

2013-18 Longitudinal Panel Study

The 2013-18 Longitudinal Panel Study examines students' perceived intellectual growth over time by comparing students' self-reported skill on 18 learning outcomes from first-year orientation to March 2018. The table below is an aggregate summary of results sorted first by significant difference (p-value), then by effect size (Cohen's d).

Significant difference measures the probability that a student's self-reported learning gains are due to chance, and a lower p-value indicates a lower probability that a student's self-reported learning gains are due to chance. If the p-value is below 0.05, there is a higher probability that the difference between self-reported skill levels is due to chance. Effect size measures the strength of the relationship between a student's two self-reported skill levels, while accounting for size and variation. The larger the effect size, the larger the difference between those two self-reported skill levels. If the effect size is below 0.2, the difference is trivial.

	Pretest Mean (FLA)	Posttest Mean (DSS)	Repeated Measures Mean Comparison	
			Significance (2-tailed) *=<.05, **=<.01	Effect Size Small=~0.2, Medium=~0.5
Understand the ethical issues related to use and misuse of information	3.86	4.31	**	Medium
Read and understand scientific writings written for an informed lay audience	3.33	3.80	**	Medium
Employ evidence effectively in writing	3.85	4.20	**	Medium
Evaluate the quality or reliability of information	3.86	4.23	**	Medium
Apply understanding of ethical issues when developing solutions	3.80	4.15	**	Small
Construct reasoned arguments	3.92	4.25	**	Small
Ability to use educational experiences to analyze civic and global issues.	3.56	3.92	**	Small
Evaluate reasoned arguments	3.95	4.25	**	Small
Ability to integrate skills and knowledge from different sources and experiences	4.01	4.29	**	Small
Communicate effectively with people from other cultures and backgrounds.	3.79	4.12	**	Small
Understand the perspectives and experiences of people who are different than you	4.00	4.23	**	Small
Analyze differences between industrialized and developing areas of the world	3.54	3.79	**	Small
Knowledge of how to participate effectively in the democratic process.	3.53	3.78	**	Small
Ability to read carefully	4.12	4.26	**	
Understand the historical, political, and social connections of past events	3.58	3.75	**	
Articulate a vision of my own values, ethics, or core beliefs	4.09	4.23	**	
Create or interpret art (ex. Sculpture, painting, music, theatre)	3.00	3.06		
Execute appropriate mathematical operations for a given question	3.75	3.77		

