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Learning is collaborative work. Collaborative learning requires students to mutually raise questions, seek understandings, and search for solutions in interactive group settings. Instructors emphasizing collaborative learning motivate students to learn from each other through peer teaching and knowledge exchange. This document provides basic findings for the FSSE Scale Collaborative Learning.

## Data Description

The data from this brief come from the 2013-2015 administrations of the Faculty Survey of Student Engagement (FSSE). FSSE collects information annually at hundreds of four-year colleges and universities from faculty who teach at least one undergraduate course in the current academic year. The results provide information about faculty expectations for student engagement in educational practices that are empirically linked with student learning and development. Institutions use their data to identify aspects of the undergraduate experience that can be improved through changes in policy and practice. For more information, visit the FSSE website: [fsse.indiana.edu](http://fsse.indiana.edu). The sample of faculty in this data consist of 43,932 faculty responses from 327 four-year colleges and universities. In instances where institutions participated in more than one administration, the most recent year's data was used.

## Item Information

Collaborative Learning consists of four items on the FSSE survey. Information on these four items can be found in Tables 1 and 2. Table 1 contains counts, means, standard deviations, and factor loadings for all three items. Table 2 contains frequency percentages for all of the items' response options.

Table 1  
Collaborative Learning Item Descriptives

**Please answer the following questions based on *one particular* undergraduate course section you are teaching or have taught during the current school year. In your selected course section, how much do you encourage students to do the following?**

*Response options: 4=Very much, 3=Quite a bit, 2=Some, 1=Very little*

	Count	Mean	Std. Dev.	Factor Loading
Ask other students for help understanding course material ( <i>fCLaskhelp</i> )	36,086	2.85	.977	.880
Explain course material to other students ( <i>fCLexplain</i> )	35,760	2.75	.994	.872
Prepare for exams by discussing or working through course material with other students ( <i>fCLstudy</i> )	35,747	2.75	1.026	.811
Work with other students on course projects or assignments ( <i>fCLproject</i> )	35,791	2.78	1.050	.717

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Table 2  
Collaborative Learning Item Frequencies

**Please answer the following questions based on *one particular* undergraduate course section you are teaching or have taught during the current school year. In your selected course section, how much do you encourage students to do the following?**

*Response options: 4=Very much, 3=Quite a bit, 2=Some, 1=Very little*

	Very much (%)	Quite a bit (%)	Some (%)	Very little (%)
Ask other students for help understanding course material ( <i>fCLaskhelp</i> )	32.1	30.1	28.6	9.2
Explain course material to other students ( <i>fCLexplain</i> )	28.9	29.0	30.8	11.3
Prepare for exams by discussing or working through course material with other students ( <i>fCLstudy</i> )	29.2	30.7	26.0	14.1
Work with other students on course projects or assignments ( <i>fCLproject</i> )	31.9	28.6	24.8	14.6

## Scale Information

The individual items within Collaborative Learning are combined together to create the Collaborative Learning scale. First, the individual responses are recoded to a 0 to 60 scale: *Very much* = 4 is recoded to 60, *Quite a bit* = 3 is recoded to 40, *Some* = 2 is recoded to 20, and *Very little* = 1 is recoded to 0.

Individual faculty responses on this 0-60 scale are then averaged together to create an aggregate scale score. Information on the Collaborative Learning Scale can be found in Table 3.

Table 3  
Collaborative Learning Scale Descriptives

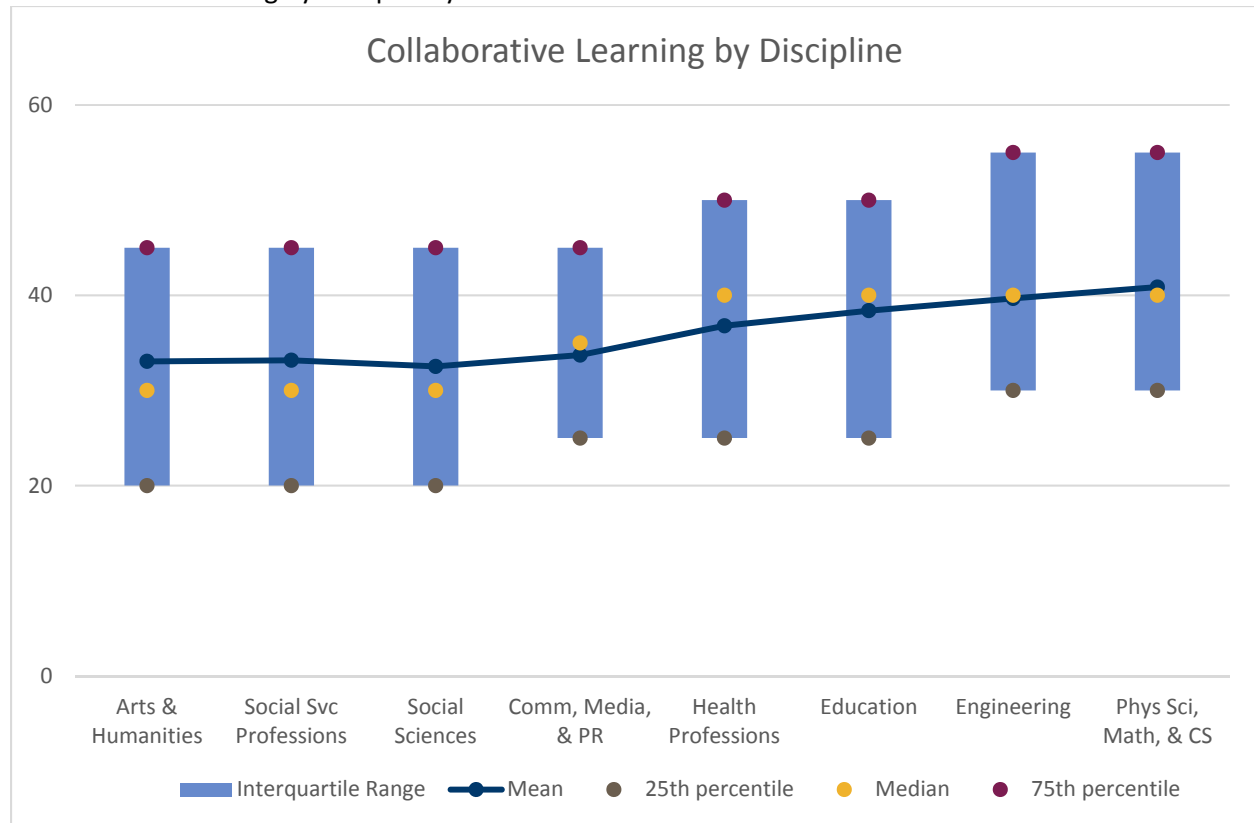
Count	Minimum	Maximum	Mean	Std. Dev.	Cronbach's Alpha	ICC
35,023	0	60	35.71	16.582	.836	.0301

## Disciplinary Differences

Collaborative Learning varies greatly by faculty's disciplinary appointment. Faculty that display the greatest levels of encouragement for Collaborative Learning are in the fields of Physical Sciences, Mathematics, and Computer Science; Engineering; and Education. Faculty that display the lowest levels of encouragement for Collaborative Learning are in the fields of Arts and Humanities; Social Service Professions; and Social Sciences. There is noticeable variation within disciplinary areas as well. For example, Communications, Media and Public Relations faculty have a relatively small interquartile range suggesting that faculty in this field more consistently encourage collaborative learning within their field. Other fields, such as Health Professions, have a larger interquartile range suggesting that faculty in this field have a greater diversity in their levels of encouragement for aspects of collaborative learning. The variation of Collaborative Learning among faculty from different disciplinary areas can be found in Figure 1.

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Figure 1  
Collaborative Learning by Disciplinary Area



## Correlations

Table 4 presents correlations between Collaborative Learning and the remaining FSSE Scales. Faculty who place greater importance on aspects of Collaborative Learning emphasize more effective Learning Strategies, Student-Faculty Interaction, and Quantitative Reasoning in their courses, and employ more frequent Effective Teaching Practices in their courses.

Table 4

Correlations between Collaborative Learning and other FSSE scales ( $p < .01$ )

Higher-Order Learning ( $r = .209$ )	Reflective & Integrative Learning ( $r = .151$ )	Effective Teaching Practices ( $r = .239$ )
Quantitative Reasoning ( $r = .272$ )	Discussions with Divers Others ( $r = .154$ )	Quality of Interactions ( $r = .058$ )
Learning Strategies ( $r = .422$ )	Student-Faculty Interaction ( $r = .289$ )	Supportive Environment ( $r = .208$ )

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## Our Related Papers

For more information about FSSE and Collaborative Learning see the following publications, conference papers and presentations, research reports or other FSSE investigations focused on Collaborative Learning:

- Ribera, T., Ribera, A.K., BrckaLorenz, A., & Nelson Laird, T.F. (June, 2012). [Faculty fostering collaborative learning and personal and social responsibility](#). Paper presented at the Association for Institutional Research Annual Forum, New Orleans, LA .
- National Survey of Student Engagement. (2013). Selected results: Learning with peers. A Fresh Look at Student Engagement—Annual Results 2013. Bloomington, IN Indiana Center for Postsecondary Research.  
[http://nsse.indiana.edu/NSSE\\_2013\\_Results/pdf/NSSE\\_2013\\_Annual\\_Results.pdf#page=16](http://nsse.indiana.edu/NSSE_2013_Results/pdf/NSSE_2013_Annual_Results.pdf#page=16)

## Predictors

Some types of faculty and types of courses are more or less likely to place greater importance on aspects of Collaborative Learning. Table 5 presents significant ( $p < .001$ ) predictors for increased encouragement of Collaborative Learning by faculty and course characteristics. Following Table 5 are figures representing the average Collaborative Learning differences by these faculty and course characteristics.

Table 5  
Significant Faculty and Course Characteristics Predictors for Collaborative Learning

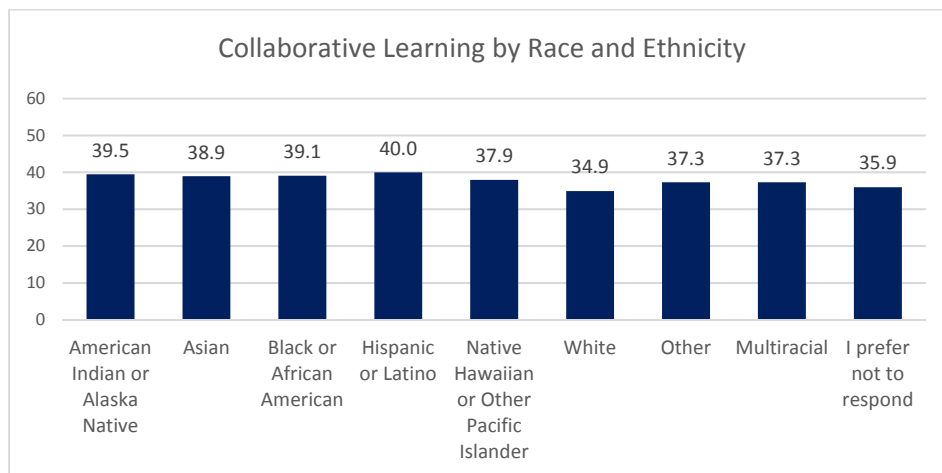
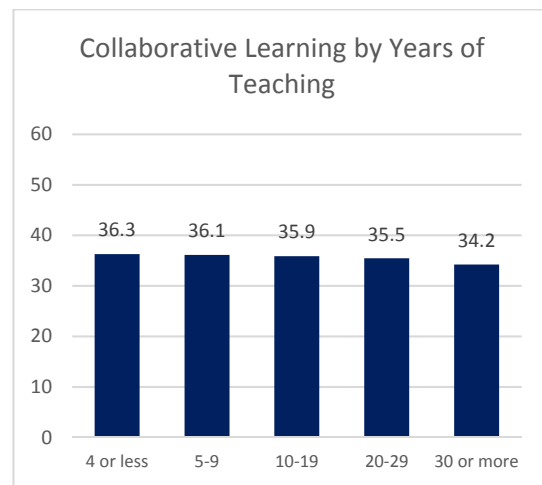
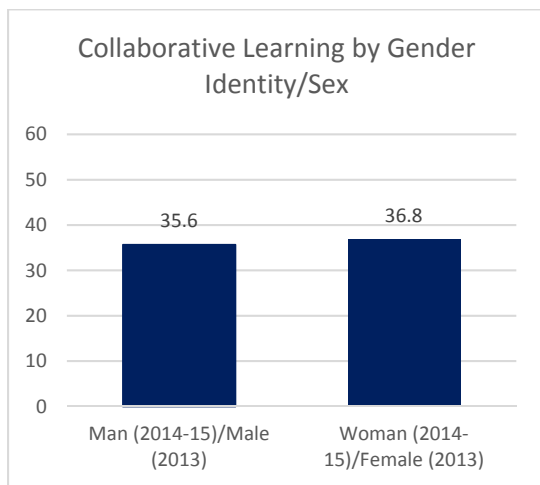
		Unstd. B	Std. Error
Woman/Female ( <i>Man/Male as reference</i> )		.106	.013
Racial/Ethnic identification ( <i>White as reference</i> )	Asian, Native Hawaiian, or other Pacific Islander	.111	.030
	Black or African American	.213	.029
	Hispanic or Latino	.295	.036
	American Indian, Alaska Native, other, multiracial	.164	.030
Disciplinary area ( <i>Arts &amp; Humanities as reference</i> )	Biological Sciences, Agriculture, & Natural Resources	.378	.027
	Physical Sciences, Mathematics, & Computer Science	.494	.023
	Business	.173	.026
	Education	.307	.025
	Engineering	.433	.036
	Health professions	.210	.027
	All other disciplines	.114	.028
Faculty have taught 20 or more years (Taught less than 20 years as reference)		-.058	.016
Course format ( <i>classroom instruction on-campus as reference</i> )	Distance education	-.465	.026
	Combination of classroom and distance format	.101	.023

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Notes: All continuous variables were standardized before entry in the model so that unstandardized coefficients can be interpreted similar to effect sizes. The following faculty-level independent variables were included in the model but were not significant ( $p < .001$ ): course division, earned doctorate, selected course size, age, citizenship, faculty who responded another to the gender identity, faculty who preferred to not respond to the gender identity, faculty who preferred to not respond to the racial/ethnic identification, faculty new to teaching, general education requirement, faculty taught a course at auxiliary location format, sexual orientation; and faculty in Social Sciences; Communications, Media, and Public Relations; and Social Service Professions. The following institution-level independent variables were included in the model but were not significant ( $p < .001$ ): control and Carnegie classification. Faculty ranks, tenure status, and undergraduate enrollment size were originally included into the model but were taken out, because the VIF of those independent variables were larger than 2, which indicated potential issues in multicollinearity.

## Predictor Follow-up

In the following figures represent the average Collaborative Learning scores by the faculty and course characteristics found to be predictive of Collaborative Learning in Table 5.



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