



A MIXED METHODS APPROACH TO MEASURING INTEGRATIVE LEARNING

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LOYOLA
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MORE THAN READY. LOYOLA READY.

SESSION AGENDA

- Project overview & review of the literature
- Methodology
 - Group norming process & assignment scoring
- Project findings related to AAC&U Integrative Learning VALUE rubric areas
- Integrative learning: our next steps
- Q&A/ discussion



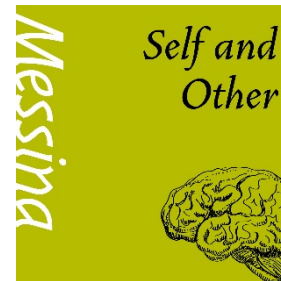
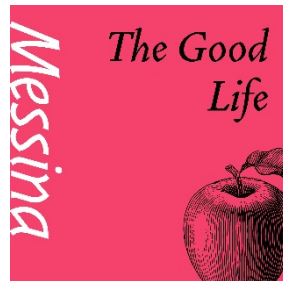
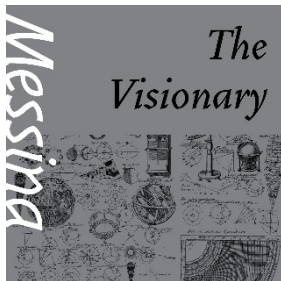
PROJECT OVERVIEW

- Research project developed as a part of Elon University Center for Engaged Learning 2017-2019 Research Seminar on Residential Learning Communities as a High-Impact Practice
<https://www.centerforengagedlearning.org/cel-seminars/residential-learning-communities/>
- This presentation will focus on [data collected](#) in 2018-2019 at Loyola University Maryland as a part of this research



MESSINA: OUR FIRST-YEAR LIVING LEARNING PROGRAM

- Two small seminar courses (one fall and one spring semester) that fulfill degree requirements
- One weekly enrichment session, covering aspects related to the college transition, experiencing Baltimore, and continued course conversations
- Events connected to the Messina themes
- More info: <https://www.loyola.edu/departments/messina>







LITERATURE ON INTEGRATIVE LEARNING

- Integrative learning is “the process by which individuals bring together experience, knowledge, and skills across contexts” (Barber, 2014)
- Helps students make “informed judgements” (Huber and Hutchings, 2004)
- Benefits beyond the undergraduate experience (Robbins, 2014). Employers want employees who have an ability to collaborate with others and have a “broad knowledge base”

RECOMMENDED LITERATURE ON INTEGRATIVE LEARNING

- Association of American Colleges & Universities (2009). Integrative learning VALUE rubric. Retrieved from <https://www.aacu.org/value/rubrics/integrative-learning>.
- Barber, J.P. (2012). Integration of learning: Grounded theory analysis of college students' learning. *American Educational Research Journal*, 49(3), 590-617.
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- Carmichael, T., & LaPierre, Y. (2014). Interdisciplinary learning works: The results of a comprehensive assessment of students and student learning outcomes in an integrative learning community. *Issues in Interdisciplinary Studies*, (32), 53-78.
- DeZure, D., Babb, M., & Waldmann, S. (2005). Integrative learning nationwide: Emerging themes and practices. *Peer Review*, 7(4), 24-29.
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- Huber, M.T., & Hutchings, P. (2004). *Integrative learning: Mapping the terrain*. Washington, DC: Association of American Colleges & Universities.
- Leonard, J. B. (2012). Integrative learning: A grounded theory. *Issues in Integrative Studies*, 30, 48-74.
- Mahoney, S. & Schamber, J. (2011). Integrative and deep learning through a learning community: A process view of self. *Journal of General Education*, 60 (4), 234-247.
- Neumann, A., & Bolitzer, L. (2014). Finding and fostering learning: What college and university leaders need to know and what they can do. *New Directions for Higher Education*, 2014(165), 95-106.
- Newell, W.H. (1999). The promise of integrative learning. *About Campus*, 4(2), 17-23.
- Newell, W.H. (2010). Educating for a complex world: Integrative learning and interdisciplinary studies. *Liberal Education*, 6-11.
- Robbins, R. (2014). AAC&U's integrative liberal learning and the CAS standards: Advising for a 21st century liberal education. *NACADA Journal*, 34(2), 26-31.
- Youngerman, E. (2018). Integrative learning in award-winning student writing: A grounded theory analysis. *AERA Open*, 4(3), 1-13.



METHODOLOGY

SUMMER 2017

Development of a pilot instrument to measure student self-perception of the practice of integrative learning

Decision to evaluate student work using a common evaluative criteria and existing student assignments

2017-2018

Pilot survey administered on all six campuses and includes 21 five-point Likert Scale items on both Pre- and Post Test instrument

Common evaluative criteria used with existing student assignments

SUMMER 2018

Principle Component Analysis of Pre-/Post-Test confirms reliability

Creation of common student assignment to be assessed using the AAC&U Integrative Learning VALUE Rubric

2018-2019

Finalized survey administered on all six campuses, includes 24 five-point Likert Scale items on Pre-Test and 27 five-point Likert Scale items on Post-Test

Common reflective assignment administered to RLC students





GROUP NORMING PROCESS & ASSIGNMENT SCORING

- Team of 7 faculty and administrators to score assignments
- Team provided a copy of norming process work conducted by the Elon Research Seminar group
- Loyola Norming meeting
 - Project Overview
 - Reviewed and discussed original Elon norming documents
 - Read, scored, and discussed two papers

Advice:

- Google Drive or other shared workspace
- Additional opportunities for group scoring
- Multiple scorers for one assignment
- Stipends for scorers if available
- Offer to provide paper copies to scorers



PROJECT FINDINGS

- Self-engaged practices of integrative learning are still an area of growth at the end of the first year
 - Ex. using knowledge vs. adapting knowledge
 - Ex. understand vs. respond
- Written assignments provided context for ways in which integrative learning opportunities were being fostered in Messina



PROJECT FINDINGS

Integrative Learning Area	Difference between overall Pre/ Post-Test Means (n=133)	Difference between overall Pre/ Post-Test Means among students also completing the writing assignment (n=34)	Writing Sample Mean (n=34)
Connections to Experience	Increase 0.01	Increase 0.08	0.53
Connections to Discipline	Decrease 0.04	Decrease 0.01	0.71
Transfer	Increase 0.02	Decrease 0.05	0.62
Reflection and Self-Assessment	Increase 0.02	Increase 0.08	1.06



PRE-TEST/ POST-TEST SCALE

- Never
- Sometimes
- About half the time
- Most of the time
- Always





AAC&U IL VALUE RUBRIC AREA: CONNECTIONS TO EXPERIENCE

Connect relevant experience and academic knowledge



CONNECTIONS TO EXPERIENCE

Item	Population	Pre-Test Mean	Post-Test Mean	Mean Difference
I have been asked or prompted to connect ideas and/or assignments learned in class to life experiences encountered outside of class (e.g., to family life, friends, residential life, extracurricular, social, or political activities)	ALL (n=133)	3.20	3.37	-0.17
	PR/PO/WR (n=34)	3.18	3.41	-0.23
Even when not asked or prompted to do so, I connect ideas and/or assignments learned in class to similar life experiences outside of class	ALL (n=133)	3.50	3.44	0.06
	PR/PO/WR (n=34)	3.26	3.53	-0.27

CONNECTIONS TO EXPERIENCE

Even when not asked or prompted to do so, I _____ gained from my experience in residential life (e.g., things I learn from my RA, fellow residents, or living on campus) in other areas of my life.

“USE KNOWLEDGE”

Population	Pre-Test Mean	Post-Test Mean	Mean Difference
ALL (n=133)	3.19	3.13	0.06
PR/PO/WR (n=34)	3.26	3.15	0.11

“ADAPT KNOWLEDGE”

Population	Pre-Test Mean	Post-Test Mean	Mean Difference
ALL (n=133)	3.27	3.37	-0.10
PR/PO/WR (n=34)	3.21	3.29	-0.08





CONNECTIONS TO EXPERIENCE

“My messina class visited many art museums such as the National Art Gallery and the Baltimore Museum of Art. The class was very challenging and engaging and I learned things about art that I never imagined I would understand. My peers began to ask me about the art that they had seen wondering who it could have been by and during what time. One specific time I remember was when I brought my friend to the Baltimore Museum of Art to show her all the breathtaking and engaging artwork my class had been shown. As she stared at a large painting about 10 foot across and 5-foot-tall, she was in awe, and I explained what the painting meant and that it was a history painting...Learning about paintings, architecture, and sculpture allowed me to recognize styles of each type of art throughout the city of Baltimore.”



AAC&U IL VALUE RUBRIC AREA: CONNECTIONS TO DISCIPLINE

Sees (makes) connections across disciplines,
perspectives

CONNECTIONS TO DISCIPLINE

Even when not asked or prompted to do so, I _____ examples, facts, and/or theories learned in one class to another class from a different discipline (e.g., biology class to an art class).

“PROVIDE”

Population	Pre-Test Mean	Post-Test Mean	Mean Difference
ALL (<i>n</i> =133)	3.21	2.98	0.23
PR/PO/WR (<i>n</i> =34)	3.29	2.85	0.44

“APPLY”

Population	Pre-Test Mean	Post-Test Mean	Mean Difference
ALL (<i>n</i> =133)	3.15	3.16	-0.01
PR/PO/WR (<i>n</i> =34)	3.21	3.18	0.03



CONNECTIONS TO DISCIPLINE

“In photography, we looked at a variety of different digital photograph mechanisms as well as a variety of different techniques and skills to make a good photograph that tells a story. In English, we looked at a variety of different literary works, including poems, novels, and short stories, as well as a variety of different techniques and skills to improve our critical analysis abilities necessary to be a good, efficient, and observatory reader...I was able to apply some skills learned in photography when analyzing photographs to English class when analyzing poems. To be specific, in photography it is important to take into consideration every aspect of the photograph including lighting, spacing, content, and more. Consequently, in English it is important to do the same but with the title, the amount of words or lines in a poem, and the form of the poem. With the help of photography, I was able to become a better reader and analyzer in English.”



AAC&U IL VALUE RUBRIC AREA: TRANSFER

Adapts and applies skills, abilities, theories, or methodologies gained in one situation to new situations

TRANSFER

Even when not asked or prompted to do so, I adapt and/or apply what I learned in one life situation in order to _____ to different situations/ issues in my life.

“UNDERSTAND”

Population	Pre-Test Mean	Post-Test Mean	Mean Difference
ALL (<i>n</i> =133)	3.68	3.71	-0.03
PR/PO/WR (<i>n</i> =34)	3.65	3.62	0.03

“RESPOND”

Population	Pre-Test Mean	Post-Test Mean	Mean Difference
ALL (<i>n</i> =133)	3.72	3.60	0.12
PR/PO/WR (<i>n</i> =34)	3.79	3.65	0.14

TRANSFER

“Coming to Loyola, I knew I wanted to enrich my college experience by not limiting myself to the constraints of the Loyola campus, but pushing myself beyond the border of the university to understand my new community and discover a new place. With that being said, I immediately got involved with CCSJ to volunteer in the Baltimore community. Having previous tutoring experience, I wanted to carry this into college and engage with children in some academic setting. By October, I was a classroom assistant at [school name and grade of students] of 30 kids. I made myself start with an open mind, and my prep sessions stressed that this would be a difficult setting to work in, but I was willing to take on the challenge. Before this, I only had experience at a high achieving public school and the environment was definitely less chaotic. But at [school name], the halls were loud, making it hard for the kids to focus, and parents are pretty disengaged. Although this was hard to see, I wanted to understand why it was so drastically different than the elementary school near my house. First semester, I was enrolled in Effective Writing class and one assignment was a personal research essay on any topic we chose. I decided to research poverty’s influence in the classroom to help make sense of my experience at [school name]. While conducting the research, I included my previous expectations and the results I found to show how the data and other facts supported my observations of the school as a classroom assistant. Because of this unique academic opportunity, I was able to connect my education to my personal experience ultimately allowing me to learn more.”





AAC&U IL VALUE RUBRIC AREA: TRANSFER

- Difference significantly dropped between PR/PO among students that also completed assignment.
-0.02 (n=133) versus 0.05 (n=34)
- This was surprising as students completing the writing assignment provided basic examples of connecting learning to campus job, service and family conversations.



AAC&U IL VALUE RUBRIC AREA: REFLECTION AND SELF-ASSESSMENT

Demonstrates a developing sense of self as a learner, building on prior experiences to respond to new and challenging contexts (may be evident in self-assessment, reflective, or creative work)

REFLECTION AND SELF-ASSESSMENT

When evaluating my learning, I use specific information about _____ in order to improve the next time.

“WHAT I DID WELL”

Population	Pre-Test Mean	Post-Test Mean	Mean Difference
ALL (n=133)	3.79	3.86	-0.07
PR/PO/WR (n=34)	3.71	4.12	-0.41

“WHAT CHALLENGED ME”

Population	Pre-Test Mean	Post-Test Mean	Mean Difference
ALL (n=133)	3.95	4.03	-0.08
PR/PO/WR (n=34)	3.97	4.03	-0.06

REFLECTION AND SELF-ASSESSMENT

Item	Population	Pre-Test Mean	Post-Test Mean	Mean Difference
When evaluating my learning, I take steps to revise my educational plans for how I will approach learning in the future.	ALL (n=133)	3.62	3.75	-0.13
	PR/PO/WR (n=34)	3.65	3.71	-0.06
When evaluating my learning, I can explain how I have improved compared to prior experiences.	ALL (n=133)	3.68	3.79	-0.11
	PR/PO/WR (n=34)	3.79	3.74	0.05

REFLECTION AND SELF-ASSESSMENT

“However, I found information from my psychology course to be most helpful, as I am a student-athlete at Loyola. I was able to understand a lot of things about myself that I experience on the court because of what I experienced in that class. For example, we learned about personality in our class such as the big five personality traits. I discovered why I have the energy I have on the court because of this. I now understand that my big personality on the court transfers from my extraverted personality in my life, especially with friends. I also know that I am able to perform very well under pressure. This became evident to me when we talked about health psychology and coping in our class. For example, I understand now that the stress that I have is good stress because it acts as a motivator to help me perform. It is the coping strategies and conditioning that I have experienced through years of practice that help me block out the noise and [description of sport activity], for example.”

REFLECTION AND SELF-ASSESSMENT

- Mean writing samples were highest in this area. Students described differences from high school to college life- including acclimation to managing schedule/ time management and discovery in how learning styles shifted given new expectations of them in college.

CONNECTING THE WRITTEN PROMPT TO MESSINA LEARNING OUTCOMES

- Jesuit Mission & Values: examples of discernment/reflection; personal growth during first year
- Critical Understanding: academic habits; use of campus resources
- Connections to Loyola Community: professional, peer, and student leader support; belonging; co-curricular engagement
- Integrated Learning: beyond the classroom experiences; Messina course and non-Messina course experiences

APPLICATION OF DATA

- [Messina Integrated Teaching Grants](#)
- Framing integrative learning for students
 - Fall Welcome Weekend Session
 - [Messina Module](#)
- Presenting these findings to our Messina working groups (faculty, mentors, peer leaders)



SUPPORTING INTEGRATIVE LEARNING THROUGHOUT THE FIRST YEAR

Before Our Students Arrive

- Building in connections between fall and spring Messina experiences, including enrichment and course connections

First Month

- Naming when integrative learning is happening
- Providing context for projects, assignments or activities
- Reviewing expectations about the experience (Messina learning outcomes, course learning outcomes, etc.)

SUPPORTING INTEGRATIVE LEARNING THROUGHOUT THE FIRST YEAR

First Semester

- After attending theme-wide event assigning reflective prompts or discussing theme event content in class or enrichment

Second Semester

- After attending theme-wide event assigning reflective prompts or discussing theme event content in class or enrichment
- Change the question: **HOW** does this connect to your first semester?

SUPPORTING INTEGRATIVE LEARNING THROUGHOUT THE FIRST YEAR

Throughout the First Year

- 1 on 1 conversations: where are you seeing connections in your learning- in and outside of the classroom?
- Resume/ career conversations: having students consider the skills/experience they are gaining- how would they describe this on paper and in an interview?

END OF THE YEAR REFLECTIVE QUESTIONS

- Write down the topics of all of the courses you are taking this year. Think about the content of those courses. **Can you think about any overlap of concepts/ theories/ topics in one or more of these courses?**
- Write down the things you got involved in this year. These could include a campus job, club, organization, sports team, event participation, leadership role or something not listed. Think about your membership/engagement in these things. **Can you think about any overlap in your engagement from one thing to another? What about engagement in a club and work in a course?**

END OF THE YEAR REFLECTIVE QUESTIONS

- Write down the topics of your two Messina classes and some of the things you did/learned about as a part of the Messina course and/or enrichment. **What connections can you make between content covered in those classes?**
- Can you think of examples of times where you applied knowledge gained in one context (e.g., the classroom, a book, an event, your Messina experience, your job, your relationships with others) to a new, different context? **How did you do this?**
- During your first year of college, **what have you discovered about yourself regarding how you learn?** Describe the courses, experiences, and/or situations that contributed to this understanding.

NEXT STEPS

- Revised instrument to capture experiences in Residential Learning Communities as well as Learning Communities without a residential component (33 question instrument)
- If you would like to administer this on your campus in Fall 2020, please email mewade@Loyola.edu

How do these results either...

- Affirm work you are already doing on your campus in this area?
- Provide something to consider as you think about your work on campus in this area?