

Academic Self-efficacy, Engagement, and Achievement for All Students

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UNIV 101
UNIVERSITY COLLEGE

Central Concepts

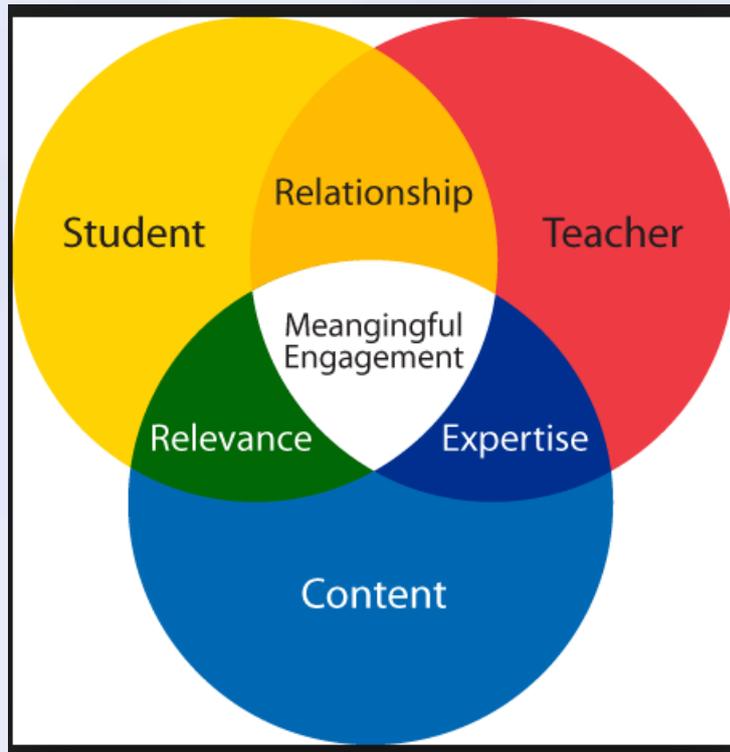
Academic Engagement:

When students are invested, attentive, passionate, and connected in the learning process.

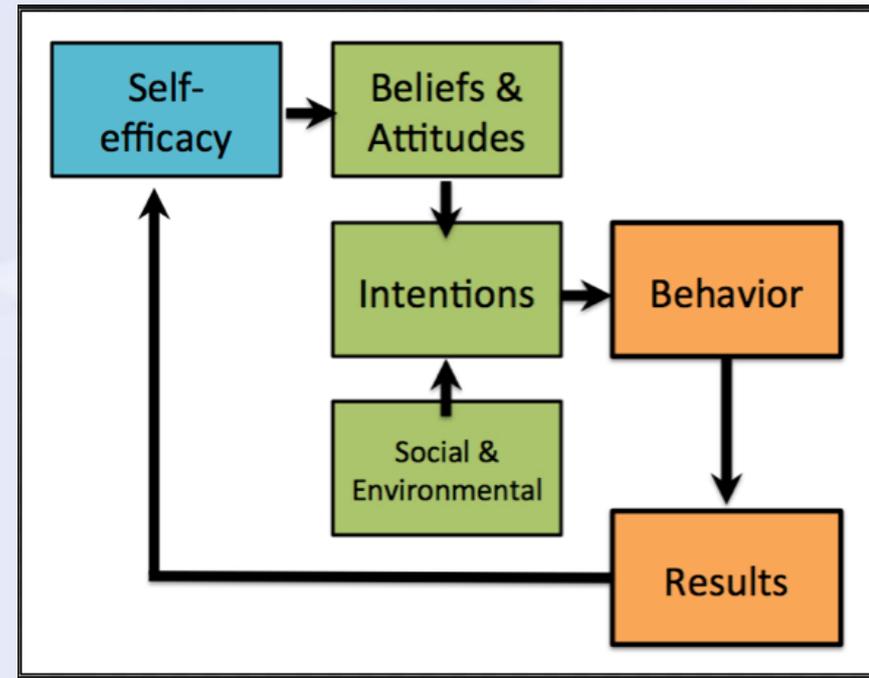
Academic Self-Efficacy:

Personal judgment or assessment of the capacity to achieve goals and complete academic tasks.

How Do We View These Factors?



www.studentengagementtrust.org/engagementModel/



<http://mprcenter.org/blog/2012/08/the-positive-side-of-video-games-part-iii/>

Research: Engagement & Self-Efficacy

Engagement

Kuh et al. (2008): expanding upon NSSE outcomes

National Survey of College Engagement (NSSE)

High School Survey of Student Engagement (HSSSE)

Self-Efficacy

Robbins et al. (2004): metanalysis showing self-efficacy to be one of the strongest predictors of GPA and persistence.

Vuong, Brown-Welty, and Tracz (2010): self-efficacy beliefs impact GPA and persistence

Student Subgroups

Gender

- NSSE: Females more engaged than males
- Huang (2011): Self-efficacy varies based on subject

First Generation

- Pike & Kuh (2005): Less engaged than second gen
- Sanchez & Nichols (2007): Lower academic self-efficacy

Nonwhite Students

- NSSE: Reports indicate lower engagement and self-efficacy

Recommendations set forth by Pintrich and Linnebrink (2003):

- 1.) Help students maintain relatively high but accurate self-efficacy beliefs
- 2.) Provide students with challenging academic tasks that most students can reach with effort
- 3.) Foster the belief that competence or ability is a changeable, controllable aspect of development
- 4.) Promote students' domain specific self-efficacy beliefs rather than global self-esteem

Our Program: University 101

- Three credit academic course
- General education requirement (LAC)
- Active learning + learning principles
- Coordinated curriculum + research intensive
- Intensive weekly trainings for all instructors, including 40 hour initial training session

Research Questions

- 1.) Are student FYS grades related to academic self-efficacy and student college engagement (controlling for high school engagement) after one semester?
- 2.) Are student FYS grades related to overall fall term GPA and persistence to the spring semester?
- 3.) Do stronger relationships in these variables exist for different student subgroups?
- 4.) Are changes between high school and college engagement after the first semester different for certain student subgroups?

Research Design

- 2014 UNC Freshmen: N=1910
- Univ101: N=398; Participants: N=208

Engaged Learning Index

- 10 items; 5-point Likert scale
- reliability (Cronbach's α): college (.845); H.S. (.848)

College Academic Self-Efficacy Scale

- 6 items; 5-point Likert scale; reliability (.866)

GENDER

	Frequency	Percent	Valid Percent	Cumulative Percent
0 M	73	35.1	35.1	35.1
Valid 1 F	135	64.9	64.9	100.0
Total	208	100.0	100.0	

FIRSTGEN_IND

	Frequency	Percent	Valid Percent	Cumulative Percent
0 N	105	50.5	50.5	50.5
Valid 1 Y	103	49.5	49.5	100.0
Total	208	100.0	100.0	

NONWHITE

	Frequency	Percent	Valid Percent	Cumulative Percent
.00 ELSE	124	59.6	59.6	59.6
Valid 1.00 NONWHITE	84	40.4	40.4	100.0
Total	208	100.0	100.0	

Statistics

		HS_MEAN	COL_MEAN	SE_MEAN
N	Valid	208	208	208
	Missing	0	0	0
Mean		4.1149	4.3827	4.5692
Std. Deviation		.72099	.58076	.73150
<u>Skewness</u>		-.625	.075	-.460
Std. Error of <u>Skewness</u>		.169	.169	.169
Kurtosis		.914	.470	.714
Std. Error of Kurtosis		.336	.336	.336
Range		4.10	3.20	3.80
Minimum		1.80	2.80	2.20
Maximum		5.90	6.00	6.00

Question 1: Are student FYS grades related to academic self-efficacy and students' college engagement after one semester?

- Self-efficacy $\rightarrow p < .0001$, and r-square of .163, making about 16% of the variance in academic self-efficacy attributable to Univ101 final grades.
- College engagement $\rightarrow p < .0001$, and r-square of .193, making about 20% of the variance in college engagement attributable to Univ101 final grades.

Question 2: Are student FYS grades related to overall fall term GPA and persistence to the spring semester?

- Spring credits (Univ101) $\rightarrow p < .003$; r-square=.043
 - 4% of variance attributable to Univ101 final grade.
- Spring credits (freshmen) $\rightarrow p < .001$; r-square=.026
 - More credits taken, on average, by Univ101 students.
- Among first year freshmen (N=1910), those who receive either an A or B in Univ101 (N=299; mean=93%) are somewhat more likely to persist (N= 1611; mean=87%; $p = .004$, $r^2 = .014$).

(cont'd) Question 2: Are student FYS grades related to overall fall term GPA and persistence to the spring semester?

- Fall GPA (Univ101) → $p < .0001$; $r\text{-square}=.624$
 - FYS final grade obviously impacts student GPA

- Fall GPA (freshmen) → $p < .0001$; $r\text{-square}=.204$
 - Higher GPA's, on average, among Univ101 students
 - Normal curve of grades across all Univ101 courses

Question 3: Do stronger relationships in these variables exist for different student subgroups?

- No significant relationships among subgroups for college or high school engagement, gender, or first generation variables.
- Influence of Univ101?
- Academic self-efficacy among Non-white students $\rightarrow p = .044$, and r-square of .020, making about **2% of the variance in self-efficacy scores attributable to being non-white.**

Question 4: Are changes between high school & college engagement after the first semester different among student subgroups?

- Might Univ101 influence changes in engagement between high school and college differently across subgroups?
- MANOVA results for Univ101 (N=208): No significant variations across gender, first gen, or non-white students.
- Equalizing effect of Univ101? Further study required

How We Promote Engagement & Efficacy

- Active learning environment
- Group work and group discussion
- Research-intensive and insight-based projects
- One-on-one support and instruction
- High level of feedback on assignments

Recommendations set forth by Linnebrink and Pintrich (2003):

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- 4.) Promote students' domain specific self-efficacy beliefs rather than global self-esteem

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