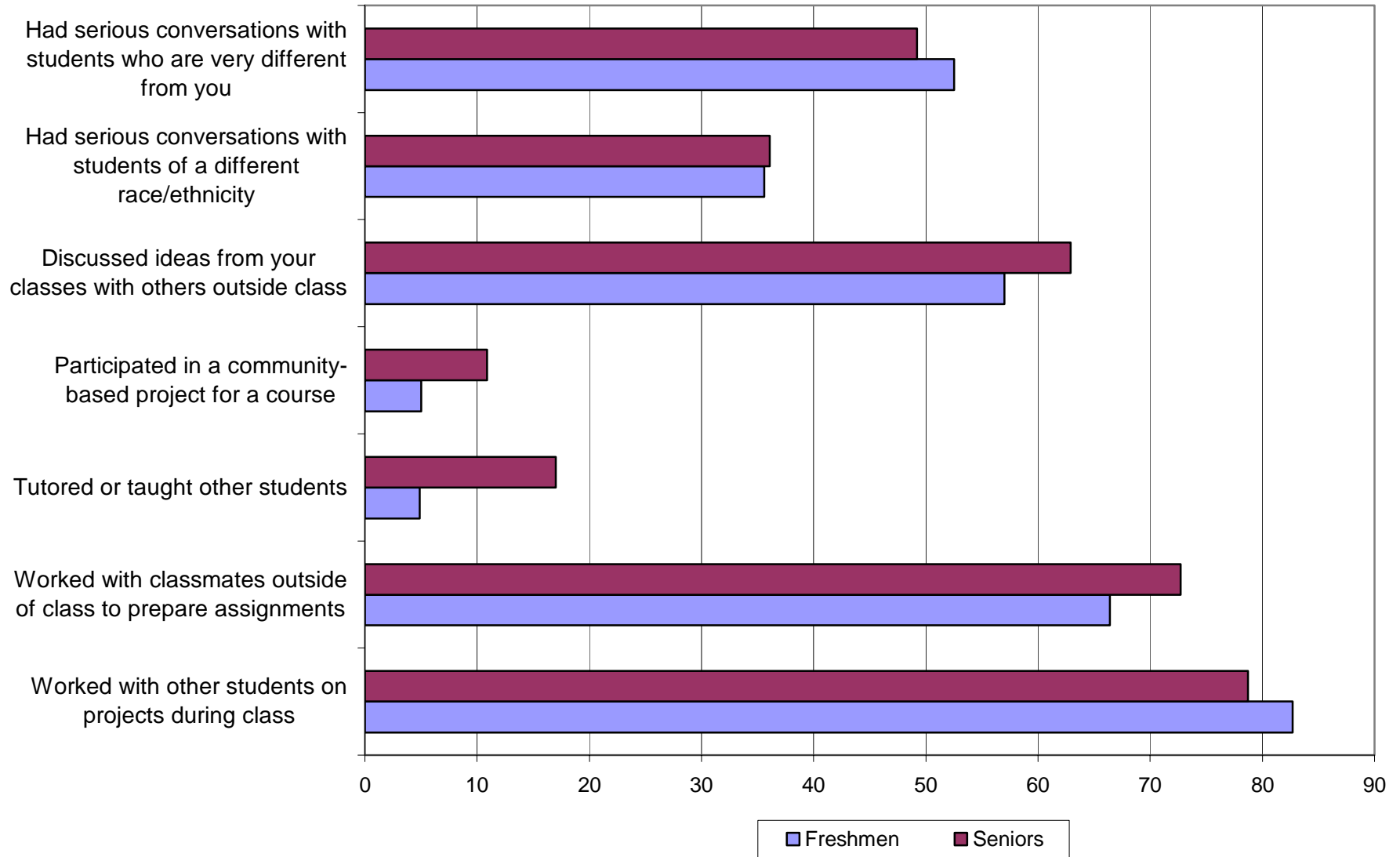
Several changes had occurred since the last administration of the NSSE two years ago. Compared to then, both freshmen and seniors reported a greater frequency of rewriting papers several times before turning them in and using an electronic medium to complete or discuss assignments. However, students also reported coming to class without having read the assignments more frequently compared to 2000.

Interactions with other students and/or the community

Learning is more likely to deepen when students are discussing ideas with others and applying that learning to projects inside and outside the classroom. Results from the NSSE indicated that students are doing much more than sitting passively listening to a lecture. About 80% of both freshmen and seniors reported that they often worked with other students on projects during class. Out-of-class group projects were also common with about two-thirds of freshmen and three-quarters of seniors reporting that this was a frequent occurrence. See Figure 2 for details.

A majority of students also often talked with others about what they were learning. Some of these conversations were with others who were decidedly unlike the student. About 35% reported often having serious conversations with students of a different race or ethnicity, while about half often had conversations with students who differed greatly from them in ways such as religious beliefs, political opinions, or values.

Figure 2. Percentage who often or very often engaged other students or community



Compared to projects and conversations, there was less emphasis on actively “giving back” to others. Only about 5% of first-year students reported that they often participated in a community-based project as part of a regular course, and almost 80% said they had never participated. Figures were slightly higher for seniors with 10% reporting that this was a frequent occurrence, and about 60% indicating that they had never participated in a community-based project. Only about 5% of freshmen also reported that they often tutored or taught fellow students, but the percentage jumped to 17% for seniors.

Statistical tests confirmed that seniors worked on more out-of-class group assignments, tutored more, and participated in more community-based projects. However, seniors and first-year students were similar in their interactions with others, particularly in conversing with other students who were very unlike them.

Compared to other urban institutions, the only area that was significantly different was in the number of serious conversations with students of a different race or ethnicity than their own. While this was most evident for first-year students (effect size=-.31), it was also a factor for seniors (effect size=-.27). Boise State results were similar to those obtained for the 2000 administration.

Interactions with faculty

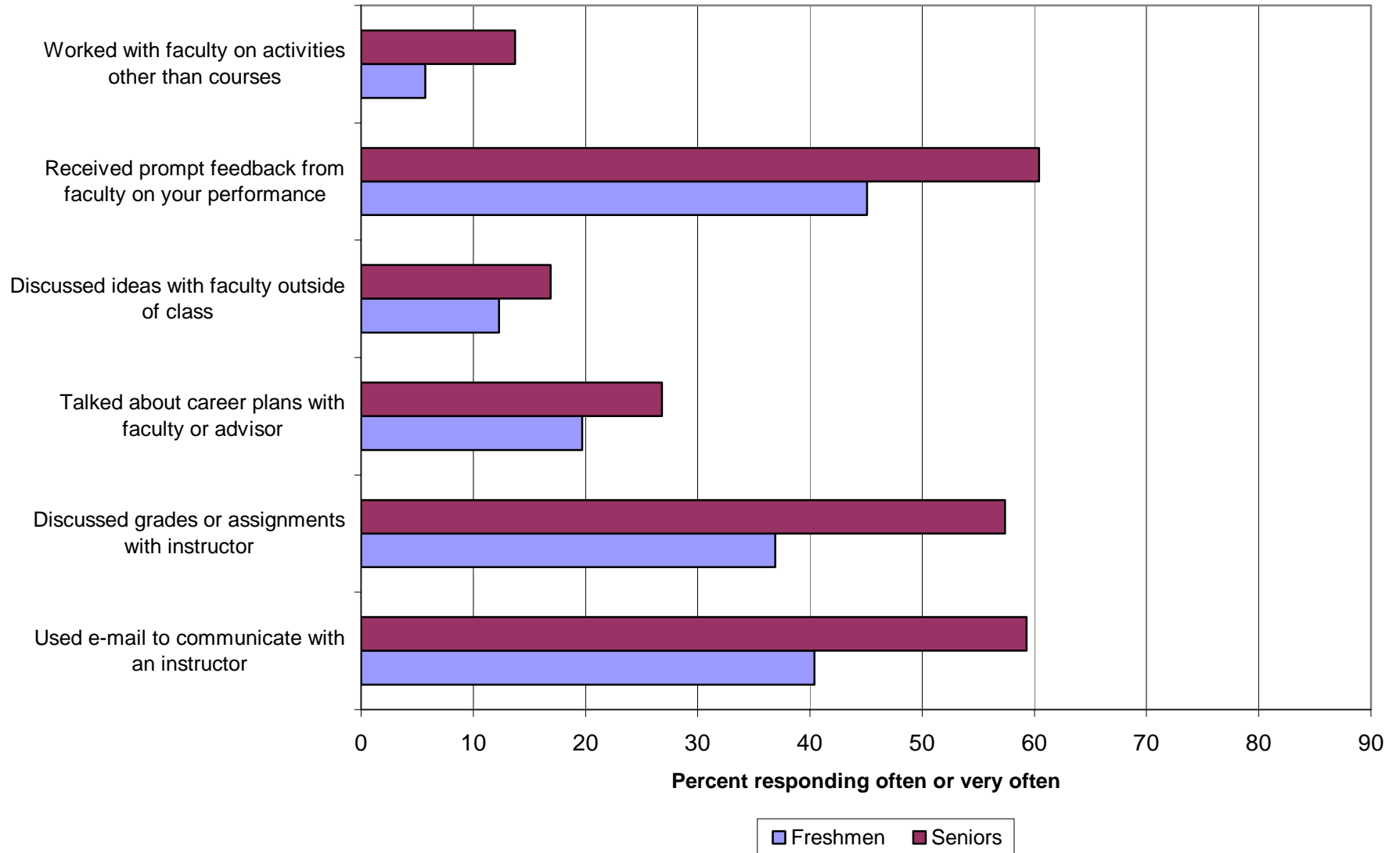
Faculty hold the key to student learning. Prior research at Boise State (Belcheir, 1997) indicated that the number of conversations with faculty was positively related to first semester GPA. NSSE results, however, indicated that seniors have many more interactions with faculty compared to first year students (see Figure 3). These differences were statistically significant for all six items.

Receiving prompt feedback on their performance was the most frequent way that faculty and students communicated. About 60% of seniors and 45% of freshmen thought they received prompt feedback often or very often. Close to 60% of seniors and 40% of freshmen also often discussed their grades or assignments with their instructors and used e-mail to communicate with their instructors.

Both freshmen and seniors were least likely to work with faculty on activities other than courses (e.g., committees, orientation, student life activities, etc.). There was also relatively little interaction reported in the areas of discussing ideas with faculty outside of class and talking about career plans. Only slightly more than a quarter of seniors reported talking often about their career plans with faculty—about the same percentage who indicated that they had never talked about their career plans.

Compared to other urban institutions, Boise State first-year students were less likely to use e-mail to communicate and to talk about their career plans with faculty or other advisors. Senior differences were more modest and did not reach significance.

Figure 3. Percentage who often or very often interacted with faculty



Comparisons to 2000 results for Boise State freshmen showed that use of e-mail to communicate had increased, while the frequency with which first-year students discuss their career plans had declined. For seniors, e-mail use had also increased, as had discussing grades or assignments and working with faculty on other activities outside of class.

SUMMARY AND CONCLUSIONS

The 22 items covered in this report are truly the heart of the National Survey of Student Engagement. These items focus on what students are actually doing that promotes learning within and outside of the classroom. For first-year students, the activities that most often promoted learning were working on papers that integrated ideas or information from various sources, preparing multiple drafts of assignments, asking questions and contributing to class discussions, discussing ideas from their classes with others outside of class, and holding serious conversations with students who are very different from them. Seniors also were most likely to report working on projects/papers that required integration, contributing to class discussions, and discussing ideas from their classes with others. The other most frequently reported activities for seniors were putting together ideas from different courses and using e-mail to communicate with instructors.

Seniors clearly engaged in more active learning behaviors than did first-year students. This is probably due to differing faculty expectations as students move closer to graduation and complete more background courses. Seniors also enjoyed more interactions with faculty, probably due to smaller upper division classes, as well as a variety of other factors related to the more mature/educated student.

Boise State was similar to other urban institutions in most ways. Where differences occurred, they generally were for freshmen. Compared to first-year students at other urban institutions, Boise State freshmen were less likely to use an electronic medium to complete an assignment or to use e-mail to communicate with instructors. Perhaps Boise State freshmen have less access to computers or are simply less comfortable with computers than freshmen on other urban campuses. Possibly Boise State faculty have been slower to adapt their courses, especially core courses, to include computer assignments.

Boise State freshmen were also less likely to talk about career plans with faculty or other advisors compared to freshmen at other urban institutions. The issue of advising had previously emerged in the report on campus climate (RR 2003-01). Results from the prior study indicated that the extent of academic support that students felt they received was most directly related to the quality of academic advising. In addition, quality of faculty relationships and general satisfaction with the institution depended in part on perceived quality of advising. Clearly, advising is an issue that Boise State needs to address further, especially at the first-year level.

Both freshmen and seniors were less likely to hold serious conversations with those of a different race or ethnicity compared to students enrolled at other urban institutions. The lack of interactions among those of different races and ethnicities surely was due in part to the small percentage of the Boise State student body that is a minority. However, additional steps could

be taken within the classroom as well as through co-curricular activities that would help to further develop relationships and understandings among students of different racial and ethnic groups. Students appear to believe that Boise State could be doing more to encourage such interactions (see RR 2003-01). In addition, students who felt that Boise State was doing more to support them socially also felt that more had been done to help them understand students of other ethnic and racial backgrounds.

Boise State made strides in several areas compared to two years ago when the NSSE was last administered. Students were rewriting their papers more before turning them in, using electronic medium more frequently to complete assignments and e-mailing instructors more frequently. In addition, more interaction between senior students and faculty was occurring, particularly in the areas of discussing grades and assignments and working with faculty on activities outside the classroom.

On the down side, more students were coming to class unprepared to participate. Freshmen also reported less discussion of their career plans with faculty or other advisors. Both of these findings are worrisome, especially if confirmed by other information.

Taken as a whole, these results indicate that efforts to change educational practices should first focus on freshmen. Inside the classroom, these efforts might include more early efforts by departments to contact freshmen who are their majors to provide more advising. The general education core courses might be another place to start, including computer assignments and communication with instructors through e-mail. Outside the classroom, ensuring access to academic advising and computers could prove helpful to freshmen.

The next report on the NSSE 2002 results will focus on where students feel they have grown most educationally and personally. This will be followed by a return to the 2000 NSSE data to see how responses on that survey relate to retention and graduation two years later.

Table 1. Means and Standard Deviations for Freshmen and Seniors

Question:	Freshman/First-year student			Senior		
	Mean	Std Deviation	Valid N	Mean	Std Deviation	Valid N
Asked questions in class or contributed to class discussions*	2.74	.87	121	2.93	.83	182
Made a class presentation*	2.03	.78	122	2.61	.78	183
Prepared two or more drafts of a paper or assignment before turning it in	2.88	.94	122	2.73	.98	181
Worked on a paper or project that required integrating ideas or information from various sources*	2.90	.91	121	3.36	.70	183
Included diverse perspectives (different races, religions, genders, political beliefs) in class discussions or assignments	2.54	.95	121	2.66	.93	181
Came to class without completing readings or assignments*	1.94	.70	122	2.09	.75	181
Worked with other students on projects during class	2.52	.77	122	2.60	.82	183
Worked with classmates outside of class to prepare class assignments*	1.89	.75	122	2.70	.87	183
Put together ideas or concepts from different courses when completing assignments or during class discussions*	2.31	.81	122	2.85	.77	182
Tutored or taught other students (paid or voluntary)*	1.36	.63	122	1.73	.91	182
Participated in a community-based project as part of a regular course*	1.27	.61	120	1.55	.82	183
Used an electronic medium (list-serv, chat group, Internet, etc.) to discuss or complete an assignment*	2.10	1.04	122	2.66	1.06	183

Question:	Freshman/First-year student			Senior		
	Mean	Std Deviation	Valid N	Mean	Std Deviation	Valid N
Used e-mail to communicate with an instructor*	2.34	.96	121	2.79	.93	182
Discussed grades or assignments with an instructor*	2.42	.86	122	2.75	.79	183
Talked about career plans with a faculty member or advisor*	1.70	.86	122	2.05	.86	183
Discussed ideas from your readings or classes with faculty members outside of class*	1.62	.74	122	1.87	.78	183
Received prompt feedback from faculty on your academic performance (written or oral)*	2.46	.91	122	2.69	.78	182
Worked harder than you thought you could to meet an instructor's standards or expectations	2.51	.82	122	2.48	.76	183
Worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)*	1.21	.56	122	1.58	.87	182
Discussed ideas from your readings or classes with others outside of class (students, family members, coworkers, etc.)	2.71	.91	121	2.85	.82	183
Had serious conversations with students of a different race or ethnicity than your own	2.27	1.03	121	2.34	.96	183
Had serious conversations with students who are very different from you (religious beliefs, political opinions, or values)	2.61	1.02	122	2.62	.94	183

Table 2. Frequency Counts for Freshmen and Seniors

Question with Response Categories		Class rank			
		First-year student		Senior	
		Count	Percent of total	Count	Percent of total
Asked questions in class or contributed to class discussions	1 Never	7	5.8%	3	1.6%
	2 Sometimes	45	37.2%	60	33.0%
	3 Often	42	34.7%	65	35.7%
	4 Very often	27	22.3%	54	29.7%
Prepared two or more drafts of a paper or assignment before turning it in	1 Never	9	7.4%	19	10.5%
	2 Sometimes	35	28.7%	59	32.6%
	3 Often	40	32.8%	54	29.8%
	4 Very often	38	31.1%	49	27.1%
Included diverse perspectives (different races, religions, genders, political beliefs) in class discussions or assignments	1 Never	17	14.0%	17	9.4%
	2 Sometimes	44	36.4%	68	37.6%
	3 Often	38	31.4%	56	30.9%
	4 Very often	22	18.2%	40	22.1%
Made a class presentation	1 Never	31	25.4%	8	4.4%
	2 Sometimes	60	49.2%	81	44.3%
	3 Often	27	22.1%	68	37.2%
	4 Very often	4	3.3%	26	14.2%
Worked on a paper or project that required integrating ideas or information from various sources	1 Never	8	6.6%	2	1.1%
	2 Sometimes	32	26.4%	18	9.8%
	3 Often	45	37.2%	76	41.5%
	4 Very often	36	29.8%	87	47.5%
Came to class without completing readings or assignments	1 Never	31	25.4%	31	17.1%
	2 Sometimes	69	56.6%	114	63.0%
	3 Often	20	16.4%	24	13.3%
	4 Very often	2	1.6%	12	6.6%
Worked with other students on projects during class	1 Never	9	7.4%	12	6.6%
	2 Sometimes	53	43.4%	76	41.5%
	3 Often	48	39.3%	68	37.2%
	4 Very often	12	9.8%	27	14.8%
Worked with classmates outside of class to prepare class assignments	1 Never	38	31.1%	12	6.6%
	2 Sometimes	62	50.8%	68	37.2%
	3 Often	19	15.6%	65	35.5%
	4 Very often	3	2.5%	38	20.8%
Put together ideas or concepts from different courses when completing assignments or during class discussions	1 Never	17	13.9%	4	2.2%
	2 Sometimes	60	49.2%	58	31.9%
	3 Often	35	28.7%	82	45.1%
	4 Very often	10	8.2%	38	20.9%

Question with Response Categories		Class rank			
		First-year student		Senior	
		Count	Percent of total	Count	Percent of total
Tutored or taught other students (paid or voluntary)	1 Never	86	70.5%	93	51.1%
	2 Sometimes	30	24.6%	58	31.9%
	3 Often	4	3.3%	18	9.9%
	4 Very often	2	1.6%	13	7.1%
Participated in a community-based project as part of a regular course	1 Never	95	79.2%	111	60.7%
	2 Sometimes	19	15.8%	52	28.4%
	3 Often	4	3.3%	11	6.0%
	4 Very often	2	1.7%	9	4.9%
Used an electronic medium (list-serv, chat group, Internet, etc.) to discuss or complete an assignment	1 Never	43	35.2%	31	16.9%
	2 Sometimes	41	33.6%	51	27.9%
	3 Often	21	17.2%	50	27.3%
	4 Very often	17	13.9%	51	27.9%
Used e-mail to communicate with an instructor	1 Never	25	20.7%	14	7.7%
	2 Sometimes	47	38.8%	60	33.0%
	3 Often	32	26.4%	59	32.4%
	4 Very often	17	14.0%	49	26.9%
Discussed grades or assignments with an instructor	1 Never	12	9.8%	4	2.2%
	2 Sometimes	65	53.3%	74	40.4%
	3 Often	27	22.1%	69	37.7%
	4 Very often	18	14.8%	36	19.7%
Talked about career plans with a faculty member or advisor	1 Never	65	53.3%	51	27.9%
	2 Sometimes	33	27.0%	83	45.4%
	3 Often	20	16.4%	37	20.2%
	4 Very often	4	3.3%	12	6.6%
Discussed ideas from your readings or classes with faculty members outside of class	1 Never	63	51.6%	62	33.9%
	2 Sometimes	44	36.1%	90	49.2%
	3 Often	13	10.7%	24	13.1%
	4 Very often	2	1.6%	7	3.8%
Received prompt feedback from faculty on your academic performance (written or oral)	1 Never	17	13.9%	10	5.5%
	2 Sometimes	50	41.0%	62	34.1%
	3 Often	37	30.3%	85	46.7%
	4 Very often	18	14.8%	25	13.7%
Worked harder than you thought you could to meet an instructor's standards or expectations	1 Never	12	9.8%	12	6.6%
	2 Sometimes	49	40.2%	90	49.2%
	3 Often	48	39.3%	63	34.4%
	4 Very often	13	10.7%	18	9.8%
Worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)	1 Never	104	85.2%	113	62.1%
	2 Sometimes	11	9.0%	44	24.2%
	3 Often	6	4.9%	14	7.7%
	4 Very often	1	.8%	11	6.0%
Discussed ideas from	1 Never	10	8.3%	4	2.2%

Question with Response Categories		Class rank			
		First-year student		Senior	
		Count	Percent of total	Count	Percent of total
your readings or classes with others outside of class (students, family members, coworkers, etc.)	2 Sometimes	42	34.7%	64	35.0%
	3 Often	42	34.7%	70	38.3%
	4 Very often	27	22.3%	45	24.6%
Had serious conversations with students of a different race or ethnicity than your own	1 Never	31	25.6%	34	18.6%
	2 Sometimes	47	38.8%	83	45.4%
	3 Often	22	18.2%	36	19.7%
	4 Very often	21	17.4%	30	16.4%
Had serious conversations with students who are very different from you (religious beliefs, political opinions, or values)	1 Never	19	15.6%	18	9.8%
	2 Sometimes	39	32.0%	75	41.0%
	3 Often	35	28.7%	49	26.8%
	4 Very often	29	23.8%	41	22.4%