

THE IMPACT OF LEARNING COMMUNITIES ON THE INTEGRATIVE LEARNING OF ACADEMICALLY AT-RISK STUDENTS

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BACKGROUND OF THE RESEARCH PROBLEM

- Estimated that 42% of recent high school graduates enter college unprepared academically and require remedial coursework to graduate (Barnes & Pilard, 2013)
- In 2007, it was reported that approximately 20.4% of students entering colleges and universities were enrolled in remedial coursework (National Center for Educational Statistics, 2013). In 2016, that number increased to between 40% and 60% (Jimenez, Sargrad, Morales, & Thompson, 2016)
- Focus in higher education has shifted to an increased attention on the impact of retention vs. attrition.
- Challenge the college-ready paradigm (White, 2016)

THEORETICAL FRAMEWORK

- Astin's (1984) theory of student involvement requires active participation on the part of the student and on the learning environment promoting this active participation.
- What are the various forces competing for a student's energy and time?
- Consider the passive, reticent, underprepared student (Astin, 1984).
- How do we utilize the learning community as a space to focus on what the student is actually doing and to influence changes in behavior?

For the purposes of this study, a learning community is defined as “a cohort of students enrolled in two or more courses in which they experience at least one explicitly designed opportunity for integrative learning” (Lardner & Malnarich, 2005, p. 30).

SIGNIFICANCE OF THE STUDY

- Current research on learning communities has a broad focus on the general population of college and university students
- Remedial coursework serves as a gateway (and barrier) to content-level coursework.
- Combining developmental (remedial) coursework with college-level coursework is more likely to result in positive student outcomes (Malnarich, 2005; Bettinger, Boatman, & Long, 2013)
- Less than 60% of remedial students enrolling in 4-year colleges graduate within a 6-year window (Bettinger, Boatman, & Long, 2013).
- Does the learning community contribute to the academic growth – particularly the integrative learning practices - of academically at-risk students

For the purposes of this study integrative learning is defined as an understanding and a disposition that a student builds across the curriculum and co-curriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus (AAC&U, 2009).

RESEARCH DESIGN

- Quasi-experimental, non-equivalent group design
- Participants were selected based on their enrollment in one of seven learning communities at a small, private, Catholic, liberal arts institution in the Mid-Atlantic.
 - Experimental Group – First-year college students enrolled in one of four non-residential learning community designed for academically at-risk students
 - Control Group – First-year college students enrolled in one of three living and learning community designed for non-at-risk students.

SOURCES OF DATA

- Integrative Learning Pre-Survey
 - Administered in August/September of 2017
- Integrative Learning Post-Survey
 - Administered in April/May of 2018
- Evaluation of Student Work
 - Shared Integrative Assignment Criteria across learning communities
 - Submitted at the conclusion of the academic year as a component of a learning community course

RESEARCH QUESTIONS

This study sought to answer the following three research questions:

- Is a degree of change occurring in student self-reporting of their integrative learning practices as a result of the learning community experience?
- Do academically at-risk students enrolled in intentionally designed learning communities self-report gains or losses in their integrative learning practices comparable to non-at-risk students enrolled in intentionally designed living and learning communities?
- Is there a relationship between student self-reported gains or losses in their integrative learning practices and direct measures of integrative learning?

SAMPLE SELECTION – START OF THE STUDY

Table 1

Gender of Participants By Group

Gender	% of At-Risk Group (n=43)	% of Non-At-Risk Group (n=52)
Female	62.8%	69.2%
Male	37.2%	30.8%

Table 2

Race/Ethnicity of Participants

Race/Ethnicity	% of At-Risk Group (n=43)	% of Non-At-Risk Group (n=52)
Asian	0%	1.9%
Black or African American	41.9%	26.9%
Hispanic	9.3%	28.8%
White	41.9%	34.6%
Two or More Races	4.6%	3.9%
Non-Reported	2.3%	3.9%

Table 3

Cumulative High School GPA of Participants

Demographic Group	Avg. High School GPA
At-Risk (n=43)	2.53
Non-At-Risk (n=52)	3.14

FINAL SAMPLE SELECTION

Table 4
Gender of Participants By Group

Gender	% of At-Risk Group (n=31)	% of Non-At-Risk Group (n=35)
Male	29%	34.3%
Female	71%	65.7%

Table 5
Race/Ethnicity of Participants

Race/Ethnicity	% of At-Risk Group (n=31)	% of Non-At-Risk Group (n=35)
Asian	0%	2.8%
Black or African American	35.5%	25.7%
Hispanic	12.9%	22.9%
White	48.4%	42.9%
Two or More Races	3.2%	5.7%

Table 6
Cumulative High School GPA of Participants

Demographic Group	Avg. High School GPA
At-Risk (n=31)	2.56
Non-At-Risk (n=35)	3.11

PRINCIPLE COMPONENT ANALYSIS

Pre Data Collection – 3 Categorical Values

- Self-reflection and assessment
- Connections between classroom learning and out of classroom experiences
- Connections across academic classes and subjects

Post Data Collection – 4 Categorical Values

- Self-reflection and assessment
- Connections to Experience
- Connections to Disciplines/Courses
- Transfer

METHODS OF DATA ANALYSIS

- Paired Samples t Test
 - Compare the means of pre-survey and post-survey responses within each group of participants
- Independent Samples t Test
 - Compare the differences of the means on each categorical value between the two groups of participants
- Pearson Correlation Coefficient
 - Determine if a relationship exists between student perception and student performance as it pertains to integrative learning practices.

FINDINGS

Research Question 1

- Is a degree of change occurring in student self-reporting of their integrative learning practices as a result of the learning community experience?

Paired Samples t Test

Risk Level	Categorical Value	t	df	Sig. (2-tailed)
Experimental Group	Transfer	-2.204	30	.035
Experimental Group	Connections to Disciplines/Courses	-.952	30	.349
Control Group	Connections to Disciplines/Courses	-3.237	34	.003
Control Group	Self-Reflection and Assessment	-2.677	34	.011
Control Group	Transfer	-.645	34	.523

FINDINGS

Research Question 1 (Continued)

Wilcoxon Signed Ranks Test

Risk Level	Categorical Value	Z	Asymp. Sig. (2-tailed)
Experimental Group	Connections to Experience	-2.826	.005
Experimental Group	Self-Reflection and Assessment	-1.465	.143
Control Group	Connections to Experience	-1.562	.118

FINDINGS

Research Question 2

- Do academically at-risk students enrolled in intentionally designed learning communities self-report gains or losses in their integrative learning practices comparable to non-at-risk students enrolled in intentionally designed living and learning communities?

Independent Samples t Test

Levene's Test for Equality of Variances

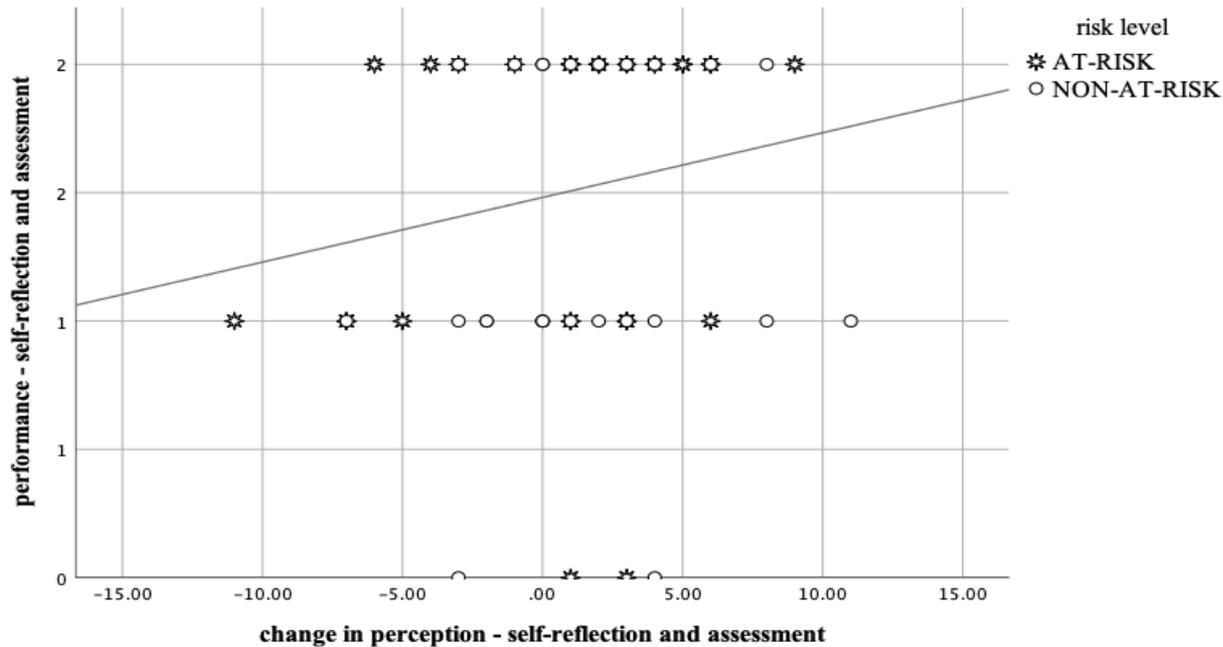
Categorical Value		F	Sig.	t	df	Sig. (2-tailed)
Self-Reflection and Assessment	Equal Variances Assumed	.569	.453	-.716	64	.477
Connections to Experience	Equal Variances Assumed	.554	.459	.940	64	.351
Connections to Disciplines/Courses	Equal Variances Assumed	1.809	.183	-1.058	64	.294
Transfer	Equal Variances Assumed	.028	.868	.989	64	.326

FINDINGS

Research Question 3

- Is there a relationship between student self-reported gains or losses in their integrative learning practices and direct measures of integrative learning?

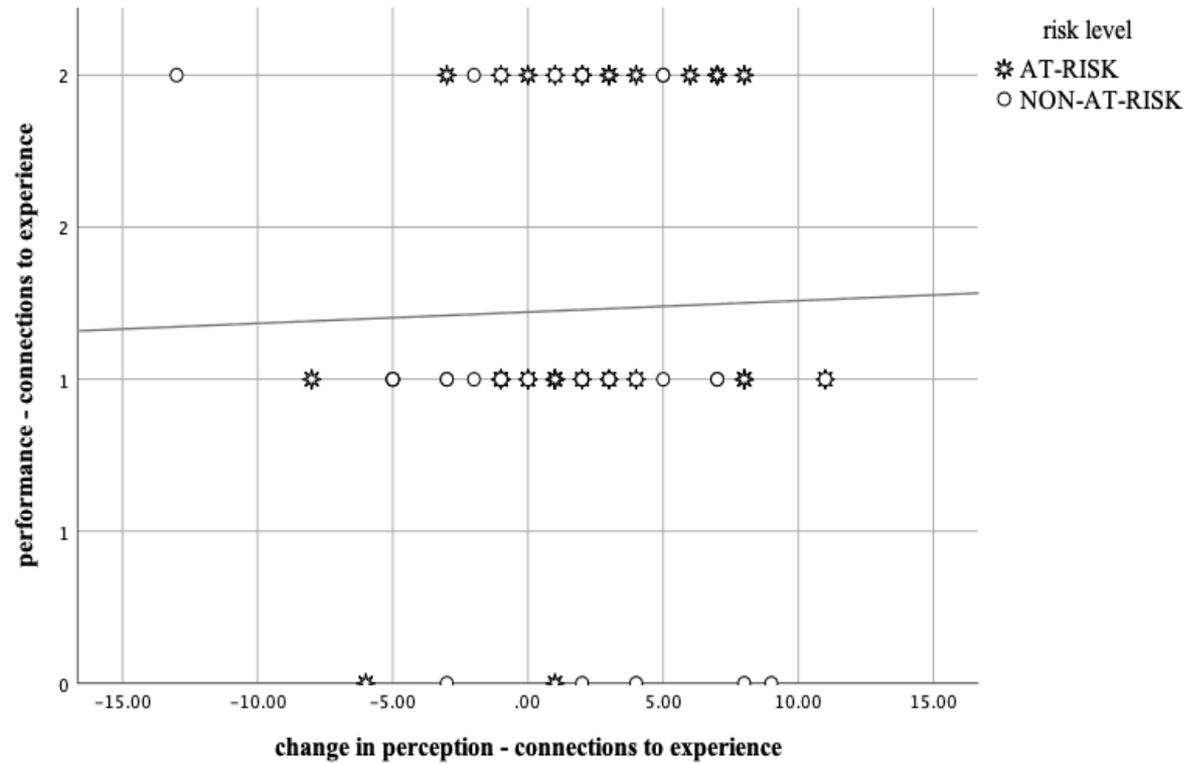
Scatter Plot – Perception and Performance - Self-Reflection and Assessment



FINDINGS

Research Question 3 Scatterplots

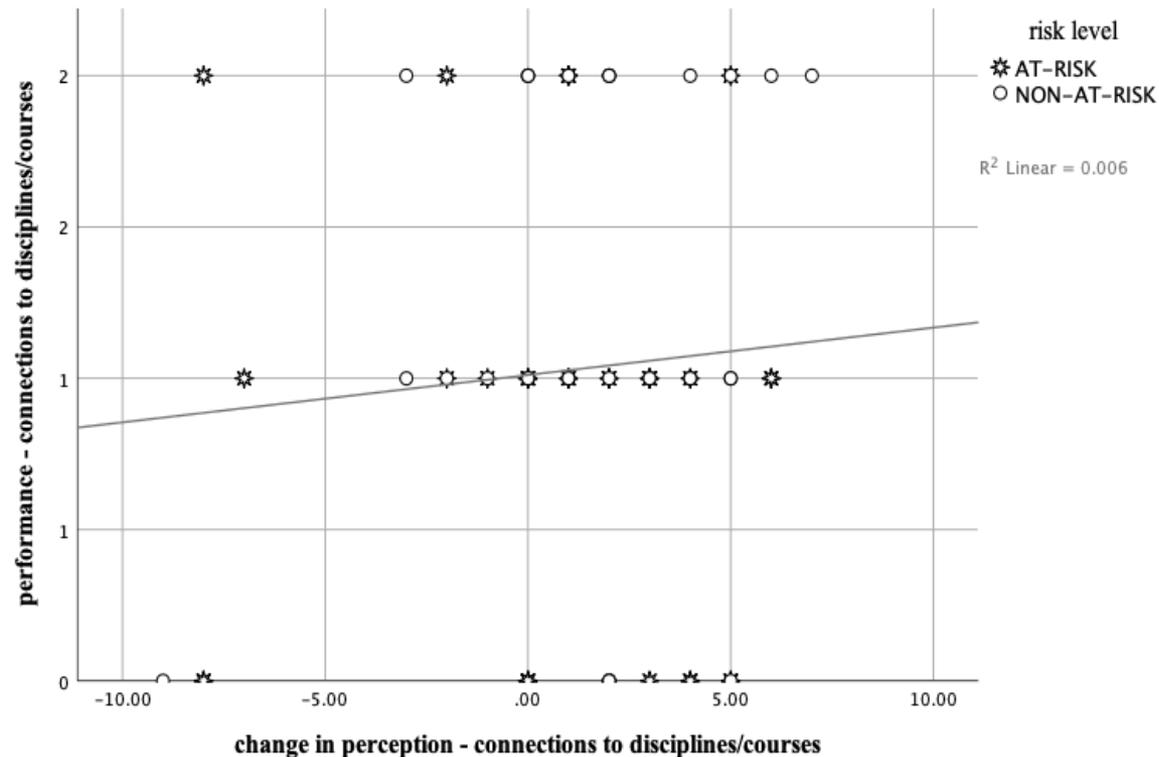
Scatter Plot – Perception and Performance – Connections to Experience



FINDINGS

- Research Question 3 Scatterplots

Scatter Plot – Perception and Performance – Connections to Disciplines/Courses



FINDINGS

Research Question 3 Descriptive Statistics

Descriptive Statistics of Direct Measures of Integrative Learning Practices In Response to Learning Outcome #1, Self-Reflection and Assessment

Descriptive Statistics

Risk Level		Mean	Std. Deviation	N
Academically At-Risk	Learning Outcome #1	1.55	.624	31
	Score Differential – Self-Reflection and Assessment	.936	4.52	31
Non-At-Risk	Learning Outcome #1	1.49	.612	35
	Score Differential – Self-Reflection and Assessment	1.66	3.66	35

FINDINGS

Research Question 3 Descriptive Statistics

Descriptive Statistics of Direct Measures of Integrative Learning Practices In Response to Learning Outcome #2, Connections to Experience

Descriptive Statistics

Risk Level			Mean	Std. Deviation	N
Academically At-Risk	Learning Outcome #2		1.39	.615	31
	Score Differential – Connections to Experience		2.23	4.21	31
Non-At-Risk	Learning Outcome #2		1.09	.612	35
	Score Differential – Connections to Experience		1.17	4.82	35

FINDINGS

Research Question 3 Descriptive Statistics

Descriptive Statistics of Direct Measures of Integrative Learning Practices In Response to Learning Outcome #3, Connections to Disciplines/Courses

Descriptive Statistics

Risk Level			Mean	Std. Deviation	N
Academically At-Risk	Learning Outcome #3		.84	.688	31
	Score Differential – Connections to Disciplines/Courses		.742	3.98	31
Non-At-Risk	Learning Outcome #1		1.20	.719	35
	Score Differential – Connections to Disciplines/Courses		1.66	3.03	35

DISCUSSION

Self-Perception Within Groups

- Review of the Findings
 - Non-at-risk students perceived growth in response to *self-reflection and assessment* and *connections to disciplines/courses*
 - Academically at-risk students perceived growth in response to *connections to experience and transfer*
- Conclusions
 - Negative internal and external forces working against academically at-risk students (Finn & Rock, 1997; Tyler and Lofstrom, 2009).
 - Resiliency (APA, 2018)
 - Fear of taking academic risks (Moreno, 2004)
 - Building schemata (Little and Box, 2018)

DISCUSSION

Self-Perception Between Groups

- Review of Findings
 - No statistically significant differences between the effects of learning communities on the self-reported gains or losses of students' integrative learning exhibited by academically at-risk students compared to non-at-risk students.
- Conclusions
 - Personal and academic support provided by teachers (Finn & Rock, 2004; Tinto, 1999; Hodges, 2001; Malnarich, 2005)
 - Clear expectations and meaningful feedback (Tinto, 1987)
 - Deeper life interactions (Sriram & McLevain, 2016)
 - Strong faculty-student relationships resulting in increased receptiveness to academic support services (Rheinheimer & Mann, 2000)

DISCUSSION

Comparing Perception to Performance

- Review of Findings
 - Findings do not reveal a relationship between student perception and student performance for any of the three learning outcomes
- Investigating Performance
 - Academically at-risk students out-performed their non-at-risk peers in regard to the categorical values of *connections to experience* and *self-reflection and assessment*
 - Non-at-risk students out-performed their academically at-risk peers in regard to *connections to disciplines/courses*.
- Conclusions
 - Academic success doesn't eliminate self doubt (Biddle & Berliner, 2002)
 - Lack of encouragement in K-12 settings
 - Learned helplessness
 - Developing trust

LIMITATIONS

- This study only examines the learning community program at one institution
- Only half of the learning communities at this institution were included in this study
- The three communities comprised of non-at-risk students were members of living and learning communities consisting of a residential component
- The quantitative research method used in this study limited the findings to the research questions that I chose to test and measure
- Small sample sizes for both the experimental and control groups reduces the study's statistical power and increases its margin for error.
- The use of the rubric in this study was limited to evaluating only three of the four categorical values assessed through the quantitative survey instrument

RECOMMENDATIONS FOR PRACTICE

- Pair remedial coursework with content-based coursework in the form of learning communities designed for specifically academically at-risk students.
- Establish a variety of spaces that invite students to engage in meaningful conversations focused on their academic, social, and personal growth.
- Develop clear and assessable learning outcomes.
- Institutional priorities must challenge institutional perception surrounding the “college-ready” paradigm.
- Provide academically at-risk students with various levels of academic support.

RECOMMENDATIONS FOR RESEARCH

- Additional studies investigating the integrative learning practices of academically at-risk students in different types of learning communities.
- A mixed methods study that includes a qualitative component designed to investigate the same questions proposed in this study.
- An examination of the types of collaboration between academic and student affairs in learning community programs that foster the practice of integrative learning.
- Further exploration of the influence of Sriram and McLevain's (2016) concept of deeper life interactions.
- Investigation of the impact of the variables race/ethnicity, gender, and estimated family contribution (EFC) have on on academically at-risk learning community students' integrative learning.

Questions?

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