

The Effects of High-Impact Practices across Twenty-First Century Learning Outcomes

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Overview

- What are these twenty-first century learning outcomes?
- What are these high-impact practices?
- Data and analysis
- Results and what they tell us
- What does this all mean?

21st Century College Outcomes

Results of the Greater Expectations Forum on Twenty-First-Century Liberal Arts Education Practice (AAC&U) fell within four categories:

- 1) Integrative learning
- 2) Inquiry learning
- 3) Global learning
- 4) Civic learning

Recommended Practices to Advance each Outcome

Learning communities

First-year experiences

Senior capstone experiences

Service learning

Experiential learning

Authentic tasks

Problem-based learning

Interdisciplinary instruction

The Essential Learning Outcomes

- Knowledge of human cultures and the physical and natural world
- Intellectual and practical skills
- Personal and social responsibility
- Integrative and applied learning

High-Impact Educational Practices

First-year seminars/experiences

Common intellectual experiences

Learning communities

Writing-intensive courses

Collaborative assignments/projects

Undergraduate research

Diversity/global learning

Service/community-based learning

Internships

Capstone courses/projects



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“High-impact practices...combine and concentrate other empirically validated pedagogical approaches into a single multidimensional activity....

At the same time, while promising, they are not a panacea.”

George Kuh, 2010

The Emerging Evidence...

- High-impact practices have minor direct effects on student learning (Salisbury & Goodman, 2009)
- A more significant connection exists between “good practices” and student-learning outcomes (Goodman, Baxter Magolda, Seifert, & King, 2011)

Vetted Good Practices

- Exposure to effective teaching
- Teaching clarity and organization
- Quality of nonclassroom interactions with faculty
- Active learning
- Influential interactions with other students
- Cooperative learning
- Academic challenge
- High expectations
- Integrative learning/experiences
- Diversity experiences inside/outside the classroom

(see Chickering & Gamson, 1987, 1991; Pascarella, Cruce, Wolniak, & Blaich, 2004; Pascarella, Cruce, Umbach, Wolniak, Kuh, Carini, Hayek, Gonyea, & Zhao, 2006)



Sample and Data Collection

- 17 institutions that participated in the Wabash National Study of Liberal Arts Education (WNSLAE)
 - 11 liberal arts colleges, 3 research universities, and 3 regional universities
- Initial data collection was conducted in early Fall 2006 (n = 4,501) – T1
- First-year follow-up data collection (n = 3,081) was conducted in Spring 2007 – T2
- Senior follow-up data collection (n = 2,329) was conducted in Spring 2010 – T3
- Follow-up participant data was weighted up to each of institution's undergraduate population by sex, race, and ACT score (or COMPASS/SAT equivalent)

Liberal Arts Outcomes

Liberal arts outcomes that serve as equivalents or proxies for the essential learning outcomes

- **Global learning** (Knowledge of human cultures and the physical and natural world)
- **Need for cognition** (Intellectual and practical skills)
- **Positive attitude toward literacy** (Intellectual and practical skills)
- **Civic learning** (Personal and social responsibility)
- **Leadership** (All)

High-Impact Practices

First-year student participation in...

- Academic Learning Community
- Service Learning
- First-Year Seminar
- Undergraduate Research
- (Senior Capstone Experiences)

Analyses

A series of ordinary least squares regressions

- 1) The **total effects** model regressed each 21st century learning outcome on a battery of pre-college and background characteristics (e.g., sex, race/ethnicity, ACT composite score) and the pretest for each outcome
- 2) The **direct effects** model, which regressed each outcome on the control variables from the total effects model in addition to a number of college experience variables, including the good practice scales
- 3) Measured the **indirect effects** model for each significant good practice in the direct effects model

Academic Learning Community

Global Learning

	Total	Direct	Indirect
Learning Community	0.20**	0.12*	
Integrative Learning		0.16*	0.03*
Diversity Experiences		0.16*	0.07*

* $p < 0.01$, ** $p < 0.001$

Service Learning

Civic Learning

	Total	Direct	Indirect
Service Learning	0.19**	0.12*	
Integrative Learning		0.13*	0.04*
Diversity Experiences		0.13*	0.04*

* $p < 0.01$, ** $p < 0.001$

Service Learning Cont.

Leadership

	Total	Direct	Indirect
Service Learning	0.15**	0.06	
Faculty Interactions		0.10**	0.02*
Academic Challenge		0.06*	0.01*
Integrative Learning		0.13**	0.03**
Diversity Experiences		0.10**	0.03**

First-Year Seminars

Positive Attitude Toward Literacy

	Total	Direct	Indirect
FYS	0.12**	0.10*	
Diversity Experiences		0.09**	0.02*

* $p < 0.01$, ** $p < 0.001$

Undergraduate Research

Global Learning

	Total	Direct	Indirect
UG Research	0.14**	0.06	
Integrative Learning		0.15*	0.05**
Diversity Experiences		0.16*	0.06**

Civic Learning

UG Research	0.18**	0.09	
Integrative Learning		0.13**	0.04**
Diversity Experiences		0.13**	0.04**

Undergraduate Research Cont.

Positive Attitude Toward Literacy

	Total	Direct	Indirect
UG Research	0.10**	0.05	
Integrative Learning		0.08**	0.03**
Diversity Experiences		0.10**	0.03**

* $p < 0.01$, ** $p < 0.001$

Undergraduate Research Cont.

Leadership

	Total	Direct	Indirect
UG Research	0.20**	0.08	
Faculty Interactions		0.10**	0.03*
Academic Challenge		0.06*	0.02*
Integrative Learning		0.13**	0.04**
Diversity Experiences		0.10**	0.03**

Three-Years Later...

Academic learning community: 2/5 (NFC, Leadership)

Service learning: 4/5 (Global, NFC, Civic, Leadership)

First-year seminars: 1/5 (PATL)

Undergraduate research: 4/5 (NFC, PATL, Civic, Leadership)

Senior capstone experiences: 4/5 (Global, NFC, PATL, Leadership)

Tendency Toward “Engaging Pedagogy”

- A variety of teaching methods
- Meaningful discussion and homework
- Challenging assignments
- Productive use of class time
- Encouragement for students to speak in class and work together

Swing, R. L. (2002). *The impact of engaging pedagogy on first-year seminars* (Policy Center on the First Year of College Report). Retrieved from <http://www.sc.edu/fye/resources/assessment/essays/Swing-8.28.02.html>.



Teaching Behaviors

Standardized Effects of Teaching Behaviors on Need for Cognition and Positive Attitude Toward Literacy using the Wabash National Study of Liberal Arts Education (n = 6,028)

Variables ^a	<i>Need for Cognition</i>		<i>Positive Attitude Toward Literacy</i>	
	<i>General Effects</i>	<i>Standard Error</i>	<i>General Effects</i>	<i>Standard Error</i>
Organization	0.04*	0.02	0.03	0.02
Clarity	0.04*	0.02	0.07***	0.02
Classroom Challenge/Expectations	0.05**	0.02	0.08***	0.02
Support	-0.04	0.02	-0.02	0.02
Prompt Feedback	0.04*	0.02	0.05**	0.02

Loes, C. N., Saichaie, K., Padgett, R. D., & Pascarella, E. T. (2010, November). *The effects of teacher behaviors on orientations towards learning*. Paper to be presented at the 35th Annual Meeting of the Association for the Study of Higher Education, Indianapolis, IN.

Shifting Gears a Little...



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Most Important Course *Objectives*

Objective	Percent
Develop academic skills	54.6
Develop a connection with the institution	50.2
Provide orientation to campus resources and services	47.6
Self-exploration/personal development	28.5
Create common first-year experience	23.3
Develop support network/friendships	17.4
Increase student/faculty interaction	16.9
Improve sophomore return rates	15.5
Develop writing skills	11.9
Introduce a discipline	7.0
Develop financial literacy	1.1
Encourage arts participation	0.6
Other (please specify)	8.1

Most Important
Topics that
Compose the
Content of the
Seminar

Topic	Percent
Campus resources	42.4
Study skills	39.8
Academic planning/advising	35.7
Critical thinking	34.8
Time management	27.6
Writing skills	17.3
Career exploration/preparation	15.5
College policies and procedures	15.1
Specific disciplinary topic	14.0
Relationship issues	9.2
Diversity issues	6.9
Health and wellness	3.7
Financial literacy	1.0
Other	14.8

Review

- Objectives:
 - Develop academic skills
 - Develop a connection with the institution
 - Provide orientation to campus resources and services
- Topics:
 - Campus resources
 - Study skills
 - Academic planning/advising

Outcomes Measured

Outcome	Percent
Persistence to sophomore year	73.7
Satisfaction with faculty	70.9
Satisfaction with institution	65.3
Grade-point average	58.0
Use of campus services	51.0
Connections with peers	49.3
Participation in campus activities	49.0
Out-of-class student/faculty interactions	47.1
Academic abilities	42.0
Persistence to graduation	38.4

Where Do We Go From Here?

“Excuse me,” said Alice, “but how do I get out of here?”

“That depends a great deal on where you want to end up,” said the cat.

“I don’t care where I end up,” said Alice, “I just want out!”

“Well,” said the cat, “if it doesn’t matter where you end up; it doesn’t matter which road you take.”

- Alice in Wonderland

Where Do We Go From Here?

- There is no one “right” type of high-impact practice; pick and choose what is best for your institution
 - Connect to learning/program outcomes
 - U101 example
- Connect high-impact practices to other educational initiatives and practices (soup)
 - Continue integrating good practices
- Integrative learning and diversity experiences are the most consistent “impactful” practices

Questions? Comments?

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