



HLC Accreditation 2016-2017

Evidence Document

Academic Affairs

Office of Planning and Analysis

Comparison of Online and Non-Online End of Term Grade Performance

Additional information: Course case study: Geology 102 Earth, Science and Environment, Fall 2014.

Comparison of Online and Non-Online End of Term Grade Performance

Course case study: Geology 102 Earth, Science and Environment, Fall 2014

Table 1: Bivariate analysis of non-online and online students

Dimensions:	All	non-online	online	^	All	non-online	online	^
	n=	354	166	188				
Academics:								
Student Class	100%	100%	100%		College Division	100%	100%	100%
freshmen	15.3%	21.1%a	10.1%b	^	Business	23.7%	25.9%a	21.8%a
sophomore	29.1%	30.7%a	27.7%a		Education	7.6%	9.0%a	6.4%a
junior	29.9%	25.9%a	33.5%a		Engineering	10.2%	10.2%a	10.1%a
senior	25.7%	22.3%a	28.7%a		Fine Arts	8.5%	6.0%a	10.6%a
graduate	0.0%	0.0%	0.0%		Health Professions	2.0%	2.4%a	1.6%a
other	0.0%	0.0%	0.0%		LAS Humanities	3.7%	4.2%a	3.2%a
					LAS Nat Sci and Math	3.4%	3.0%a	3.7%a
% new student	29.7%	38.0%a	22.3%b	^	LAS Social Sciences	31.4%	25.3%a	36.7%b
					LAS Other ⁴	9.3%	13.9%a	5.3%b
enrolled hours (mean)	12.4	12.3a	12.5a		Other College Units	0.0%	0.0%	0.0%
% full-time	76.8%	77.3%a	74.6%a					
cumulative gpa	2.86	2.80a	2.90a		ACT(SAT)⁵	22.1	21.5a	22.6b
WSU gpa	2.74	2.68a	2.78a		INC SR score⁶	44.3	43.0a	45.5a
WSU earned hours	40.3	35.3a	44.5b	^				
					SEAS¹ risk (low 1 - 4 high)	1.52	1.52a	1.52a
					degree probability⁷	54.7%	53.4%a	55.8%a
Demographics:								
% female	50.0%	42.2%a	56.9%b		Origin of residence	100%	100%	100%
% under-rep minority²	23.7%	29.5%a	18.6%b		KS Sedgwick	65.3%	67.5%a	63.3%a
% first generation	47.7%	42.2%a	52.7%b		KS MSA wo Sedgwick	14.7%	13.9%a	15.4%a
% low income <=125% poverty³	24.3%	22.3%a	26.1%a		KS (southeast exc MSA & Sedg)	0.6%	0.0%a	1.1%a
% university housing	8.8%	15.7%a	2.7%b	^	KS (northeast)	5.9%	8.4%a	3.7%a
					KS (northwest)	0.3%	0.6%a	0.0%1
Residency	100%	100%	100%		KS (southwest)	2.5%	2.4%a	2.7%a
resident	91.5%	93.4%a	89.9%a		Nebraska	0.3%	0.0%a	0.5%a
non-resident	4.8%	2.4%a	6.9%b		Oklahoma	0.3%	0.0%a	0.5%a
international	3.7%	4.2%a	3.2%a		non surrounding states	2.3%	1.8%a	2.7%a
					domestic no address	3.4%	1.2%a	5.3%b
% on financial aid	82.5%	78.3%a	86.2%a		international	4.5%	4.2%a	4.8%a

note: adjacent row cells with dissimilar subscript letters are statistically different at $p < .05$

^ effect size greater than .30

¹ SEAS = Student Early Alert System in-class behavioral risk (attendance, participation, assignments, exams); ² Under-represented minority includes black non-hispanic, hispanic, american indian/alaskan native and hawaiian; ³ Low income <=125% of poverty based on family income and family size poverty thresholds, available for students who have submitted a fafsa; ⁴ LAS Other includes undecided, intensive english and students who have enrolled post degree; ⁵ ACT(SAT) SAT scores converted to ACT metric; ⁶ INC SR score composite of standardized ACT, HS gpa and HS percentile converted to a centile, scores lower than 25 are 3 times more likely to be on probation during 1st term, available for matriculating high school seniors; ⁷ Degree probability provided by the Student Success Collaborative based student's academic performance in reference to degree outcome performance of students in major.

Table 1 Summary: Few statistically significant differences exist between students in Geology 102 non-online and online classes with nearly all meaningful statistical differences being attributed to new students. Non-online classes have a higher percentage of new students (38.0% versus 22.3%) which is also reflected in the higher percentage of freshmen, university housing, LAS other (incoming undecided students) and lower earned hours.

Comparison of Online and Non-Online End of Term Grade Performance

Course case study: Geology 102 Earth, Science and Environment, Fall 2014

Table 2: Bivariate analysis of grade outcomes among non-online and online classes

Dimensions:	End-of-term grade outcomes					
	All	non-online		online		
total	354	100%	166	100%	188	100%
A	71	20.1%	34	20.5%a	37	9.7%a
B	134	37.9%	65	39.2%a	69	6.7%a
C	94	26.6%	47	28.3%a	47	5.0%a
D	35	9.9%	12	7.2%a	23	2.2%a
F	20	5.6%	8	4.8%a	12	6.4%a
<i>class gpa (mean)</i>	2.55		2.64a		2.47a	

note: adjacent row cells with dissimilar subscript letters are statistically different at $p < .05$

Table 2 Summary: There are no statistical differences at the bivariate level between the grades that Geology 102 non-online and online students achieved at end of term.

Table 3: OLS Regression on GEOL 102 Course Grade During Fall 2014 (dependent= class grade)

Table 3 Predictors:	unstd beta	std beta	sig.	Non-Online Class			Online Class		
				unstd beta	std beta	sig.	unstd beta	std beta	sig.
online (0,1)	-0.19	-0.09	0.218	n/a	n/a	n/a	n/a	n/a	n/a
<i>Academics:</i>									
full-time student (0,1)	0.12	0.05	0.320	0.04	0.02	0.799	0.17	0.07	0.305
undecided major (0,1)	0.13	0.04	0.453	0.09	0.03	0.667	0.20	0.04	0.528
earned hours (student class proxy)	0.00	0.00	0.945	-0.01	-0.01	0.888	0.01	0.01	0.857
cumulative gpa prior to term	0.38	0.50	0.000	0.37	0.52	0.000	0.38	0.47	0.000
SEAS risk (0,1)	-0.03	-0.05	0.260	0.00	0.01	0.937	-0.06	-0.10	0.121
<i>Demographics:</i>									
female (0,1)	-0.30	-0.14	0.004	-0.36	-0.18	0.013	-0.23	-0.10	0.118
under-represented minority (0,1)	-0.05	-0.02	0.686	-0.22	-0.10	0.188	0.08	0.03	0.678
first generation (0,1)	-0.18	-0.08	0.091	-0.16	-0.08	0.297	-0.18	-0.08	0.231
low income <=125% poverty (0,1)	-0.02	-0.01	0.864	-0.02	-0.01	0.925	-0.02	-0.01	0.927
university housing (0,1)	-0.14	-0.04	0.452	-0.18	-0.07	0.368	0.07	0.01	0.869
(Constant)	1.86		0.000	2.01		0.000	1.58		0.000
R-sq	0.543			0.549			0.546		
n=	354			166			188		

Table 3 Summary: Enrollment in a Geology 102 online class has no statistically significant independent effect on grade outcome net of controls. Prior academic performance, regardless of course method, is the most important predictor of grade outcomes for both non-online and online classes and had the same impact on grade outcome for students in non-online and online classes.