



Assessment Report: **Quantitative Reasoning Report**
Assessment Period: **Academic Year 2021**
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The following report is based on data from the three most recent cycles of the **National Survey of Student Engagement (NSSE)** administered at Eastern Illinois University. This report presents and compares data that describes **students’ quantitative reasoning** from the “**NSSE Frequencies and Statistical Comparisons**” Reports of 2013, 2017, and 2020. Data are collected from **first-year students** and from **seniors**. EIU’s Quantitative Reasoning Report has not been updated since 2018. The General Education Committee is working on a new framework for assessing quantitative reasoning.

First-Year Students

<i>Survey year</i>	Response rate	Sampling error	Total respondents	Full completions
2013	16%	+/- 6.4%	199	133
2017	32%	+/- 5.4%	223	173
2020	26%	+/- 4.7%	326	229

Seniors

<i>Survey year</i>	Response rate	Sampling error	Total respondents	Full completions
2013	23%	+/- 4.4%	381	293
2017	37%	+/- 4.3%	328	256
2020	30%	+/- 4.7%	300	252

First-year students and seniors answered the following question on the NSSE survey:

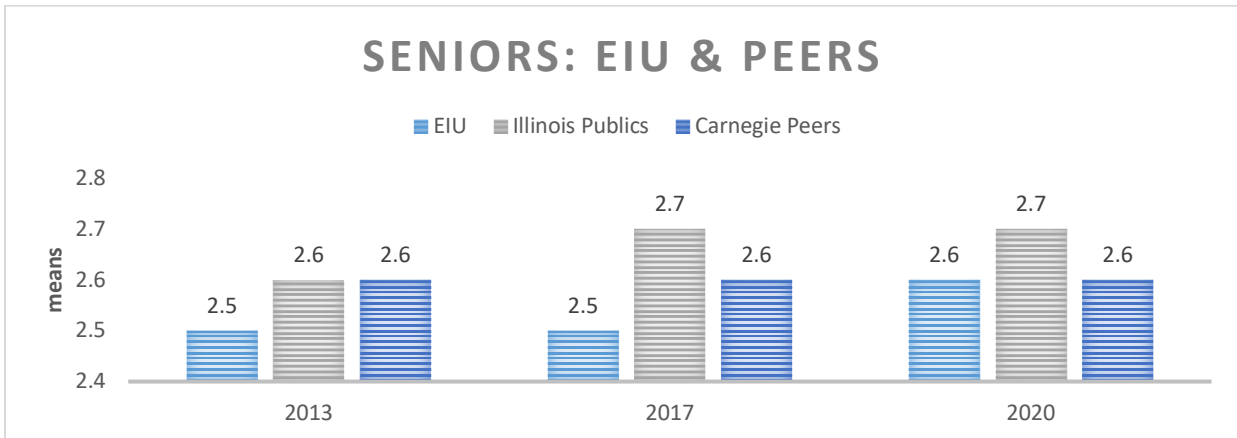
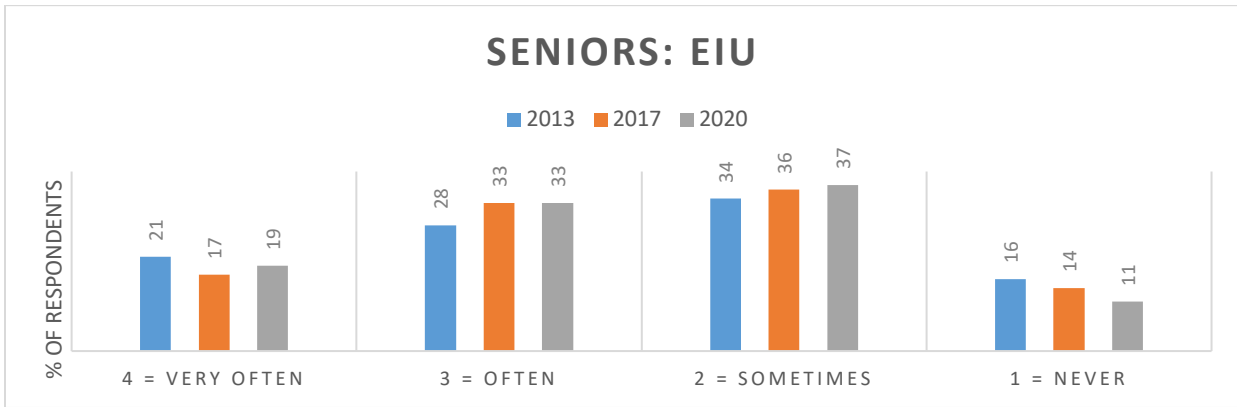
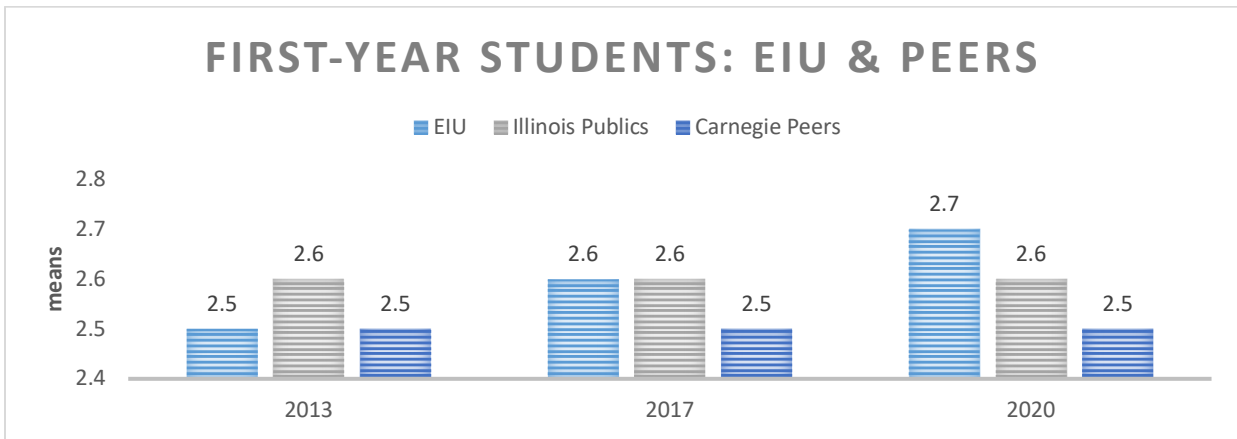
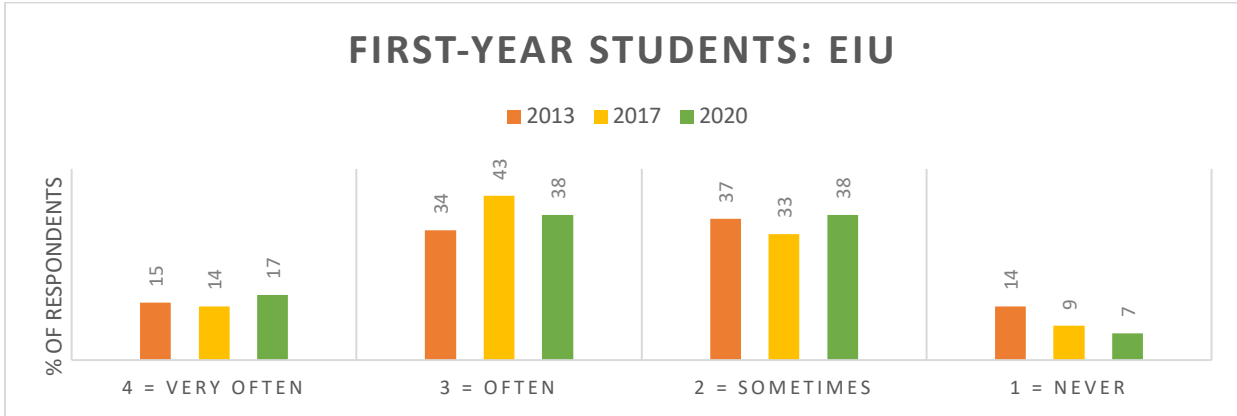
6. During the current school year, about how often have you done the following?

- A) Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)
- B) Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)
- C) Evaluated what others have concluded from numerical information

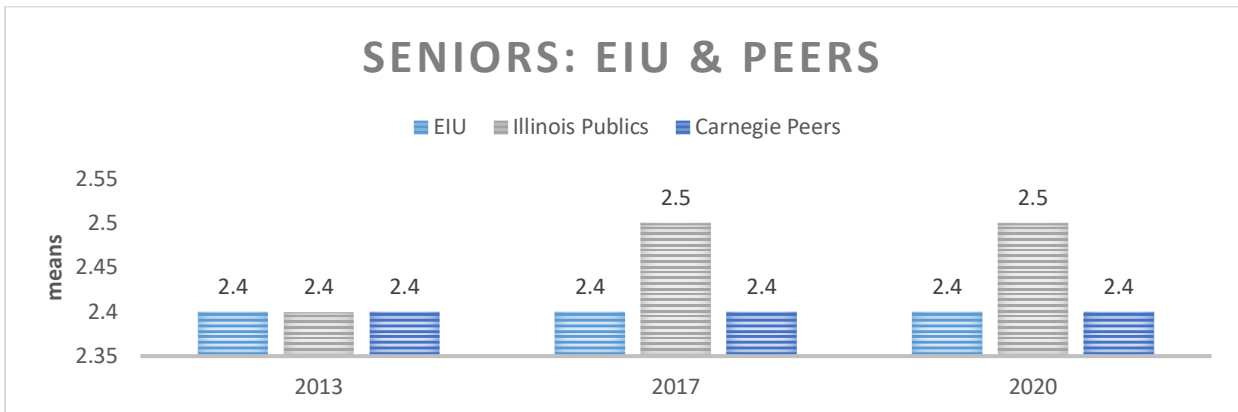
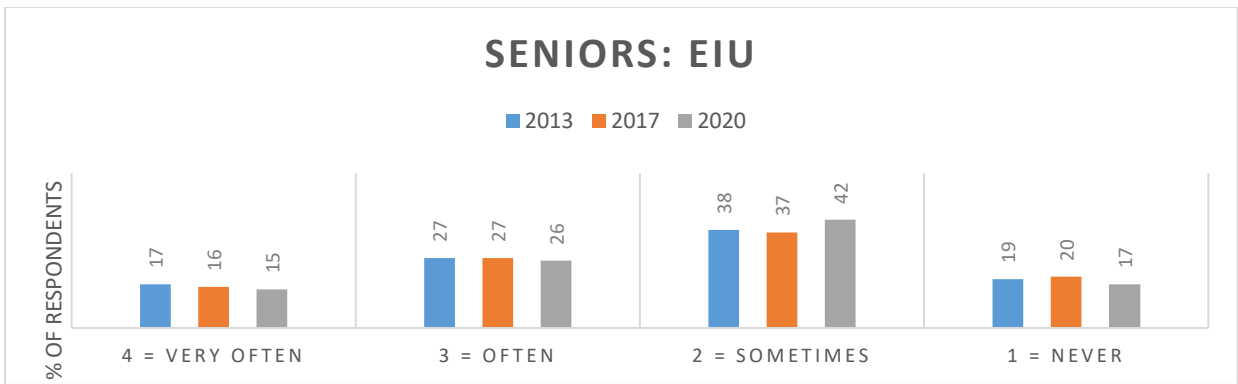
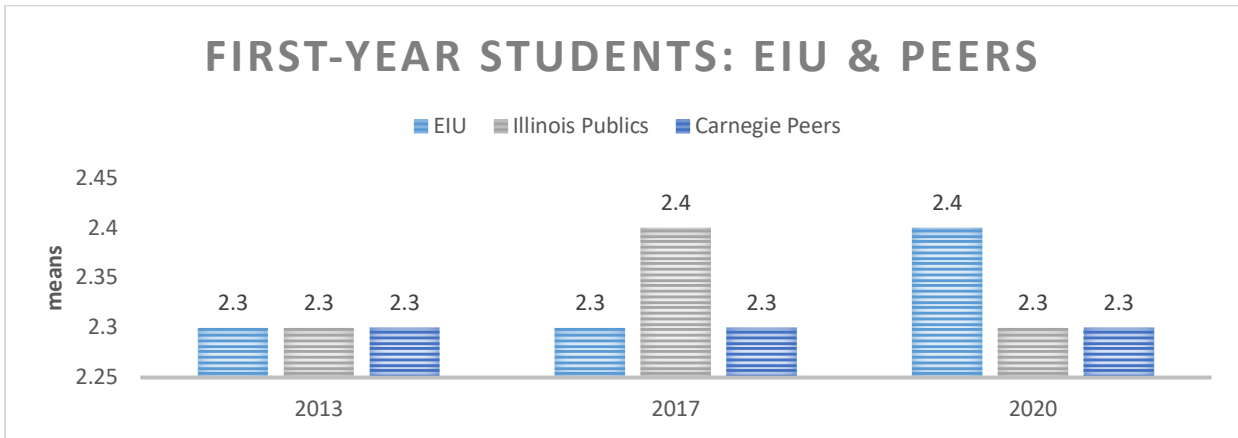
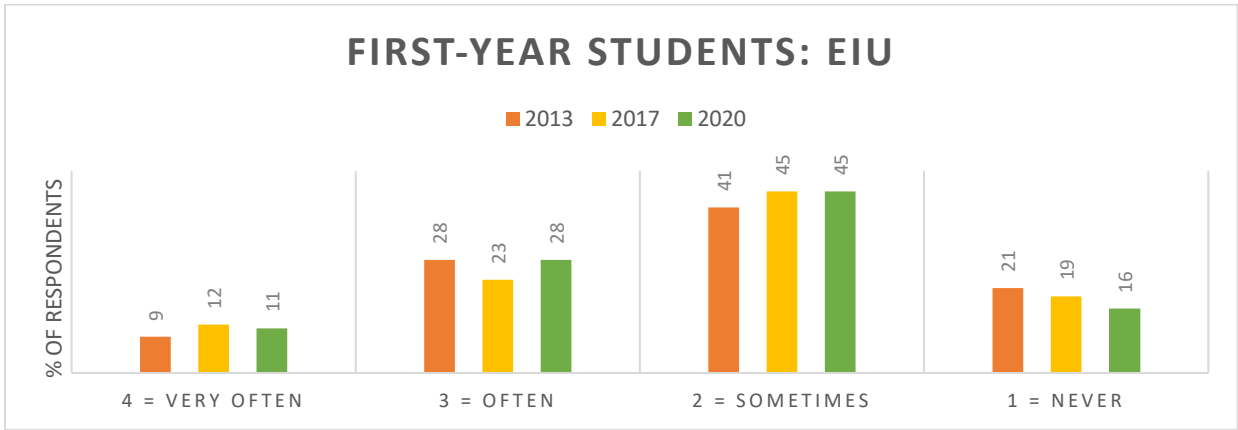
The survey asks students about their use of numerical information, during the current school year. Specifically, they are asked to describe how often—if ever—they reach conclusions, examine problems, and evaluate the conclusions of others via numerical information.

In the charts below, “peer institutions” indicates similarly-sized public, master’s degree-granting institutions. See the **appendix** for a specification of peer institutions.

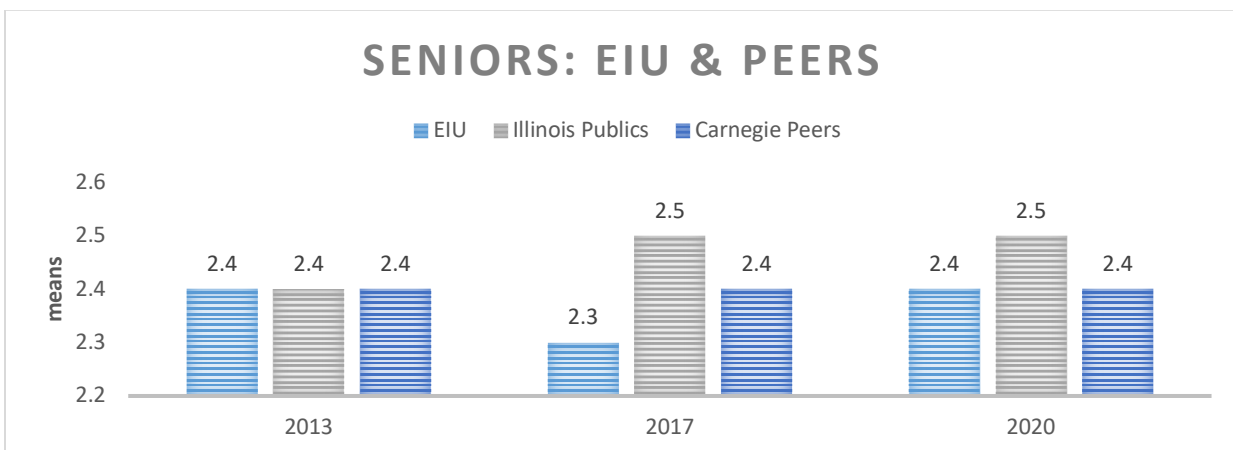
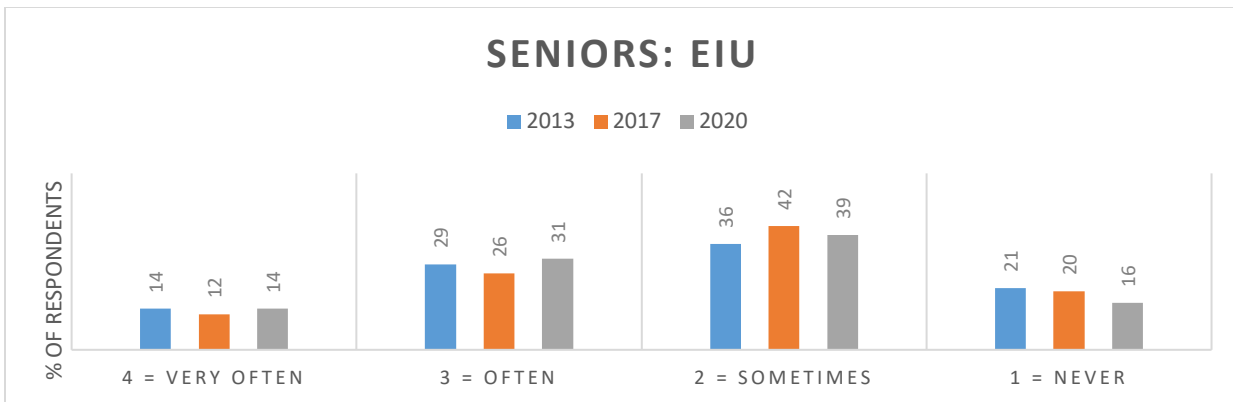
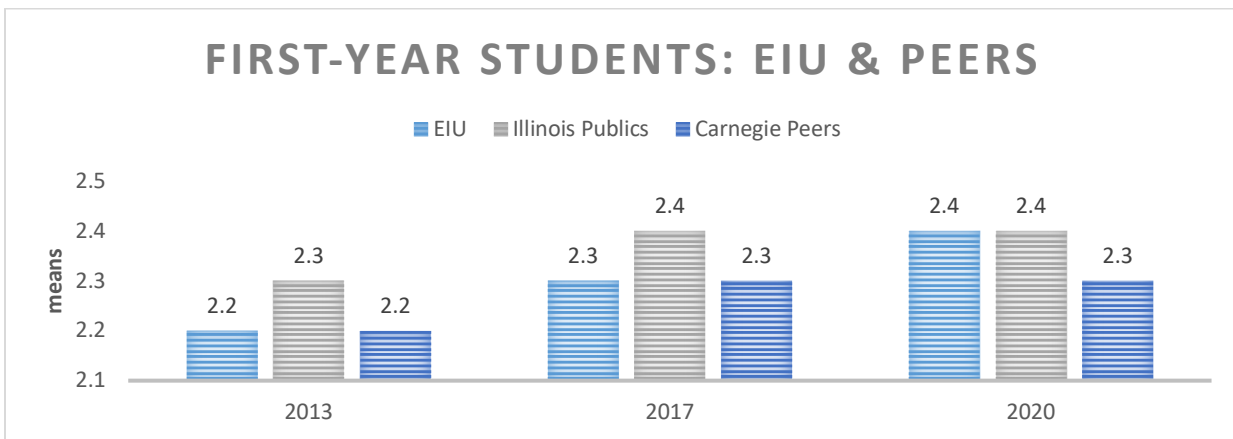
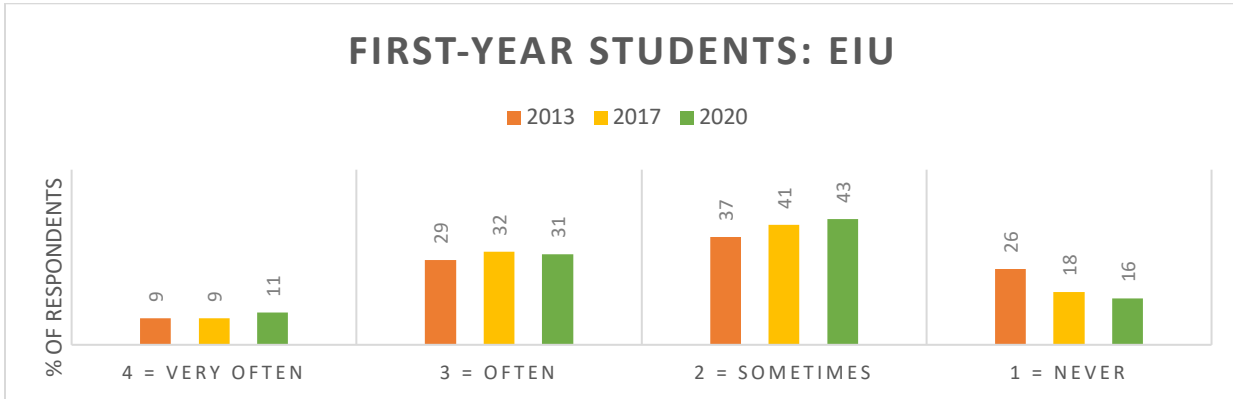
A) Reached conclusions based on your own analysis of numerical information (numbers, graphs, statistics, etc.)



B) Used numerical information to examine a real-world problem or issue (unemployment, climate change, public health, etc.)



C) Evaluated what others have concluded from numerical information



Conclusions

At EIU:

- **EIU first-year students** have shown moderate increases in interactions with numerical information over the period 2013-2020 in each of the three categories.
- **EIU Seniors** have maintained stable numbers for each of the categories over the period, with a moderate increase in reaching conclusions using numerical information.

Comparisons to peer institutions specified in the appendix:

There are **no statistically significant differences** between results in Quantitative Reasoning at the first-year or senior level at EIU and public institutions in Illinois (UIUC, UIC, ISU, etc.) or Carnegie peer institutions.

EIU has shown only improvement in all categories of quantitative reasoning.

- Approximately **65% (2020)** vs. 57% (2017) of EIU freshmen and **52% (2020)** vs. 50% (2017) of EIU seniors indicate they have reached conclusions based on their own analysis of numerical information **often or very often**.
- **Two percent more EIU seniors** (41%) than EIU freshmen (39%) indicate that within their coursework they have used numerical information to examine real-world problems often or very often. These percentages reflect trends at Carnegie peer institutions. The percentage of students at each level indicating they have **never** done this in classes **has fallen 3% since 2017** to 16% and 17% for first-years and seniors, **compared to higher percentages** at IL publics and peer institutions (18% and 19%).
- **More students in 2020** indicate they had often or very often evaluated what others have concluded from numerical information than in 2017: first-years rising to 42% (2020) vs. 41% (2017), and seniors to 45% (2020) vs. 38% (2017). In 2020, only 16% of first-year and senior students indicate they have **never done this in classes**, decreasing from 18% and 20% of EIU first-years and seniors in 2017, continuing a decrease from 2013 at both levels.

APPENDIX

NSSE selected comparison groups

Illinois Publics = University of Illinois system schools, plus Governors State

For 2013, no “Illinois Publics” data was specified. For purposes of comparison, this report uses NSSE data for the following institutions: Eastern Michigan U, Illinois State U, Indiana State U, Iowa State U, Michigan State U, SIU-Carbondale, SIU-Edwardsville, U Wisconsin-Whitewater, and Western Michigan U

Carnegie Peers = Master’s-granting public universities

For 2017, no “Carnegie Peers” data was specified. For purposes of comparison, this report uses NSSE data for the following 29 institutions: Chicago State U, Eastern Kentucky U, Ferris State U, Governors State U, Indiana U East, Lincoln U, Missouri State U-Springfield, Murray State U, Northeastern Illinois U, Northern Michigan U, Northwest Missouri State U, Saginaw Valley State U, Truman State U, U Central Missouri, U Illinois-Springfield, U Michigan-Dearborn, U Michigan-Flint, U Saint Francis-Fort Wayne, U Southern Indiana, U Wisconsin (UW)-Oshkosh, UW-Eau Claire, UW-Green Bay, UW-La Crosse, UW-Platteville, UW-River Falls, UW-Stevens Point, UW-Stout, UW-Whitewater, Western Illinois U