

## QI Summary Report – National Survey of Student Engagement (NSSE) 2014-15

The National Survey of Student Engagement (NSSE) is one of the most widely used surveys of undergraduates in the country for more than 15 years. NSSE reports that over 5 million students from 1600 colleges and universities have completed the survey since its inception in 2000. In 2015, 587 colleges and universities administered the survey on their campuses.

### Background

Specifically, the NSSE is designed to determine the degree to which students are engaged in activities that are considered “good” or “high impact” practices, as determined by empirical research. The assumption is that measuring self-reported participation in such activities can predict student cognitive and personal development – i.e. the more engagement in or exposure to empirically vetted practices in college, the greater the students’ intellectual and personal development. Challenges to the validity of NSSE as a viable proxy for determining student cognitive development are grounded in the question of whether or not exposure to good practices in undergraduate education can predict important educational outcomes.

In an independent study to better understand whether or not NSSE results can be good predictors of cognitive and personal development, the Wabash National Study of Liberal Arts Education (WNSLAE) coupled NSSE measures with direct measures of learning in each of the cognitive areas measured on the NSSE. In an intensive study of 19 institutions, they found that “institution-level NSSE benchmark scores had a significant overall positive association with liberal arts outcomes at the end of the first year of college, independent of differences across the institutions” (mean value of all partial correlations = .34,  $p < .001$ )

The WNSLAE findings support the claim that the NSSE results regarding educational practices and student experiences are good proxy measures for growth in important educational outcomes such as critical thinking, moral reasoning, intercultural effectiveness, personal well-being, and a positive orientation toward literacy activities. Even with controls for the average institutional-level precollege score, there were discernible differences among institutions in the average end-of-first-year educational outcomes that were significantly and positively linked to average institutional scores on the NSSE benchmarks. Findings suggest that institutions using the NSSE can have reasonable confidence that the benchmark scales do, in fact, measure exposure to experiences that predict student progress on important educational outcomes, independent of the level on these outcomes at which an institution’s student body enters college.

Ultimately, the Wabash study suggests that increases in institutional NSSE scores can be considered as reasonable proxies for student growth and learning across a range of important educational outcomes. The research implies that focusing on the “process” of

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undergraduate education as measured by NSSE benchmarks will likely have implications for the “product.” As such, the researchers suggest that striving to engage students in effective educational practices may be the best approach to achieving improved institutional effectiveness and increased student learning and development.

**NSSE Administration at NMSU**

Every three years NMSU administers the NSSE to first year freshman and seniors, with spring 2014 being the most recent administration. In addition to the general survey, students also completed a topical module (supplemental survey) about their experiences with writing. The response rate was 30% for first-year freshmen (n=634), and 35% for seniors (n=1,177). Results were provided in aggregate descriptive data, and contrasted with a group of comparison institutions.

**NMSU Results – General Survey**

Results from the general survey related to student writing, and therefore NMSU’s Quality Initiative (QI), are in Table 1.

*Table 1 – General Survey questions related to writing: No statistically significant differences emerged between NMSU students and students at comparable institutions.*

Survey Question	NMSU		Comparison Institutions	
	First Year Freshmen	Seniors	First Year Freshmen	Seniors
Average hours per week on course reading	5.6	7.3	6.1	7.4
Average number of pages of assigned writing (for the year)	49.4	66.8	39.3	65.4
Perceived gains among seniors in writing clearly and effectively – answers including “very much” or “quite a bit”	--	73%	NA	NA
Perceived gains among seniors in thinking critically and analytically – answers including “very much” or “quite a bit”	--	86%	NA	NA

**Engagement Indicators**

NMSU students’ average was significantly lower than our comparison group on two of the four broad Engagement Indicators – Reflective & Integrative Learning, and Learning Strategies.

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One of NMSU seniors' lowest performing item scores was a statement for which they indicated how often they summarized what they learned in class or from course materials. This item resulted in a -5% point difference from our peers/comparison group.

### **NMSU Results – Topical Module: Experiences with Writing** (see Table 2 below)

In the topical module, students respond to 2 sets of questions related to writing. In the first set, students are asked, "During the current school year, for how many *writing assignments* have you done the following?" followed by 10 specific questions. For each question posed, students select one of the following answers: "No writing assignments" "Few writing assignments" "Some writing assignments" "Most writing assignments" or "All writing assignments". The second set asks, "During the current school year, for how many of your *writing assignments* has *your instructor* done the following?" which is followed by 3 specific questions to which students respond with one of the same 5 options listed above.

NMSU first-year freshmen average responses were at or above (at a statistically significant level of  $p < .05 - .001$ ) our comparison group on all 10 items in the first set, and all 3 items in the second set. All items had an effect size of less than 0.3. Questions on which NMSU first year students had a *significantly higher mean* than the comparison group (9 questions total) were related to

- student interactions with family, classmates or others about assignments or drafts
- describing methods or findings related to data
- explaining in writing numerical/statistical data
- addressing a real or imagined audience
- the degree to which the instructor provided clear instructions and explained in advance the learning outcomes and grading criteria

Unfortunately, average scores on all items (both sets) except one declined from first-year to senior. Average NMSU senior responses were significantly lower than their peers at other institutions on 4 measures: 3 in the first set ( $p < .001$ ) and 1 in the second set ( $p < .01$ ). Average responses were significantly higher than our comparison group for only one question, which was from the first set.

Questions on which NMSU Seniors had a *significantly lower mean* than the comparison group (4 questions total) were in response to questions about writing assignments in which students were

- required to analyze or evaluate something they read, researched or observed
- argue a position using evidence and reasoning
- write in the style and format of a specific field

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NMSU Seniors also had a statistically lower mean score than the comparison group when asked about the degree to which

- the instructor provided clear instructions describing what he/she wanted the student to do

In summary, NSSE data suggests NMSU students' experiences with writing are comparable to students at similar institutions. However, findings also indicate that freshmen, more so than seniors, experience the types of writing that involve more critical thinking and that is more specific to their disciplines. As such this could be an area for growth in the overall NMSU undergraduate educational experience.

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*Table 2: First year and senior Comparison of mean response on Topical Module – Experiences with Writing*

		Statistical Comparisons <sup>b</sup>				Statistical Comparisons <sup>b</sup>			
		NMSU First Year	Peer Writing Experiences			NMSU Senior	Peer Writing Experiences		
<i>Item wording or description</i>		<i>Mean</i>	<i>Mean</i>	<i>Effect size<sup>d</sup></i>	<i>Mean</i>	<i>Mean</i>	<i>Effect size<sup>d</sup></i>		
<b>1. During the current school year, for how many writing assignments have you done the following?</b>									
a.	Talked with a classmate, friend, or family member to develop your ideas before starting your assignment	3.1	3	**	0.14	2.9	2.8		0.03
b.	Received feedback from a classmate, friend, or family member about a draft before turning in your final assignment	3.3	3.2	**	0.12	2.8	2.8		0.05
c.	Gave feedback to a classmate about a draft or outline he or she had written	3.2	3	**	0.15	2.7	2.6	*	0.08
d.	Summarized material you read, such as articles, books, or online publications	3.4	3.3		0.05	3.3	3.3		-0.05
e.	Analyzed or evaluated something you read, researched, or observed	3.6	3.6		-0.01	3.5	3.7	***	-0.17
f.	Described your methods or findings related to data you collected in lab or field work, a survey project, etc.	3.1	2.8	***	0.21	3	3		0.05
g.	Argued a position using evidence and reasoning	3.5	3.4		0.08	3.1	3.3	***	-0.14
h.	Explained in writing the meaning of numerical or statistical data	2.7	2.5	**	0.14	2.8	2.7		0.02
i.	Wrote in the style and format of a specific field (engineering, history, psychology, etc.)	3	3		0.04	3.3	3.4	**	-0.09
j.	Addressed a real or imagined audience such as your classmates, a politician, non-experts, etc.	3.2	2.9	***	0.18	2.8	2.9		-0.05
<b>2. During the current school year, for how many of your writing assignments has your instructor done the following?</b>									
a.	Provided clear instructions describing what he or she wanted you to do	4.2	4.1	**	0.14	3.9	4	***	-0.12
b.	Explained in advance what he or she wanted you to learn	3.9	3.7	**	0.12	3.7	3.7		0
c.	Explained in advance the criteria he or she would use to grade your assignment	4.1	4	**	0.14	3.9	3.9		-0.03

**Key to symbols:** \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Your students' average** was significantly higher ( $p < .05$ ) with an effect size less than .3 in magnitude.

**Your students' average** was significantly lower ( $p < .05$ ) with an effect size less than .3 in magnitude.