

Moving Students to Read: Unpacking the Relationship with Reflective and Integrative Learning

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Research Questions

To date, very little is known about how reading motivation may vary among diverse groups of students studying at four-year institutions. Focusing on senior students, this study intends to explore the differences in intrinsic reading motivation by students' demographic background and academic majors. We also set out to examine the relationship between intrinsic reading motivation and an aspect of deep approaches to learning, reflective and integrative learning.

This study is guided by the following research questions:

1. What student background characteristics and college academic experiences (disciplinary field of study) are associated with seniors' intrinsic reading motivation?
2. To what extent is intrinsic reading motivation of senior students related to their engagement in reflective and integrative learning?
3. Does disciplinary fields moderate the impact of intrinsic reading motivation on seniors' engagement in reflective and integrative learning?

Literature

- *Disciplinary Differences in Reading Motivation* A number of reasons gave rise to college students' reading apathy, such as lack of self-confidence, low interests in the subject matters, large amount of readings with limited time (e.g. Hoelt, 2012; Lei et al., 2010), and disciplinary differences (e.g. Howard, 2004; NSSE, 2013). The nature of different disciplinary areas leads to different expectations on student reading, which also leads to different levels of processing and comprehension (Wambach, 1999). National Survey of Student Engagement (2013) found an indirect relationship between student reading motivation and the amount of time students spent on reading.
- *Approaches to Learning* The notion of "approaches to learning" (Ramsden, 1988; Biggs, 1979); the notion of "deep approaches to learning" and how it contributes to achieving a deep learning outcome (Biggs, 1987); an brief introduction of "deep approaches to learning" and how it varies among different disciplinary areas (Nelson Laird, Shoup, Kuh, & Schwarz, 2008).
- *Reflective and Integrative Learning (RIL)* As an important component of "deep approaches to learning", RIL contributes to promoting student learning outcomes (e.g. Huber, Hutchings, Gale, Miller, & Breen, 2007).

Data Source, Samples, and Measures

- Data source: 2013 administration of National Survey of Student Engagement (NSSE)
- The samples of this study included 12,383 senior college students at four-year institutions in the U.S.; utilizing Biglan's (1973) classification of subject matters, this study categorized 137 students' self-reported majors into four categories: hard-pure, soft-pure, hard-applied, soft-applied.
- Two dependent variables were Intrinsic Reading Motivation scale (Cronbach's $\alpha = .67$) and Reflective and Integrative Learning scale (Cronbach's $\alpha = .88$). Intrinsic Reading Motivation is a component of four items that asked students the extent they agreed with the following statements: I am interested in the topic; I enjoy reading of any kind; I respect the instructor; and the reading material is easy to understand. Reflective and Integrative Learning is created by averaging seven items regarding students' experiences in connecting one's knowledge with other courses and problems, reflecting one's own thinking, and examining other's viewpoints.

Analyses

- RQ1: Descriptive analyses and an Ordinary Least Squares (OLS) regression were used to explore the relationship between Intrinsic Reading Motivation and demographic background (gender, race and ethnicity, first generation status, age) and academic characteristics (enrollment status, time spent on reading, online courses, grades, degree expectations, major). We included Carnegie classification and Barron's selectivity as control for the institutional context.
- RQ2: An OLS regression was used to examine the relationship between Intrinsic Reading Motivation and Reflective and Integrative Learning, holding all other student and institutional characteristics constant.
- RQ3: An interaction term between Intrinsic Reading Motivation and Biglan's academic fields was entered into the OLS regression based on the analysis of the second research question.

Highlighted Findings

1. *What student background characteristics and college academic experiences (disciplinary field of study) are associated with seniors' intrinsic reading motivation?*

A variety of student and institutional characteristics were significant predictors of Intrinsic Reading Motivation. Senior college students who were female ($B = .10, p < .001$), Hispanic or Latino ($B = .14, p < .001$), non-traditional-aged students ($B = .18, p < .001$), or who earned mostly A's in their self-reported grades, had a degree expectations of a doctoral degree ($B = .23, p < .001$), or majored in soft-pure fields ($B = .15, p < .001$) had the highest level of Intrinsic Reading Motivation. Students attending non- or less competitive institutions ($B = .07, p < .001$) or competitive institutions ($B = .06, p < .001$), or attending baccalaureate institutions had the highest Intrinsic Reading Motivation. See more details in Table 5.

2. *To what extent is intrinsic reading motivation of senior students related to their engagement in reflective and integrative learning?*

After holding all else constant, Intrinsic Reading Motivation ($B = .24, p < .001$) had a positive and significant relationship with Reflective and Integrative Learning. Again, the model was significant ($F = 98.354, p < .001$) and adjusted R^2 suggests 16% of the variance in Reflective and Integrative Learning can be explained by predictors in this model. More details can be found in Table 6 in the full paper.

3. *Does disciplinary fields moderate the impact of intrinsic reading motivation on seniors' engagement in reflective and integrative learning?*

An interaction term was added into the model to determine whether the effect of Intrinsic Reading Motivation on Reflective and Integrative Learning varied by disciplinary fields. Results from Table 6 reveal interaction terms were non-significant, meaning the disciplinary context did not moderate the effect. In other words, the positive relationship between Intrinsic Reading Motivation and Reflective and Integrative Learning did not significantly vary among the four disciplinary fields (using soft-applied as the reference group).

Significance

- This study is very important for faculty members and learning advisors to understand the different levels of intrinsic reading motivation reported by students with different backgrounds.
- College student themselves can also see their intrinsic reading motivation and reflective and integrative learning skills mirrored in this study.

Discussion and Recommendations

- Further studies need to investigate the reasons that why male students, multiracial students, and traditional-aged students had low intrinsic reading motivation.
- Students in soft-pure fields had the highest level of intrinsic reading motivation and students in hard-applied fields had the lowest. If faculty members want to promote the reading motivation of students, making students clearly understand the reading expectations may be very helpful.
- This study also found that students, who have a higher degree of expectations, tend to have greater intrinsic motivation to read. This finding implies the significance of understanding the requirement and expectations of readings in enhancing students' reading motivation.
- This study found that the lower grades students obtained the lower intrinsic reading motivation that students had. This is very important for faculty members and advisors to identify students who are at-risk and provide them sufficient support and resources to promote their reading motivation in order to avoid a vicious circle in study.
- Instructional practices, such as pop quizzes, emphasis on benefits of reading, small-group "book clubs", and graded journals, are believed to be effective incentives for promoting reading motivation (e.g. Brost & Bradley, 2006; Connor-Greene, 2000; Hobson, 2004; Lei et al., 2010; Lewis, 2004). Although those reading intervention strategies have been familiar with students since their K-12 education and can be access easily and freely, faculty members should reexamine them and consider how to adjust those strategies in order to fit college-level courses.
- It is important for faculty to adjust course designs and pedagogies promptly based on students' preferences and expectations on reading.
- This study found a positive relationship between students' intrinsic reading motivation and reflective and integrative learning. In order to support student to develop deep approaches to learning, faculty members and advisors should think about ways to promote students' intrinsic reading motivation, which has a positive association with reflective and integrative learning—an important component of deep approaches to learning.
- It is important for students themselves to establish the ownership of their learning and intentionally enhance their motivation in reading.

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Table 5.

Regression Results of Student Characteristics and Intrinsic Reading Motivation

Student Characteristics	Intrinsic Reading Motivation ^a		
	B	SE of B	Sig.
(Constant)	-.01	.05	
Female	.10	.02	***
Race/Ethnicity (White (non-Hispanic)= reference group)			
Asian, Native Hawaiian, or Other Pacific Islander	.04	.07	
Black or African American	.07	.04	*
Hispanic or Latino	.14	.03	**
Multiracial	-.19	.07	**
Other	.03	.03	
First generation students	.00	.02	
Traditional age	-.18	.02	***
Full-time	-.04	.02	
Taking courses all online	.04	.04	
Grades (A = reference group)			
Mostly Bs	-.15	.02	***
Cs or lower	-.33	.04	***
Educational Aspirations (Baccalaureate or less = reference group)			
Master's degree	.11	.02	***
Doctoral degree	.23	.03	***
Time spend on reading every week	.02	.00	***
Biglan's academic fields (Soft applied = reference group)			
Hard pure	-.09	.03	**
Soft pure	.15	.02	**
Hard applied	-.15	.03	***
Barron's selectivity (Very or highly competitive = reference group)			
Non- or less competitive	.07	.03	*
Competitive	.06	.02	**
Carnegie classification (Baccalaureate = reference group)			
Doctoral and Research	-.14	.03	***
Master's	-.09	.03	**
Other Carnegie type	.09	.11	
<i>R</i>	.066		
Adjusted <i>R</i> ²	.065		
<i>F</i>	38.232***		

Note. * p<.05, ** p<.01, ***p<.001, two-tailed.

^a Dependent variable was standardized prior to entry into the model.

Table 6.

Regression Results of Regression Results of Intrinsic Reading Motivation and Reflective and Integrative Learning

Student Characteristics	Reflective and Integrative Learning ^a					
	B	SE of B	Sig	B	SE of B	Sig
(Constant)	-.63	.05	***	-.64	.05	***
Female	.01	.02		.01	.02	
Race/Ethnicity (White (non-Hispanic)= reference group)						
Asian, Native Hawaiian, or Other Pacific Islander	-.07	.06		-.07	.06	
Black or African American	.03	.03		.03	.03	
Hispanic or Latino	.03	.03		.03	.03	
Multiracial	.07	.07		.07	.07	
Other	-.06	.03	*	-.06	.03	*
First generation students	.02	.02		.01	.02	
Traditional age	.06	.02	**	.06	.02	**
Full-time	.13	.02	***	.13	.02	***
Taking courses all online	.04	.04		.04	.04	
Grades (A = reference group)						
Mostly Bs	-.10	.02	***	-.10	.02	***
Cs or lower	-.16	.04	***	-.16	.04	***
Educational Aspirations (Baccalaureate or less = reference group)						
Master's degree	.20	.02	***	.20	.02	***
Doctoral degree	.36	.02	***	.36	.02	***
Time spend on reading every week	.02	.00	***	.02	.00	***
Biglan's academic fields (Hard applied = reference group)						
Hard pure	.02	.03		.03	.03	
Soft pure	.47	.03	***	.47	.03	***
Soft applied	.38	.03	***	.38	.03	***
Barron's selectivity (Very or highly competitive = reference group)						
Non- or less competitive	-.07	.03	**	-.07	.03	**
Competitive	-.05	.02	*	-.05	.02	*
Carnegie classification						
Doctoral and Research	-.02	.03		-.02	.03	
Master's	-.01	.03		-.02	.03	
Other Carnegie type	.25	.11	*	.25	.11	*
Intrinsic Reading Motivation	.25	.01	***	.25	.02	***
Interaction Term						
IRM×Hard Pure				.05	.03	
IRM×Soft Pure				.00	.03	
IRM×Soft Applied				.00	.02	
R	.16			.16		
Adjusted R ²	.16			.16		
F	98.354***			87.558***		

Note. * $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed.

IRM: Intrinsic Reading Motivation

^a Dependent variable and Intrinsic Reading Motivation were standardized prior to entry into the model.