IUPUI

National Survey of Student Engagement

Report for

School of Informatics and Computing

2018

Welcome to the 2018 School of Informatics and Computing NSSE Report

The National Survey of Student Engagement (NSSE) was developed to document dimensions of quality in undergraduate education and provides information and assistance to colleges, universities, and other organizations to improve student learning. The final NSSE report consists of 12 scales, referred to as Engagement Indicators. These Engagement Indicators are grouped into four over-arching themes: Academic Challenge, Learning with Peers, Experiences with Faculty, and Campus Environment. In addition, NSSE also asks students about their engagement in High Impact Practices (HIPs) and the amount of time they spend engaged in various activities.

The following report is a summary of responses from the School of Informatics and Computing compared to students enrolled in other programs at IUPUI that participated in NSSE. This report uses effect size to quantify differences between your school and peer means. Effect size is a measure of the magnitude of the difference between two means. Effect size differences for the NSSE Engagement Indicators can be interpreted at the number of standard deviations between the mean for your school and the mean for students majoring in similar programs at IUPUI peer institutions. Items are labeled as "Areas of Strength" (an effect size of 0.21 standard deviations greater than the benchmark programs average), "Asset to Protect" (between 0.05 and 0.2 standard deviations), "Issue to be Mindful of" (between -0.05 and -0.2 standard deviations below), and "Opportunity for Improvement" (-0.21 or more below the mean). A total of 25 First-year and 62 Senior students in the School of Informatics and Computing had completed the survey.

IUPUI's Vision

To be a leading urban research institution recognized for the success of its students, its advances in health and life sciences, and its intellectual, economic, and cultural contributions to the well-being of the citizens of Indianapolis, the state of Indiana, and beyond.

Key Highlights Overall

- Thirty-seven percent of Senior respondents plan to work more than 20 hours for pay off campus weekly and forty-five percent of Seniors plan to spend more than 20 hours a week preparing for class.
- Twenty-nine percent of First Year respondents plan to spend more than 20 hours a week **preparing for clas**s but only ten percent expect to spend more than 20 hours working for pay off campus.
- Informatics and Computing First Years had 40% more participation in a learning community and 10% more in service-learning.
- There is a large significant difference between Informatics and other Seniors, with Informatics Seniors rating higher on average, for **Reflective and Integrative Learning**, **Higher-Order Learning, Learning Strategies**, **Student-Faculty Interaction**, **Effective Teaching Practices, and Quality of Interactions**. They rated significantly and largely lower in **Collaborative Learning**.

The table below displays the NSSE Engagement Indicators that are considered "Areas of Strength" and "Opportunities for Improvement" for the School of Informatics and Computing. For more information about the NSSE Engagement Indicators or the NSSE in general, please see http://nsse.indiana.edu/html/engagement_indicators.cfm.

Areas of Strength and Opportunities for Improvement

	Areas of Strength	Opportunities for Improvement
Seniors	Higher-Order Learning Reflective and Integrative Learning Learning Strategies Student-Faculty Interaction Effective Teaching Practices Quality of Interactions Supportive Environment	Quantitative Reasoning Collaborative Learning
First Year	Reflective and Integrative Learning Learning Strategies Student-Faculty Interaction Effective Teaching Practices Quality of Interactions	Higher-Order Learning Quantitative Reasoning Collaborative Learning Supportive Environment

Table 1
Academic Challenge
Senior

	N	Mean	Standard Deviation	Peer Mean	Effect Size
Higher-Order Learning [a][1]	**51**	**42.5**	**12.2**	**37.1**	**1.51**
Applying facts, theories, or methods to practical problems or new situations	54	3.15	0.71	3.3	
Analyzing an idea, experience, or line of reasoning in depth by examining its parts	52	3.17	0.83	3.0	
Evaluating a point of view, decision, or information source	53	3.04	0.83	2.4	
Forming a new idea or understanding from various pieces of information	52	3.08	0.74	2.7	
Reflective & Integrative Learning [b][1]	**56**	**38.4**	**12.0**	**31.3**	**2.06**
Combined ideas from different courses when completing assignments	60	3.08	0.83	2.9	
Connected your learning to societal problems or issues	59	2.71	0.93	2.3	
Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	57	2.40	0.94	1.8	
Examined the strengths and weaknesses of your own views on a topic or issue	58	2.84	0.77	2.5	
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	58	3.12	0.73	2.7	
Learned something that changed the way you understand an issue or concept	55	2.93	0.77	2.8	
Connected ideas from your courses to your prior experiences and knowledge	56	3.29	0.73	3.0	
Learning Strategies [b][1]	**52**	**39.7**	**15.9**	**35.1**	**1.17**
Identified key information from reading assignments	52	3.13	0.79	2.8	
Reviewed your notes after class	52	2.83	1.04	2.8	
Summarized what you learned in class or from course materials	52	3.00	0.93	2.7	
Quantitative Reasoning [b][4]	**51**	**31.6**	**16.8**	**33.7**	**-0.53**
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	52	2.79	0.85	3.1	
Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	51	2.49	1.01	2.4	
Evaluated what others have concluded form numerical information	52	2.50	0.96	2.5	

[a] 1=Very Little, 2=Some, 3=Quite a bit, 4=Very much
[b] 1=Never, 2=Sometimes, 3=Often, 4=Very Often
[1] Area of Strength [2] Asset to Protect [3] Issue to be Mindful of [4] Opportunity for Improvement

Table 2
Learning with Peers
Senior

	N	Mean	Standard Deviation	Peer Mean	Effect Size
Collaborative Learning [a4]	**60**	**30.3**	**13.5**	**39.5**	**-2.48**
Asked another student to help you understand course material	60	2.45	0.79	2.8	
Explained course material to one or more students	61	2.70	0.86	3.0	
Prepared for exams by discussing or working through course material with other students	61	2.16	0.99	2.9	
Worked with other students on course projects or assignments	61	2.82	1.01	3.2	
Discussions with Diverse Others [a2]	**51**	**43.1**	**12.7**	**42.4**	**0.18**
People from a race or ethnicity other than your own	52	3.23	0.81	3.2	
People from an economic background other than your own	52	3.15	0.72	3.1	
People with religious beliefs other than your own	52	3.12	0.81	3.1	
People with political views other than your own	51	3.06	0.79	3.0	

[a] 1=Never, 2=Sometimes, 3=Often, 4=Very Often
[1] Area of Strength [2] Asset to Protect [3] Issue to be Mindful of [4] Opportunity for Improvement

Table 3
Experiences with Faculty
Senior

	N	Mean	Standard Deviation	Peer Mean	Effect Size
Student-Faculty Interaction [b1]	**53**	**26.0**	**18.0**	**20.6**	**1.33**
Talked about career plans with a faculty member	56	2.70	1.03	2.2	
Worked w/faculty on activities other than coursework (committees, student groups, etc.)	56	2.09	1.16	1.9	
Discussed course topics, ideas, or concepts with a faculty member outside of class	55	2.24	1.05	2.1	
Discussed your academic performance with a faculty member	54	2.24	0.99	2.0	
Effective Teaching Practices [a1]	**52**	**39.3**	**14.1**	**34.0**	**1.42**
Clearly explained course goals and requirements	53	2.98	0.84	2.9	
Taught course sessions in an organized way	53	2.94	0.84	2.8	
Used examples or illustrations to explain difficult points	53	2.98	0.93	2.9	
Provided feedback on a draft or work in progress	52	2.85	1.04	2.3	
Provided prompt and detailed feedback on tests or completed assignments	52	3.02	0.85	2.5	

[a] 1=Very Little, 2=Some, 3=Quite a bit, 4=Very much
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[1] Area of Strength [2] Asset to Protect [3] Issue to be Mindful of [4] Opportunity for Improvement

Table 4
Campus Environment
Senior

	N	Mean	Standard Deviation	Peer Mean	Effect Size
Quality of Interactions [b1]	**45**	**43.8**	**10.1**	**38.9**	**1.47**
Students	49	5.57	1.28	5.6	
Academic advisors	52	5.38	1.54	4.6	
Faculty	52	5.77	1.11	4.9	
Student Services Staff (career services, student activities, housing, etc.)	36	5.11	1.49	4.6	
Other administrative staff and offices (registrar, financial aid, etc.)	46	4.89	1.37	4.5	
Supportive Environment [a1]	**51**	**31.7**	**12.5**	**29.8**	**0.52**
Providing support to help students succeed academically	51	2.90	0.90	2.8	
Using learning support services (tutoring services, writing center, etc.)	50	2.82	0.92	2.6	
Encouraging contact among students from diff. backgrounds (soc., racial/eth., relig., etc)	51	2.84	0.90	2.5	
Providing opportunities to be involved socially	51	2.88	0.95	2.7	
Providing support for your overall well-being (recreation, health care, counseling, etc.)	51	2.57	0.81	2.6	
Helping you manage your non-academic responsibilities (work, family, etc.)	51	1.92	1.00	1.9	
Attending campus activities and events (performing arts, athletic events, etc.)	51	2.43	0.83	2.5	
Attending events that address important social, economic, or political issues	50	2.32	0.94	2.2	

[a] 1=Very Little, 2=Some, 3=Quite a bit, 4=Very much
[b] Stem= "Indicate the quality of your interactions with the following people at your institution"; 1= "Poor", 7 = "Excellent"
[1] Area of Strength [2] Asset to Protect [3] Issue to be Mindful of [4] Opportunity for Improvement
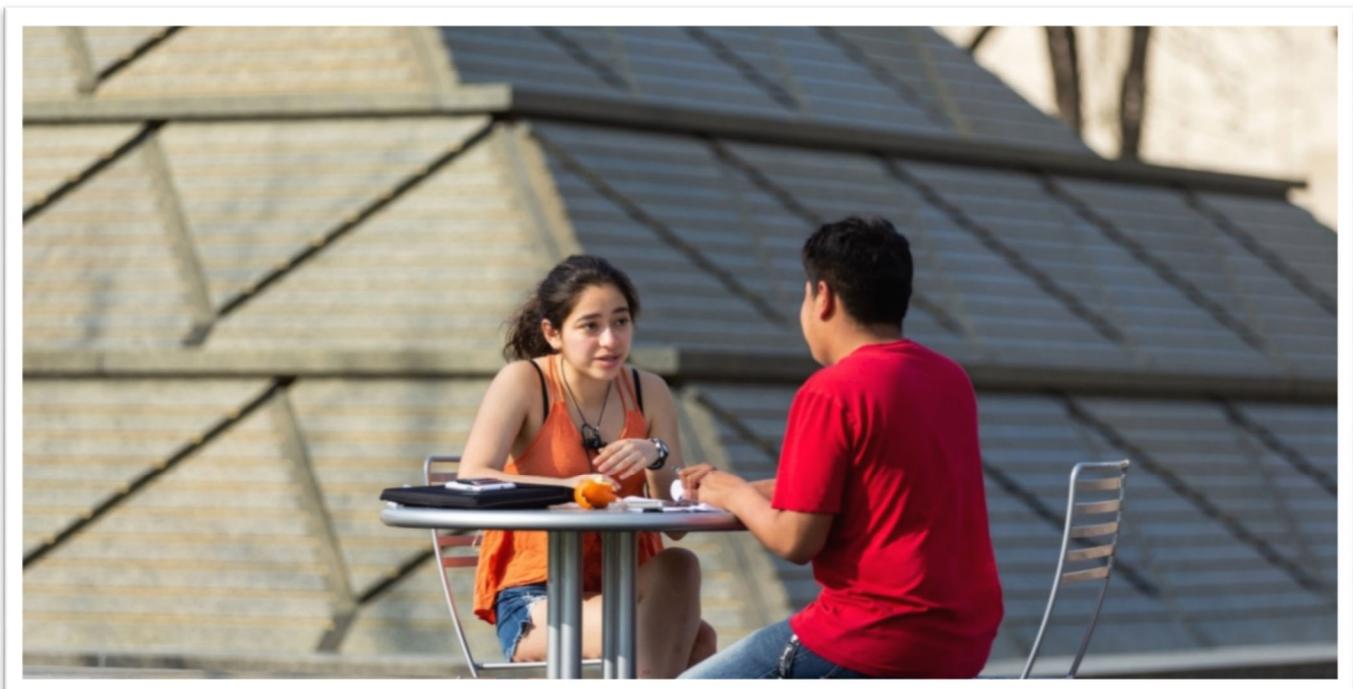
Table 5
Hours per week spent on activities
Senior

|	N	0 Hours per Week	1-5 Hours	6-10 Hours	11-15 Hours	16-20 Hours	21-25 Hours	26-30 Hours	More than 30 hours
					Peer Percentages				
Preparing for class [a]	51	0.0	13.7	15.7	15.7	9.8	5.9	15.7	23.5
	1288	0.9	7.1	14.0	17.8	17.9	15.5	19.2	17.5
Participating in co-curricular activities [a]	51	66.7	15.7	5.9	7.8	0.0	3.9	0.0	0.0
	1284	37.8	30.8	13.7	7.7	4.8	2.8	1.1	1.6
Working for pay on-campus [a]	51	58.8	2.0	15.7	5.9	9.8	2.0	5.9	0.0
	1281	75.2	4.4	6.3	6	4.1	2.7	0.4	0.9
Working for pay off-campus [a]	51	33.3	3.9	11.8	3.9	9.8	3.9	9.8	23.5
	1287	49.0	4.4	6.8	7.2	10.7	7.0	4.2	10.7
Doing community service or volunteer work [a]	51	80.4	15.7	3.9	0.0	0.0	0.0	0.0	0.0
	1286	61.5	28.2	4.8	2.6	1.2	0.8	0.2	0.6
Relaxing and socializing [a]	51	3.9	29.4	37.3	7.8	11.8	2.0	3.9	3.9
	1281	3.6	24.5	26.4	19.6	12	5.9	2.2	5.8
Providing care for dependents [a]	51	49.0	11.8	7.8	3.9	2.0	2.0	2.0	21.6
	1277	71.7	9.8	4.6	3.0	2.9	1.8	1.2	5.1
Commuting to campus [a]	51	19.6	37.3	27.5	11.8	2.0	2.0	0.0	0.0
	1282	11.1	51.4	22.5	8.9	3.0	1.3	0.4	1.4

[a] Chi-square test revealed statistically significant difference at α ≤ 0.05.

Table 6
High Impact Practices
Senior

	School of Informatics and Computing Percent "Done"	Peer Percent "Done"	Difference
Service-Learning	50% (26)	53%	- 3%
Learning Community	30.8% (16)	25%	5.8%
Research with Faculty	30.8% (16)	24%	6.8%
Internship or Field Experience	46.2% (24)	50%	- 3.8%
Study Abroad	5.8% (3)	14%	- 8.2%
Culminating Senior Experience	53.8% (28)	46%	7.8%

N included in parentheses

Figure 1
Number of High Impact Practices Completed
Senior
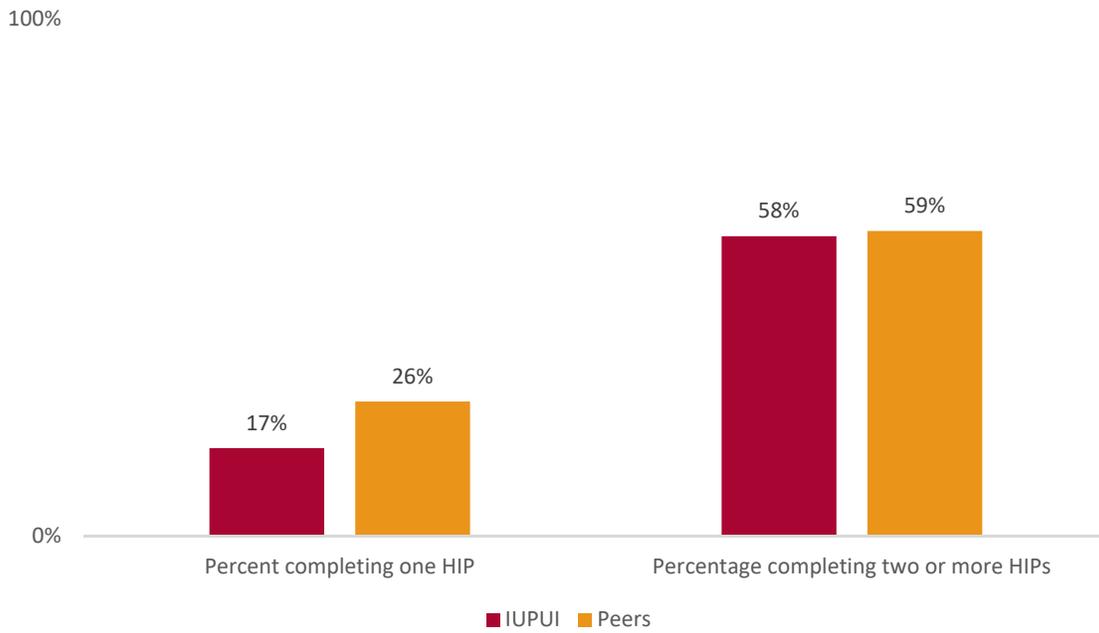
Table 7
Academic Challenge
First Year

	N	Mean	Standard Deviation	Peer Mean	Effect Size
Higher-Order Learning [a4]	**22**	**34.1**	**14.1**	**38.0**	**-1.07**
Applying facts, theories, or methods to practical problems or new situations	22	2.68	0.89	3.1	
Analyzing an idea, experience, or line of reasoning in depth by examining its parts	22	2.77	0.81	3.0	
Evaluating a point of view, decision, or information source	22	2.50	0.80	2.7	
Forming a new idea or understanding from various pieces of information	22	2.86	0.83	2.8	
Reflective & Integrative Learning [b1]	**23**	**34.7**	**9.49**	**32.1**	**0.81**
Combined ideas from different courses when completing assignments	23	2.70	0.82	2.6	
Connected your learning to societal problems or issues	23	2.39	0.78	2.3	
Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments	23	2.35	0.71	2.2	
Examined the strengths and weaknesses of your own views on a topic or issue	23	2.65	0.78	2.6	
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	23	3.04	0.83	2.8	
Learned something that changed the way you understand an issue or concept	23	3.04	0.93	2.8	
Connected ideas from your courses to your prior experiences and knowledge	23	2.96	0.64	3.0	
Learning Strategies [b1]	**21**	**37.5**	**15.1**	**35.9**	**0.43**
Identified key information from reading assignments	21	3.05	0.81	2.8	
Reviewed your notes after class	21	2.81	0.87	2.8	
Summarized what you learned in class or from course materials	21	2.76	0.83	2.7	
Quantitative Reasoning [b4]	**20**	**24.0**	**16.4**	**31.8**	**-2.01**
Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)	20	2.50	0.83	2.9	
Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)	21	2.00	0.95	2.4	
Evaluated what others have concluded form numerical information	21	2.10	0.94	2.5	

[a] 1=Very Little, 2=Some, 3=Quite a bit, 4=Very much
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[1] Area of Strength [2] Asset to Protect [3] Issue to be Mindful of [4] Opportunity for Improvement

Table 8
Learning with Peers
First Year

	N	Mean	Standard Deviation	Peer Mean	Effect Size
Collaborative Learning [a4]	**25**	**36.2**	**9.50**	**37.5**	**-0.39**
Asked another student to help you understand course material	25	2.60	0.71	2.8	
Explained course material to one or more students	25	2.88	0.78	3.0	
Prepared for exams by discussing or working through course material with other students	25	2.60	0.76	2.8	
Worked with other students on course projects or assignments	25	3.16	0.75	2.9	
Discussions with Diverse Others [a3]	**21**	**41.2**	**15.5**	**41.9**	**-0.18**
People from a race or ethnicity other than your own	21	3.00	0.95	3.1	
People from an economic background other than your own	21	3.10	0.94	3.1	
People with religious beliefs other than your own	21	2.95	0.87	3.1	
People with political views other than your own	21	3.19	0.98	3.1	

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[1] Area of Strength [2] Asset to Protect [3] Issue to be Mindful of [4] Opportunity for Improvement

Table 9
Experiences with Faculty
First Year

	N	Mean	Standard Deviation	Peer Mean	Effect Size
Student-Faculty Interaction [b1]	**23**	**21.6**	**17.0**	**18.3**	**0.85**
Talked about career plans with a faculty member	23	2.35	0.98	2.1	
Worked w/faculty on activities other than coursework (committees, student groups, etc.)	23	1.87	1.01	1.7	
Discussed course topics, ideas, or concepts with a faculty member outside of class	23	2.13	1.01	1.9	
Discussed your academic performance with a faculty member	22	2.23	1.07	1.9	
Effective Teaching Practices [a1]	**22**	**42.5**	**10.4**	**35.7**	**2.01**
Clearly explained course goals and requirements	22	3.18	0.66	3.0	
Taught course sessions in an organized way	22	3.27	0.70	2.9	
Used examples or illustrations to explain difficult points	22	3.41	0.73	3.0	
Provided feedback on a draft or work in progress	22	2.91	0.87	2.5	
Provided prompt and detailed feedback on tests or completed assignments	21	2.86	0.73	2.5	

[a] 1=Very Little, 2=Some, 3=Quite a bit, 4=Very much
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[1] Area of Strength [2] Asset to Protect [3] Issue to be Mindful of [4] Opportunity for Improvement

Table 10
Campus Environment
First Year

	N	Mean	Standard Deviation	Peer Mean	Effect Size
Quality of Interactions [b,1]	**18**	**45.0**	**11.7**	**40.6**	**1.28**
Students	21	5.38	1.40	5.5	
Academic advisors	21	5.81	1.44	5.0	
Faculty	21	5.19	1.47	5.1	
Student Services Staff (career services, student activities, housing, etc.)	15	4.80	2.01	4.9	
Other administrative staff and offices (registrar, financial aid, etc.)	16	5.13	1.36	4.8	
Supportive Environment [a,4]	**21**	**33.5**	**13.5**	**36.1**	**-0.71**
Providing support to help students succeed academically	21	2.86	0.79	3.1	
Using learning support services (tutoring services, writing center, etc.)	21	2.95	0.81	3.1	
Encouraging contact among students from diff. backgrounds	21	2.67	0.91	2.8	
Providing opportunities to be involved socially	21	2.76	0.89	2.9	
Providing support for your overall well-being (recreation, health care, counseling, etc.)	21	2.86	0.85	3.0	
Helping you manage your non-academic responsibilities (work, family, etc.)	21	2.19	0.75	2.4	
Attending campus activities and events (performing arts, athletic events, etc.)	21	2.57	0.98	2.8	
Attending events that address important social, economic, or political issues	21	2.52	1.03	2.5	

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[1] Area of Strength [2] Asset to Protect [3] Issue to be Mindful of [4] Opportunity for Improvement

Table 11
Hours per week spent on activities
First Year

|	N	0 Hours per Week	1-5 Hours	6-10 Hours	11-15 Hours	16-20 Hours	21-25 Hours	26-30 Hours	More than 30 hours
					Peer Percentages				
Preparing for class [a]	21	0.0	14.3	28.6	14.3	14.3	19.0	4.8	4.8
	773	0.3	6.6	15.9	23.2	20.1	17.3	7.9	8.8
Participating in co-curricular activities [a]	21	42.9	42.9	4.8	4.8	4.8	0.0	0.0	0.0
	771	25.8	37.7	19.8	9.5	3.6	2.9	0.4	0.3
Working for pay on-campus	21	90.5	4.8	0.0	4.8	0.0	0.0	0.0	0.0
	769	86.0	2.3	4.3	3.5	2.2	1.6	0.0	0.1
Working for pay off-campus [a]	20	75.0	5.0	10.0	0.0	0.0	5.0	5.0	0.0
	768	74.5	3.6	4.2	7.2	4.2	3.4	1.7	1.3
Doing community service or volunteer work [a]	20	55.0	30.0	10.0	0.0	5.0	0.0	0.0	0.0
	771	56.0	32.9	6.6	1.9	1.3	1.0	0.1	0.0
Relaxing and socializing [a]	21	0.0	14.3	33.3	38.1	14.3	0.0	0.0	0.0
	770	1.4	17.4	27.8	20.4	15.7	6.8	3.0	7.5
Providing care for dependents	21	90.5	9.5	0.0	0.0	0.0	0.0	0.0	0.0
	768	85.5	6.4	4.0	1.6	1.3	0.8	0.1	0.3
Commuting to campus [a]	20	40.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0
	772	38.3	35.9	14.6	6.5	2.3	1.3	0.4	0.6

[a] Chi-square test revealed statistically significant difference at $\alpha \leq 0.05$.

Table 12
High Impact Practices
First Year

	School of Informatics and Computing "Done"	Peer Percent "Done"	Difference
Service-Learning	60% (12)	50%	10%
Learning Community	61.9% (13)	22%	39.9%
Research with Faculty	4.8% (1)	5%	- 0.2%

N included in parentheses

Figure 2
Number of High Impact Practices Completed
First Year
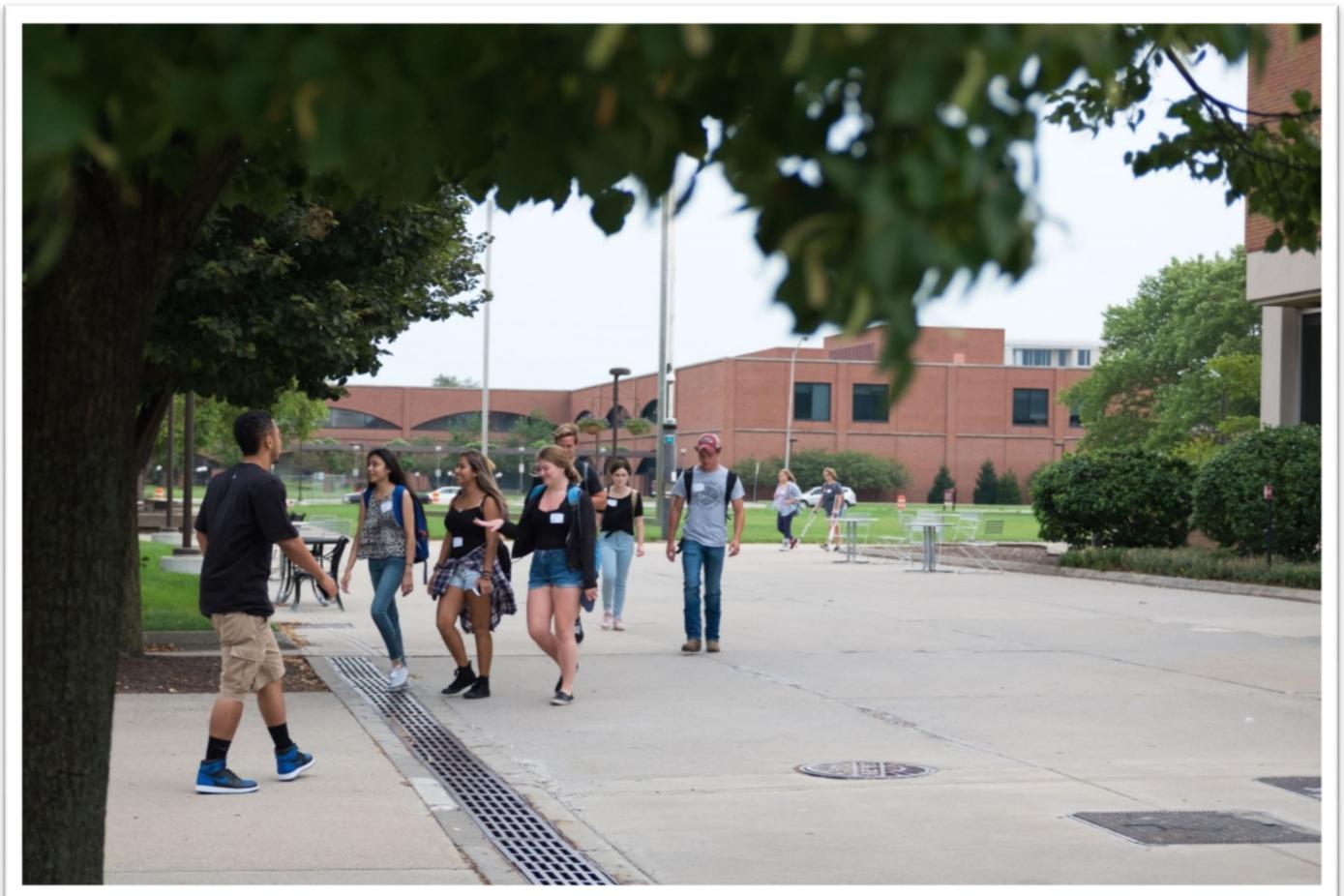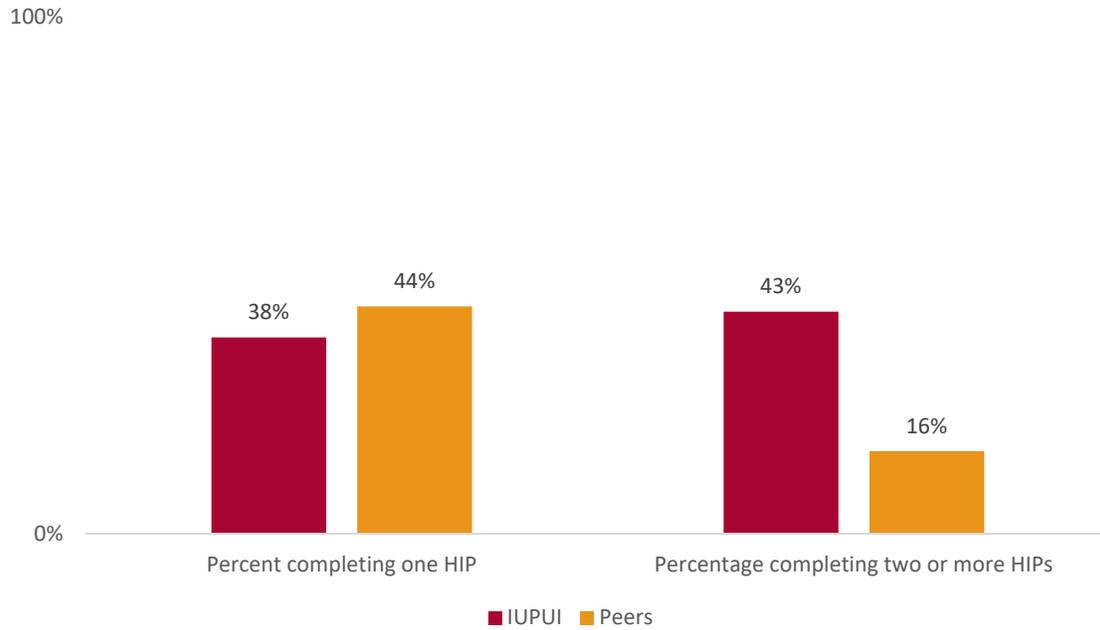
2018 NSSE Report for School of Informatics and Computing

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