Exploring Integrative Learning within Residential Learning Communities

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Year One STORY
INTEGRATIVE LEARNING
introduction
purpose of the study
research question(s)

PATH TO INTEGRATIVE LEARNING
lit review, AAC&U,
pre/post survey, assignment

FUTURE STEPS
findings, data, conclusion
Residential Learning Communities as a High-Impact Practice:
- Three-summer research seminar
- Facilitates multi-institutional research on types of Residential Learning Communities (RLCs)
- Projects use mixed-methods approach to conduct research

Our Research Study:
- Established collaboration and integrative learning themes at all 6 participating universities
- AAC&U Integrative Learning rubric
- Focus of this presentation - The integrative learning component of this study
Research Questions

Is there a relationship between Academic & Student Affairs collaboration and the practice of integrative learning in RLCs?

i. How is collaboration in RLCs between academic and student affairs defined?

ii. Which elements of collaboration between academic and student affairs foster the practice of integrative learning?

iii. How can we measure students’ practice of integrative learning in RLCs?

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

v. Do student self-reported gains or losses in integrative learning predict direct measures of integrative learning?
For the purposes of this study, residential learning communities are defined as a residential, educational approach that involves the integration of engaged curricular and co-curricular learning and emphasizes relationship and community building among faculty and/or staff and a cohort of students in a rich learning environment. This educational approach may come in different forms, but typically involves/incorporates/includes at least one of the following:

- A curricular structure characterized by a cohort of students participating in an intentionally designed integrative study of an issue or theme through connected courses, experiences, and resources while living together.

- A community of learners participating in a learning community that intentionally integrates learning through curricular and co-curricular education in a residential experience.
• What is integrative learning? (Barber, 2012)
• Why integrative learning? (DeZure et al., 2005; Inkelas & Soldner, 2011; Newell, 2010)
• Integrative vs. interdisciplinary learning (Boix Mansilla, 2008; Booth et al., 2009)
• RLCs and integrative learning (Klein, 2005; Mahoney & Schamber, 2011)
• Assessment (AAC&U, 2009)

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).
Theoretical Framework and Significance of the Study

- 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.

- There is an abundance of research on residential learning communities and on integrative learning, independent of one another.

- Does the residential learning community contribute to the academic growth - particularly the integrative learning - of college students?

- Can we begin to test components of the Best Practices Model (BPM) beginning with an “Academically Supportive Climate?”
Research Design

- Quasi-experimental, pretest-posttest nonequivalent group design

- Participants were selected based on their enrollment in residential learning communities at one of six, four-year, accredited institutions

- Institutions represented included:
  - University of Central Oklahoma - large, regional, public in midwest
  - University of San Diego - mid-size, private, Catholic, liberal arts institution in the western region
  - Loyola University Maryland - mid-size, private, Jesuit, liberal arts institution in the Mid-Atlantic
  - UNC Greensboro - mid-size, research intensive, public institution in the southeast
  - Cal Poly San Luis Obispo - large, public, polytechnic institution that is part of CSU system in the western region
  - Cabrini University - small, private, Catholic, liberal arts institution in the Mid-Atlantic
Sources of Data

● Integrative Learning Pre-Survey
  ○ Administered in August/September of 2018

● Integrative Learning Post-Survey
  ○ Administered in April/May of 2019

● Evaluation of Student Work
  ○ Common integrative learning assignment offered to a series of participants within the participant pool.
  ○ Submitted at the conclusion of the academic year as a component of a RLC course or as a residential expectation.
Integrative Learning Pre- and Post-Survey
(Designed to assess student perception)

1. Original survey piloted AY ‘17-‘18 - 21 five-point Likert Scale items on pre- and post-survey instrument created based on language used in AAC&U’s Integrative Learning VALUE Rubric.

2. Revised survey implemented AY ‘18-‘19 - 24 five-point Likert Scale items on pre-survey and 27 five-point Likert Scale items on post-survey.

3. Survey assessed 4 categorical values:
   1) Reflection and Self-Assessment
   2) Connections to Experience
   3) Connections to Discipline
   4) Transfer
## Integrative Survey Validity and Reliability

- Validated the Original Survey at Cal Poly – 140+ students
- Reliability – Principal Component Analysis

### Item and Reliability Statistics – Connections to Experience Categorical Value

<table>
<thead>
<tr>
<th>Item Statistics</th>
<th>Mean</th>
<th>Std. Deviation</th>
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### Reliability Statistics

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<th>Reflection &amp; Self-Assessment</th>
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<th>Transfer</th>
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# Principal Component Analysis on the Integrative Learning Survey Instrument

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Integrative Learning Writing Assignment

- Pilot year – Used common evaluative criteria but assignment varied across institutions
- Year 2 – Developed common assignment to be used across all 6 institutions that was designed to address four of the learning outcomes outlined in AAC&U’s Integrative Learning VALUE rubric:
  1) Reflection and Self-Assessment
  2) Connections to Experience
  3) Connections to Discipline
  4) Transfer
- Norming of AAC&U’s Integrative Learning VALUE rubric amongst the research team on this assignment from upper-class students at two different institutions represented in this study
- Assessing whether a correlation exists between student perception and student performance
Sample Selection

- Completion of the Pre-Survey
  - 2,012 responses
    - 7% Cabrini; 23% Cal Poly; 17% LUM; 0% UCO; 3% UNCG; 50% USD

- Completion of the Post-Survey
  - 1,091 responses
    - 12% Cabrini; 9% Cal Poly; 21% LUM; 0% UCO; 2% UNCG; 56% USD

- Completion of both the Pre- and Post-Survey
  - 849 responses
    - 14% Cabrini; 12% Cal Poly; 16% LUM; 0% UCO; 1% UNCG; 57% USD

- Completion of the Integrative Learning Assignment
  - 351 responses
    - 4.3% Cabrini; 0.5% Cal Poly; 66.7% LUM; 0.9% UCO; 27.6% UNCG; 0% USD
Methods of Data Analysis

- **Paired Samples t Test**
  - Compare the means of pre-survey and post-survey responses within each group of participants.

- **Pearson Correlation Coefficient**
  - Determine if a relationship exists between student perception and student performance as it pertains to integrative learning practices.

- **Regression Analysis**
  - If a relationship exists between perception and performance, to determine if one influences the other.
## FINDINGS

*Paired Samples t Test*

<table>
<thead>
<tr>
<th>Categorical Value</th>
<th>Mean and Std. Deviation</th>
<th>df</th>
<th>t</th>
<th>Sig. (2-tailed)</th>
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</thead>
<tbody>
<tr>
<td>Reflection and Self-Assessment</td>
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<td>Connections to Disciplines/Courses</td>
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<tr>
<td>Transfer</td>
<td>M = 1.15614, SD = 5.47358</td>
<td>838</td>
<td>6.118</td>
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</tbody>
</table>
FINDINGS

● There was a statistically significant growth in student perception pertaining to their integrative learning practices across all four categorical values.

● Difference in means per categorical value:
  ○ Reflection and Self Assessment - 30.62 (Pre) to 29.53 (Post)
  ○ Connections to Experience - 29.27 (Pre) to 28.07 (Post)
  ○ Connections to Disciplines - 9.42 (Pre) to 9.07 (Post)
  ○ Transfer - 18.22 (Pre) to 17.06 (Post)
Discussion

- Statistical significance but not practical significance

- Mean of participant responses across all four categorical values decreased from pre- to post-survey

- Must consider inflation of pre-survey responses - is this an example of participants unconsciously inflating their skill sets or a lack of awareness of what integrative learning truly entails?

- Does that academic year educate students on how learning is integrated across contexts and as a result, post-survey responses decrease yet are accurate?
Limitations

- Generalizations within institutions
- Sample sizes at institutions varied significantly
- Student self-assessment
- Participation selection bias
- Doesn’t tell us the “how”
- As a result of…
- Only examines the learning community program at six institutions
- Each learning community program is different and, as a result, has the potential to skew data
- The quantitative research method used in this study limited the findings to the research questions that the researchers chose to test and measure
CONCLUSION  •  Next Steps

- Run separate principal component analyses on the larger pre-survey data set and the larger post-survey data set to evaluate if the clustering of questions are accurate
- Evaluate survey questions to eliminate the possibility of perception inflation
- Run paired samples t tests per institution
- Explore whether or not a correlation exists between perception and performance for those participants who completed the pre- and post-survey and submitted their integrative assignment.
- Re-run validity and reliability of this survey
- Determine whether or not we can link this portion of our study with the collaboration portion of our study to answer the larger research question posed at the start of the CEL Research Seminar.
References


This project was supported by the 2017-2019 Research Seminar on Residential Learning Communities as a High-Impact Practice, a multi-institutional research initiative hosted by Elon University’s Center for Engaged Learning (www.CenterForEngagedLearning.org).

THANK YOU - Questions?