



Perceived growth in academic and personal skills

Results from the 2014-15 Graduating Student Survey

Abstract

Every fall and spring graduating students are asked to take a survey that asks about their perceived growth in academic and student development areas at the undergraduate level, their perceptions of faculty and their departments, their overall satisfaction with their college experience, and their activities while at Boise State. Results from the 2014-5 graduating student survey are largely similar to graduates' sentiments in the 2013-14 survey: They entered and graduated feeling stronger in their writing abilities, personal ethical decision-making, and their knowledge of cultural differences. Graduates felt they gained the most in their critical inquiry skills, understanding of cultural differences, and their level of engagement in the community. In some areas, the gains between entry and graduation were slightly higher compared to the same areas in the 2013-14 survey. There is little systematic evidence of cross-college differences in perceived gains in discrete academic skills or personal development; some very modest differences exist between 2-3 colleges in skill sets related to subject areas. Despite these differences, the average graduate in all colleges experienced positive gains in each subject, academic and personal skill area.

Overview

For almost twenty years, all students who are scheduled to graduate in fall or spring are asked by the Office of Institutional Research to complete a survey about their perceptions of their Boise State experience. The survey asks undergraduate students to compare their skill level on a series of university learning outcomes at the beginning of their time at Boise State and again at the end. Graduates are asked about their perceptions of faculty, of their courses, and of their department. They indicate which in a series of activities they took part in, whether they transferred courses and if they had difficulty in doing so. Finally, graduates are asked about their satisfaction with their academic experience at Boise State University.

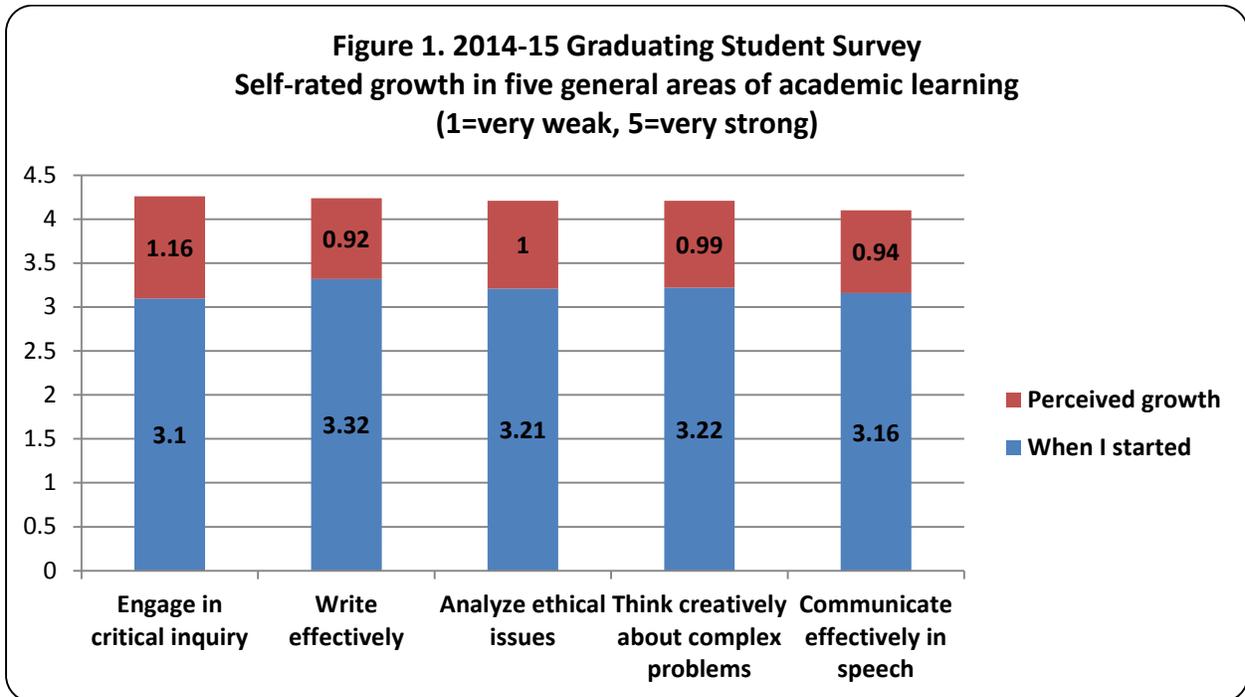
This is a report on findings from the 2014-15 survey. The survey was completed by 37% of graduating students, so it provides a fairly good view of graduates' perceptions. The study will address the following questions:

- How much growth in learning outcomes did undergraduates experience? In what areas did they report growing the most?
- Do results vary depending on whether a graduate was a transfer student?
- Did perceived growth in academic and personal skills differ between graduates of different university colleges?

Results

How much growth did undergraduates experience?

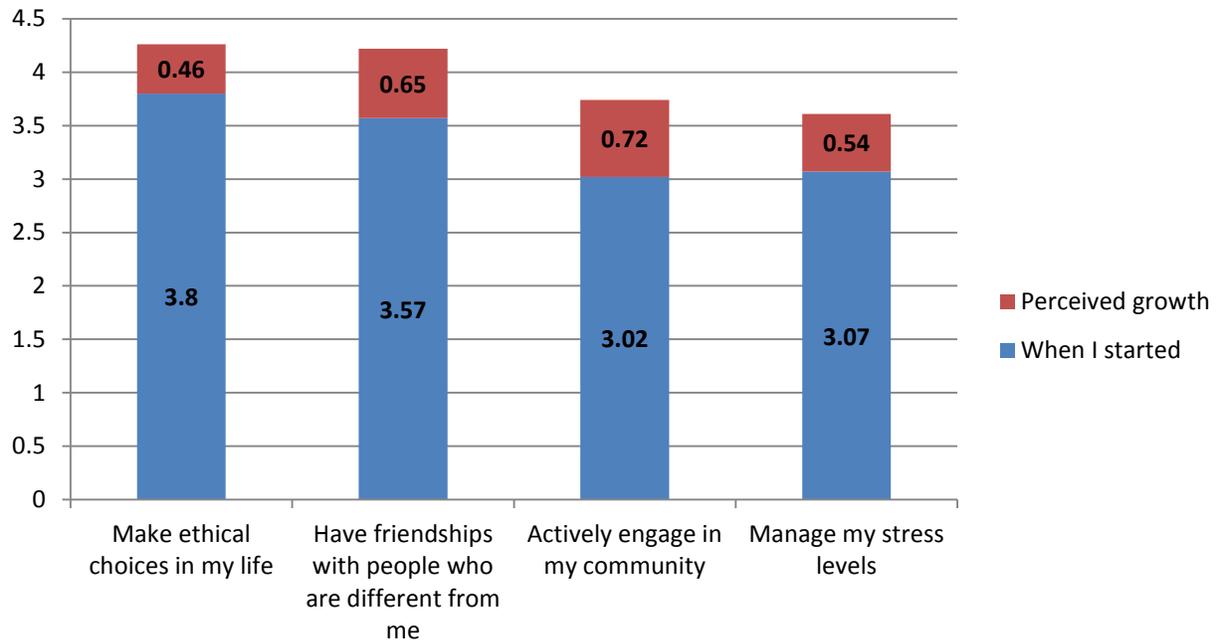
Students obtaining an undergraduate degree were asked to rate themselves on a series of 15 outcomes both on their perceived level of proficiency when they arrived at Boise State and at the point of graduation. Figure 1 displays the results for five general academic proficiencies. In the beginning, undergraduates rated themselves highest in their ability to write effectively and lowest in their ability to engage in critical inquiry. Upon graduation, students rated themselves highest in critical inquiry and lowest in speech communication.



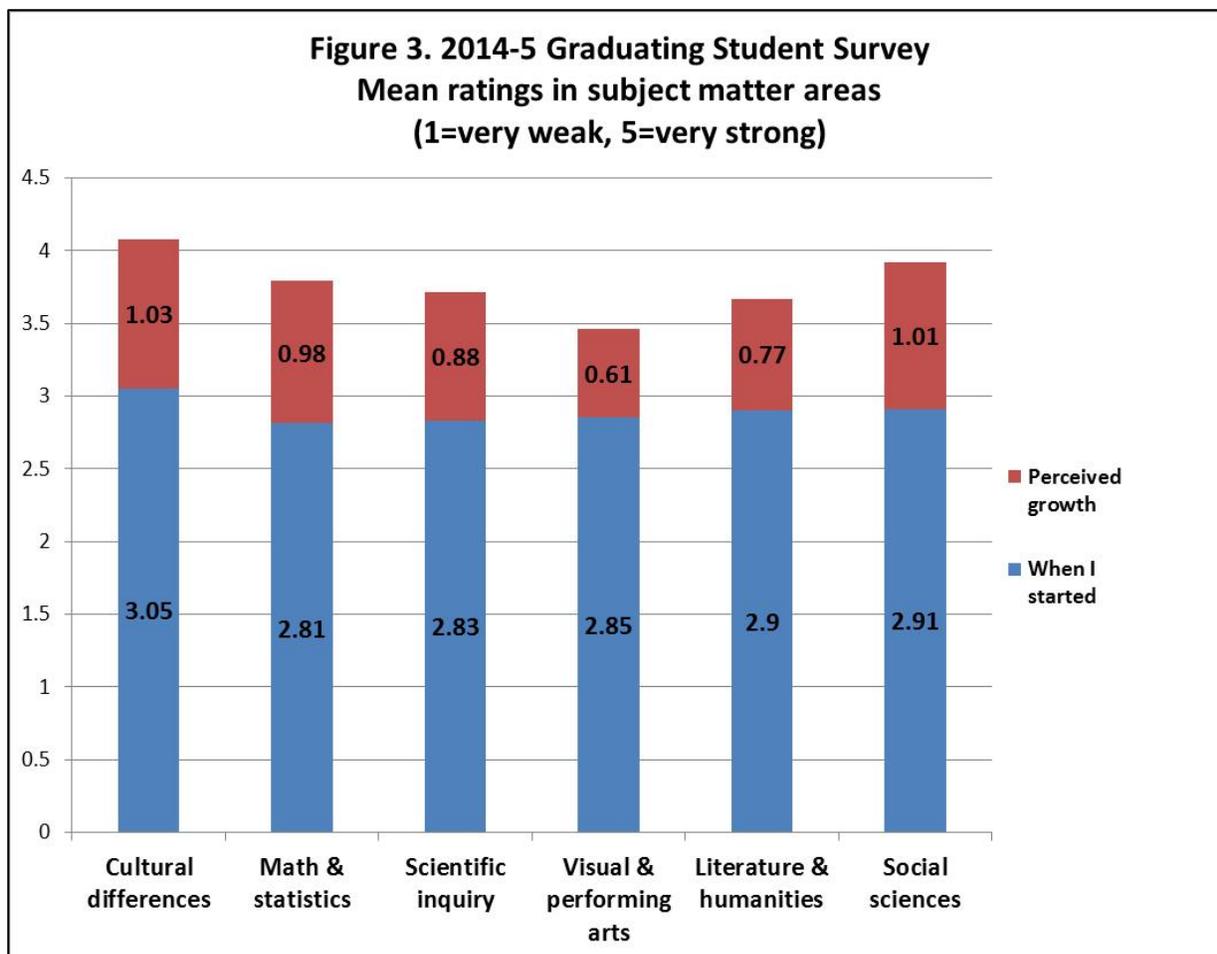
In which areas did students gain the most in perceived competencies? In the academic realm (Figure 1), critical inquiry exhibited the most growth; and ever so slightly more so than in the previous year's survey (2013-14: 1.14). Writing effectiveness exhibited the least change. Overall, all five of the academic measures exhibited slightly higher gains compared to the previous year's graduates.

The survey also asked undergraduates to rate their level of proficiency in a number of areas of student development (Figure 2). At the beginning of their studies, undergraduates rated themselves highest in their ability to make ethical choices in their daily lives and lowest in community engagement and personal stress management. At graduation, daily ethical decision-making maintained the highest ranking, and students reported stress management as the weakest competency. In terms of personal development (Figure 2), students perceived the largest gain in community engagement, and least in their ability to make daily ethical choices.

**Figure 2. 2014-15 Graduating Student Survey
Mean ratings in areas of student development
(1=very weak; 5=very strong)**



Finally, undergraduates were asked to rate their proficiency levels in six subject matter areas. As shown in Figure 3, students initially felt they were weakest in math and statistics, scientific inquiry, and visual/performing arts. At graduation, visual/performing arts and scientific inquiry remained among the bottom three weakest skill sets; literature and the humanities slipped from third to fifth place in the rankings from entry to graduation. Graduates perceived the most growth in knowledge of cultural differences and in the use of social sciences to explain and evaluate human behavior and institutions. The pattern of the gains across these areas is reflective of the 2013-14 survey, though in the cases of math/statistics (2013-14: .90) and scientific inquiry (2013-14: .83), there is evidence of modest increases in perceived gains compared to the 2013-14 survey group.



Are there meaningful differences between transfer and non-transfer graduates?¹

Looking across the 15 items (Table 1), it is clear that transfer and non-transfer undergraduate students differ, but these differences depend on the measure consulted. When looking back at how they felt when they *began* at Boise State, transfer students rated themselves significantly higher than non-transfer students in 10 areas ($p < .05$), primarily concentrated in subject areas and personal development. These differences are modest in size, often no more than .10-.20 points. A notable exception is cultural differences, which transfer students, on average, rated themselves nearly one-third of a point higher than non-transfers.

Non-transfer students reported significantly greater perceived *gains* for 7 of the items, primarily in the academic skills and subject areas. The actual magnitude of the differences between groups is slightly higher, ranging from .15-.25 points. As a result, there was not a single *statistically* significant difference between the two groups *at graduation*. In absolute terms, at graduation, the average transfer student rated her/himself higher on seven areas, and the average non-transfer student rated her/himself higher in six areas, with the two groups exactly the same in written communication and community engagement.

¹ Transfer students defined as those who previously attended another higher education institution (Pyramid cohort codes of BACHXFER and ASSOCXFER). Graduates who had obtained dual enrollment credit or Advanced Placement/International Baccalaureate transfer credits are included in the non-transfer category.

Table 1. Differences between transfer and non-transfer students.

Skills	Who was significantly stronger?		
	<i>Started</i>	<i>Growth</i>	<i>At graduation</i>
Effective writing	-	-	-
Speech communication	-	Non-transfer	-
Critical inquiry	Transfer	-	-
Complex problems	-	Non-transfer	-
Ethical issues	-	-	-
Cultural differences	Transfer	Non-transfer	-
Subject areas			
Math/statistics	-	-	-
Scientific inquiry	Transfer	-	-
Visual/performing arts	Transfer	Non-transfer	-
Literature/humanities	Transfer	Non-transfer	-
Social sciences	Transfer	Non-transfer	-
Personal development			
Engage in community	Transfer	-	-
Manage stress	Transfer	-	-
Ethical choices	Transfer	-	-
Diverse friendships	Transfer	Non-transfer	-

Note. Two-tailed *t*-tests, all $p < .05$.

The survey also asked graduates to indicate whether or not they had participated in any number of activities (e.g., participate in clubs) or had particular personal responsibilities (e.g., taking time off to fulfill a military obligation). Compared to non-transfer graduates, transfer students were statistically *less* likely to engage in campus-based community service, participate in student clubs, work or live on campus and *more* likely to have responsibilities for children. The two groups were not significantly distinct in working full time or meeting with an advisor at least every year.

There is little evidence that perceived growth in academic or personal skills differs between these two groups when it comes to their *actual* participation in campus life as reported by the graduates themselves. However, there are two notable exceptions among undergraduate transfer students. First, a greater proportion of those who reported participating in campus-based community service (85.6%) felt they were “strong” or “very strong” in speech communication at graduation compared to those transfer students who had not participated (76.4%, $p = .014$). Second, a greater percentage of those who participated in a research, service or creative project (98.2%) reported feeling “strong” or “very strong” in critical inquiry skills at graduation compared to transfer graduates who had not done so (90.2%, $p < .01$).

Coded responses to open-ended questions pertaining to factors that might help or impede learning were also examined. Graduates were asked about any out-of-class services or experiences that helped or hindered progress toward graduation.

Among undergraduate transfer graduates, 121 chose to comment. Fifty-five expressed positive sentiment regarding a variety of factors. One of the most common was praise for service-learning, internships, student clubs, volunteering and other experiences held largely outside of the classroom (21 of these were applied experiences, while 12 were clubs, fraternities and degree-related organizations). For example:

I was heavily involved in Greek life that seriously helped my progress toward my degree. There were always peers in my classes to study with and get advice about my major or specific classes. Leadership opportunities geared toward both Greeks and non-Greeks enabled me to be more vocal in the goals and opinions inside and outside of the classroom. Volunteering in

Boise with organizations like Relay for Life and Girls on the Run provided experiences that directly correlated with class projects and insight.

I was a part of Prssa for 5 semesters. I also had a total of 4 internships. The experience I gained from those activities made the learning a lot easier because I could see how it was applied into my career path.

Others cited a variety of faculty and—occasionally—advisors who kept them motivated in their programs. Although non-transfer graduates expressed a similar pattern of positive sentiment regarding Boise State, fewer of these graduates mentioned applied/other work or club activities (22% v. 29%).

Did the perceived gains vary by college?

While it is ideal that undergraduates of all majors would report gains across all subject areas, a more likely scenario is that students will perceive relatively stronger gains when such gains might reasonably resonate with the college from which they are graduating. For example, a student graduating from Arts & Sciences might be expected to report stronger gains in understanding cultural differences compared to students in Engineering, while Engineering graduates could be expected to report greater gains in scientific inquiry.

Among the six colleges, there were significant differences overall in the mean perceived gains within each subject matter area ($p < .001$), with the exception of visual and performing arts. As Table 1 shows, no college's graduates reported higher gains compared to other colleges' graduates. Post-hoc tests show Engineering graduates perceived significantly less growth in understanding cultural differences compared to all of the remaining colleges except Education ($p < .001$). However, no other college graduate set had significantly greater/lesser gains compared to each other.

In terms of math and statistics, both Business/Economics and Engineering graduates reported significantly *stronger* gains compared to Arts/Sciences and Health Sciences graduates ($p \leq .001$); while perceived gains in scientific inquiry were stronger among graduates from Engineering ($p < .001$) compared to Arts/Sciences, Business/Economics and Public Service ($p < .05$). As might be expected, Arts/Sciences graduates reported stronger gains in literature and the humanities compared to Engineering ($p = .001$), Business/Economics and Health Sciences (both $p < .05$) graduates. Engineering graduates also reported smaller gains in literature/humanities relative to Public Service graduates ($p < .01$). Again, across these areas other colleges had neither significantly smaller nor larger gains compared to other colleges' graduates.

Finally, given the number of social science-related departments in Arts & Sciences, it is perhaps no surprise that graduates from this college reported larger gains in application of social science concepts compared to Business/Economics and Engineering ($p < .01$ and $p < .001$, respectively). Engineering graduates reported smaller gains compared to each other college graduate set ($p < .05$). None of the remaining pairs of graduate sets were significantly different from one another. Note, however, that in absolute terms, Public Service graduates perceived the greatest gains in the social sciences (+1.33 points) and cultural (+1.19) areas.

While there is some variability in the perceived gains across some of the colleges, it is important to emphasize that the average undergraduate in *each* college reported gains in *each* subject area. Thus, the average undergraduate was positive about gaining a diversity of subject matter skills regardless of the college of her/his major. None of this analysis should be construed to mean that any given college is exceptionally succeeding or failing in this domain.

Table 1. Mean perceived change in subject area skills by Boise State college. *Source:* 2014-15 Graduating Student Survey.

(Original scale is 1-5 where 1=very weak, 5=very strong.)

College	<i>Cultural differences</i>	<i>Math & Statistics</i>	<i>Scientific inquiry</i>	<i>Visual & performing arts</i>	<i>Literature</i>	<i>Apply social sciences</i>
Arts/Sciences	1.15	.81	.82	.66	.90	1.14
Business/ Economics	1.10	1.31	.72	.56	.67	.86
Education	.91	1.00	.89	.58	.83	1.03
Engineering	.48	1.44	1.28	.46	.42	.48
Health	.99	.86	1.01	.61	.69	1.00
Public Service	1.19	1.11	.83	.69	.94	1.33

Summary and Conclusion

Graduates provide a perspective on Boise State that cannot be obtained in any other way. For this reason, every fall and spring graduating students are asked to take a survey that covers their perceived growth in academic areas at the undergraduate level, their perception of faculty and their departments, and their activities while at Boise State. This report focused on perceived gains in the areas of subject area, academic skills and personal development—as well as whether these perceived gains between transfer and non-transfer students as well as those graduates from across different university colleges.

Boise State is committed to the development of academic, personal and subject matter expertise among its students. At the point of graduation, students reporting making the greatest gains in the area of critical inquiry, active engagement with the community; and having diverse friendships, and knowledge of cultural differences and the application of social sciences to explain and evaluate human behavior/institutions. Transfer graduates reported entering Boise State feeling stronger than non-transfer graduates with regard to 10 student skills, while non-transfers perceived greater gain over time in seven skills, with the result being statistical equity across all areas at graduation. Participation in university-based community service and research/service/creative projects seemed particularly beneficial for transfer students.

Finally, the average graduate in each college felt s/he gained skills, with Engineering showing relative strength in math/science and scientific inquiry, Arts/Sciences displaying relative strength in literature/humanities and the social sciences, and Business/Economics in speech communication.

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