

# Institutional Analysis, Assessment & Reporting

## NSSE Outcomes Comparisons by Year and Class Level For 2002, 2004, and 2006 Administrations Adjusted for full-time enrollment, gender, and age Research Report 2007-03

*Marcia J. Belcheir, PhD.*  
*Associate Director*

*Boise State University*  
*February, 2007*

### Summary of Findings

An analysis of National Survey of Student Engagement (NSSE) results for the last three administrations indicates that Boise State University has had an impact on its students across a variety of outcomes as they progress from freshman to senior status. In addition, these impacts have generally been greater in more recent years compared to 2002.

Across all the outcomes, there was a statistically significant effect when freshmen and seniors were compared. Follow-up analyses indicated that seniors felt that BSU had helped them more in the following areas compared to freshmen:

- Acquiring job or work-related knowledge and skills
- Thinking critically and analytically
- Analyzing quantitative problems
- Using computing and information technology
- Working effectively with others
- Voting in elections
- Learning effectively in their own
- Solving complex real-world problems
- Contributing to the welfare of the community

No significant differences were found for the following outcomes: acquiring a broad general education, writing clearly and effectively, speaking clearly and effectively, understanding yourself, understanding people of other racial and ethnic backgrounds, and developing a personal code of values.

A similar overall effect was found for the comparisons by year. Follow-up analyses indicated that responses were different for six outcomes. With one exception (understanding yourself), students reported more impact of the institution on the outcome in recent years compared to 2002. The outcomes that had significant differences by year were:

- Speaking clearly and effectively
- Analyzing quantitative problems
- Using computing and information technology
- Voting in elections
- Understanding yourself
- Contributing to the welfare of the community

Freshman vs. Seniors Results

Estimates

Dependent Variable				Mean	Std. Error	95% Confidence Interval	
						Lower Bound	Upper Bound
Institutional contribution: Acquiring a broad general education	FROSH	Senior		3.023(a)	.031	2.961	3.084
		Freshman		2.954(a)	.039	2.877	3.031
Institutional contribution: Acquiring job or work-related knowledge and skills	FROSH	Senior		2.841(a)	.038	2.767	2.916
		Freshman		2.364(a)	.048	2.271	2.458
Institutional contribution: Writing clearly and effectively	FROSH	Senior		2.942(a)	.034	2.875	3.008
		Freshman		2.878(a)	.043	2.794	2.962
Institutional contribution: Speaking clearly and effectively	FROSH	Senior		2.727(a)	.036	2.657	2.798
		Freshman		2.683(a)	.045	2.595	2.771
Institutional contribution: Thinking critically and analytically	FROSH	Senior		3.123(a)	.032	3.060	3.187
		Freshman		2.956(a)	.041	2.876	3.036
Institutional contribution: Analyzing quantitative problems	FROSH	Senior		2.766(a)	.036	2.695	2.837
		Freshman		2.441(a)	.045	2.352	2.530
Institutional contribution: Using computing and information technology	FROSH	Senior		3.023(a)	.037	2.951	3.095
		Freshman		2.464(a)	.046	2.375	2.554
Institutional contribution: Working effectively with others	FROSH	Senior		2.896(a)	.035	2.826	2.965
		Freshman		2.593(a)	.044	2.506	2.679
Institutional contribution: Voting in local, state (provincial), or national (federal) elections	FROSH	Senior		1.805(a)	.038	1.730	1.880
		Freshman		1.654(a)	.048	1.559	1.749
Institutional contribution: Learning effectively on your own	FROSH	Senior		2.862(a)	.037	2.789	2.935
		Freshman		2.647(a)	.047	2.555	2.739
Institutional contribution: Understanding yourself	FROSH	Senior		2.474(a)	.041	2.395	2.554
		Freshman		2.469(a)	.051	2.369	2.569

				Mean	Std. Error	95% Confidence Interval	
						Lower Bound	Upper Bound
Institutional contribution: Understanding people of other racial and ethnic backgrounds	FROSH	Senior	2.257(a)	.039	2.181	2.334	
		Freshman	2.288(a)	.049	2.192	2.384	
Institutional contribution: Solving complex real-world problems	FROSH	Senior	2.422(a)	.037	2.349	2.494	
		Freshman	2.248(a)	.046	2.157	2.339	
Institutional contribution: Developing a personal code of values and ethics	FROSH	Senior	2.261(a)	.042	2.179	2.343	
		Freshman	2.191(a)	.052	2.089	2.294	
Institutional contribution: Contributing to the welfare of your community	FROSH	Senior	2.126(a)	.038	2.052	2.200	
		Freshman	1.929(a)	.047	1.836	2.022	

a Covariates appearing in the model are evaluated at the following values:  
 FT\_ENRL = .8022, MALE = .3607, Age = 27.86.

#### Univariate Tests

			Sum of Squares	df	Mean Square	F	Sig.
Dependent Variable	Institutional contribution: Acquiring a broad general education	Contrast	1.056	1	1.056	1.801	.180
		Error	750.285	1280	.586		
	Institutional contribution: Acquiring job or work-related knowledge and skills	Contrast	50.380	1	50.380	58.776	.000
		Error	1097.168	1280	.857		
	Institutional contribution: Writing clearly and effectively	Contrast	.906	1	.906	1.319	.251
		Error	879.039	1280	.687		
	Institutional contribution: Speaking clearly and effectively	Contrast	.436	1	.436	.570	.450
		Error	979.098	1280	.765		
	Institutional contribution: Thinking critically and analytically	Contrast	6.218	1	6.218	10.021	.002
		Error	794.291	1280	.621		
	Institutional contribution: Analyzing quantitative problems	Contrast	23.462	1	23.462	30.360	.000
		Error	989.158	1280	.773		
	Institutional contribution: Using computing and	Contrast	69.210	1	69.210	87.263	.000
		Error	1015.194	1280	.793		

		Sum of Squares	df	Mean Square	F	Sig.
<b>information technology</b>						
<b>Institutional contribution: Working effectively with others</b>	<b>Contrast</b>	<b>20.364</b>	<b>1</b>	<b>20.364</b>	<b>27.560</b>	<b>.000</b>
	<b>Error</b>	<b>945.751</b>	<b>1280</b>	<b>.739</b>		
<b>Institutional contribution: Voting in local, state (provincial), or national (federal) elections</b>	<b>Contrast</b>	<b>5.047</b>	<b>1</b>	<b>5.047</b>	<b>5.750</b>	<b>.017</b>
	<b>Error</b>	<b>1123.637</b>	<b>1280</b>	<b>.878</b>		
<b>Institutional contribution: Learning effectively on your own</b>	<b>Contrast</b>	<b>10.231</b>	<b>1</b>	<b>10.231</b>	<b>12.339</b>	<b>.000</b>
	<b>Error</b>	<b>1061.253</b>	<b>1280</b>	<b>.829</b>		
<b>Institutional contribution: Understanding yourself</b>	<b>Contrast</b>	<b>.006</b>	<b>1</b>	<b>.006</b>	<b>.006</b>	<b>.937</b>
	<b>Error</b>	<b>1251.236</b>	<b>1280</b>	<b>.978</b>		
<b>Institutional contribution: Understanding people of other racial and ethnic backgrounds</b>	<b>Contrast</b>	<b>.205</b>	<b>1</b>	<b>.205</b>	<b>.228</b>	<b>.633</b>
	<b>Error</b>	<b>1152.901</b>	<b>1280</b>	<b>.901</b>		
<b>Institutional contribution: Solving complex real-world problems</b>	<b>Contrast</b>	<b>6.677</b>	<b>1</b>	<b>6.677</b>	<b>8.223</b>	<b>.004</b>
	<b>Error</b>	<b>1039.363</b>	<b>1280</b>	<b>.812</b>		
<b>Institutional contribution: Developing a personal code of values and ethics</b>	<b>Contrast</b>	<b>1.084</b>	<b>1</b>	<b>1.084</b>	<b>1.051</b>	<b>.305</b>
	<b>Error</b>	<b>1319.719</b>	<b>1280</b>	<b>1.031</b>		
<b>Institutional contribution: Contributing to the welfare of your community</b>	<b>Contrast</b>	<b>8.611</b>	<b>1</b>	<b>8.611</b>	<b>10.140</b>	<b>.001</b>
	<b>Error</b>	<b>1086.902</b>	<b>1280</b>	<b>.849</b>		

The F tests the effect of FROSH. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

Year by year comparisons

Estimates

				Mean	Std. Error	95% Confidence Interval	
						Lower Bound	Upper Bound
Dependent Variable	Institutional contribution: Acquiring a broad general education	year	2002	2.923(a)	.047	2.831	3.015
			2004	3.000(a)	.050	2.902	3.098
			2006	3.042(a)	.029	2.985	3.099
	Institutional contribution: Acquiring job or work-related knowledge and skills	year	2002	2.590(a)	.057	2.479	2.701
			2004	2.600(a)	.060	2.482	2.719
			2006	2.618(a)	.035	2.549	2.687
	Institutional contribution: Writing clearly and effectively	year	2002	2.827(a)	.051	2.727	2.926
			2004	2.998(a)	.054	2.893	3.104
			2006	2.904(a)	.031	2.843	2.966
	Institutional contribution: Speaking clearly and effectively	year	2002	2.587(a)	.053	2.482	2.692
			2004	2.815(a)	.057	2.703	2.927
			2006	2.713(a)	.033	2.649	2.778
	Institutional contribution: Thinking critically and analytically	year	2002	3.007(a)	.048	2.913	3.102
			2004	3.057(a)	.051	2.956	3.157
			2006	3.055(a)	.030	2.997	3.114
	Institutional contribution: Analyzing quantitative problems	year	2002	2.546(a)	.054	2.441	2.651
			2004	2.528(a)	.057	2.416	2.640
			2006	2.737(a)	.033	2.672	2.802
	Institutional contribution: Using computing and information technology	year	2002	2.492(a)	.054	2.385	2.599
			2004	2.852(a)	.058	2.739	2.966
			2006	2.887(a)	.034	2.821	2.953
Institutional contribution: Working effectively with others	year	2002	2.708(a)	.053	2.605	2.812	
		2004	2.713(a)	.056	2.603	2.822	
		2006	2.811(a)	.033	2.748	2.875	
Institutional contribution: Voting in local, state (provincial), or national (federal) elections	year	2002	1.626(a)	.057	1.514	1.738	
		2004	1.737(a)	.061	1.618	1.857	
		2006	1.825(a)	.035	1.756	1.895	
Institutional contribution: Learning effectively on your own	year	2002	2.795(a)	.056	2.686	2.904	
		2004	2.764(a)	.059	2.648	2.880	
		2006	2.705(a)	.034	2.637	2.772	
Institutional	year	2002	2.592(a)	.060	2.473	2.710	

			Mean	Std. Error	95% Confidence Interval		
					Lower Bound	Upper Bound	
	contribution: Understanding yourself	2004	2.388(a)	.064	2.262	2.514	
		2006	2.435(a)	.037	2.361	2.508	
	Institutional contribution: Understanding people of other racial and ethnic backgrounds	year	2002	2.249(a)	.058	2.135	2.363
		2004	2.302(a)	.062	2.180	2.423	
		2006	2.267(a)	.036	2.197	2.338	
	Institutional contribution: Solving complex real-world problems	year	2002	2.296(a)	.055	2.188	2.404
		2004	2.346(a)	.059	2.231	2.461	
		2006	2.363(a)	.034	2.296	2.430	
	Institutional contribution: Developing a personal code of values and ethics	year	2002	2.192(a)	.062	2.071	2.314
		2004	2.248(a)	.066	2.118	2.378	
		2006	2.238(a)	.038	2.162	2.313	
	Institutional contribution: Contributing to the welfare of your community	year	2002	1.898(a)	.056	1.788	2.009
		2004	2.004(a)	.060	1.886	2.122	
		2006	2.179(a)	.035	2.111	2.248	

a Covariates appearing in the model are evaluated at the following values: FT\_ENRL = .8022, MALE = .3607, Age = 27.86.

#### Univariate Tests

			Sum of Squares	df	Mean Square	F	Sig.
Dependent Variable	Institutional contribution: Acquiring a broad general education	Contrast	2.748	2	1.374	2.344	.096
		Error	750.285	1280	.586		
	Institutional contribution: Acquiring job or work-related knowledge and skills	Contrast	.172	2	.086	.100	.904
		Error	1097.168	1280	.857		
	Institutional contribution: Writing clearly and effectively	Contrast	3.685	2	1.843	2.683	.069
		Error	879.039	1280	.687		
	Institutional contribution: Speaking clearly and effectively	Contrast	6.593	2	3.297	4.310	.014
		Error	979.098	1280	.765		
	Institutional contribution: Thinking critically and analytically	Contrast	.487	2	.244	.392	.675
		Error	794.291	1280	.621		
	Institutional	Contrast	11.660	2	5.830	7.544	.001

		Sum of Squares	df	Mean Square	F	Sig.
contribution: Analyzing quantitative problems	Error	989.158	1280	.773		
	Institutional contribution: Using computing and information technology	31.020	2	15.510	19.556	.000
Institutional contribution: Working effectively with others	Error	1015.194	1280	.793		
	Institutional contribution: Voting in local, state (provincial), or national (federal) elections	2.973	2	1.487	2.012	.134
Institutional contribution: Learning effectively on your own	Error	945.751	1280	.739		
	Institutional contribution: Understanding yourself	7.830	2	3.915	4.460	.012
Institutional contribution: Understanding people of other racial and ethnic backgrounds	Error	1123.637	1280	.878		
	Institutional contribution: Solving complex real-world problems	1.780	2	.890	1.074	.342
Institutional contribution: Developing a personal code of values and ethics	Error	1061.253	1280	.829		
	Institutional contribution: Contributing to the welfare of your community	6.281	2	3.141	3.213	.041
Institutional contribution: Understanding people of other racial and ethnic backgrounds	Error	1251.236	1280	.978		
	Institutional contribution: Solving complex real-world problems	.362	2	.181	.201	.818
Institutional contribution: Developing a personal code of values and ethics	Error	1152.901	1280	.901		
	Institutional contribution: Contributing to the welfare of your community	.879	2	.439	.541	.582
Institutional contribution: Contributing to the welfare of your community	Error	1039.363	1280	.812		
	Institutional contribution: Solving complex real-world problems	.492	2	.246	.239	.788
Institutional contribution: Developing a personal code of values and ethics	Error	1319.719	1280	1.031		
	Institutional contribution: Contributing to the welfare of your community	16.967	2	8.483	9.991	.000
Institutional contribution: Solving complex real-world problems	Error	1086.902	1280	.849		
	Institutional contribution: Developing a personal code of values and ethics					

The F tests the effect of year. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.