Academic success and engagement of Fall 2020 first-time first-year college students at ECU: How do they compare to previous cohorts and their national peers?

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Institutional Planning, Assessment and Research
East Carolina University
COHORT COMPARISONS: DEMOGRAPHICS, RETENTION, PROGRESSION, & GRADES
First-time/First-year Demographics

<table>
<thead>
<tr>
<th>Percentage</th>
<th>2018 Cohort</th>
<th>2019 Cohort</th>
<th>2020 Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Female</td>
<td>58%</td>
<td>58%</td>
<td>61%</td>
</tr>
<tr>
<td>% Minority</td>
<td>32%</td>
<td>31%</td>
<td>33%</td>
</tr>
<tr>
<td>% Full-time</td>
<td>98%</td>
<td>99%</td>
<td>97%</td>
</tr>
<tr>
<td>% Out-of-state</td>
<td>12%</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>% First-generation</td>
<td>21%</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>% Pell</td>
<td>37%</td>
<td>35%</td>
<td>36%</td>
</tr>
</tbody>
</table>
Retention

Fall to spring retention: 2018 cohort - 93%, 2019 cohort - 93%, 2020 cohort - 90%
Fall to fall retention: 2018 cohort - 82%, 2019 cohort - 83%, 2020 cohort - 81%
Transfer out rate: 2018 cohort - 12%, 2019 cohort - 10%, 2020 cohort - 12%
Stop out rate: 2018 cohort - 7%, 2019 cohort - 8%, 2020 cohort - 8%
Progression

- Attempted hours term 1:
  - 2018 cohort: 15
  - 2019 cohort: 15
  - 2020 cohort: 15

- Earned hours term 1:
  - 2018 cohort: 13
  - 2019 cohort: 13
  - 2020 cohort: 13

- Attempted hours year 1:
  - 2018 cohort: 30
  - 2019 cohort: 30
  - 2020 cohort: 29

- Earned hours year 1:
  - 2018 cohort: 26
  - 2019 cohort: 26
  - 2020 cohort: 26
Course Grades
DFW rates, first attempt (of those who took the course in their first year)
Grade Point Averages

Unweighted HS GPA
- 2018 cohort: 3.3
- 2019 cohort: 3.3
- 2020 cohort: 3.3

First-term college GPA
- 2018 cohort: 2.8
- 2019 cohort: 2.8
- 2020 cohort: 3.1

First-year college GPA
- 2018 cohort: 2.9
- 2019 cohort: 3.1
- 2020 cohort: 3.2
Correlations between unweighted high school GPA & term/year 1 college GPA

2018: HS GPA & TERM 1 GPA = 0.51, HS GPA & YEAR 1 GPA = 0.55
2019: HS GPA & TERM 1 GPA = 0.53, HS GPA & YEAR 1 GPA = 0.53
2020: HS GPA & TERM 1 GPA = 0.42, HS GPA & YEAR 1 GPA = 0.33
Correlations between unweighted high school GPA & term/year 1 credit hour difference
(difference between number of attempted hours & number of earned hours)
Comparison of at-risk groups to total cohort: Retained to spring & retained to fall

![Comparison of at-risk groups to total cohort](chart.png)
Within group comparison of at-risk students:
Retained to spring & retained to fall

<table>
<thead>
<tr>
<th>First-gen (Y-N)</th>
<th>Gender (M-F)</th>
<th>Minority (Y-N)</th>
<th>Pell (Y-N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2.3% -2.1%</td>
<td>-1.8%</td>
<td>-4.2%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>-1.8%</td>
<td>-2.7%</td>
<td>-4.5%</td>
<td>-1.8%</td>
</tr>
<tr>
<td>-5.2%</td>
<td>-5.6%</td>
<td>-4.9%</td>
<td>-5.1%</td>
</tr>
<tr>
<td>-2.9%</td>
<td>-3.1%</td>
<td>-4.9%</td>
<td>-5.1%</td>
</tr>
<tr>
<td>-1.9%</td>
<td>-1.4%</td>
<td>-3.1%</td>
<td>-4.9%</td>
</tr>
<tr>
<td>-3.1%</td>
<td>-2.4%</td>
<td>-3.7%</td>
<td>-5.6%</td>
</tr>
<tr>
<td>-1.8%</td>
<td>-1.0%</td>
<td>-5.1%</td>
<td>-6.2%</td>
</tr>
<tr>
<td>-6.0%</td>
<td>-5.1%</td>
<td>-5.6%</td>
<td>-6.2%</td>
</tr>
<tr>
<td>-7.0%</td>
<td>-5.1%</td>
<td>-5.6%</td>
<td>-6.2%</td>
</tr>
</tbody>
</table>
Comparison of at-risk groups to total cohort: Transfer & stop out rates
Comparison of at-risk groups to total cohort: Average first-term & first-year GPA

![Comparison of at-risk groups to total cohort: Average first-term & first-year GPA](image_url)
Summary of Findings

- Demographics for the Fall 2020 cohort of new first year students were not very different from those for the Fall 2018 & Fall 2019 cohorts.
- Both fall-to-spring and fall-to-fall retention rates were lower for the Fall 2020 cohort than for previous cohorts (though not markedly so).
- The pandemic may have advantaged students who could apply to take a Pass grade or a pandemic drop option.
  - Thus, the correlation between high school GPA and first term/year college GPA was lower for the Fall 2020 cohort than for previous cohorts.
  - The negative correlation between high school GPA and first term/year attempted minus earned credit hours is smaller for the Fall 2020 than for previous cohorts.
- Some sub-groups of new students are more at-risk than others (e.g., first-generation, male, minority, Pell) in terms of retention, stop-out rates, and first term/year GPAs.
  - The pandemic may have been particularly detrimental to retention for these sub-groups.
Engagement Indicators and Participation in High Impact Activities
First-Year Student Engagement

• Data Source: National Survey of Student Engagement
• Student population: incoming freshmen of prior fall semester and other first-year students with <30 credits

First-Year Student Response Rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>20%</td>
</tr>
<tr>
<td>2018</td>
<td>21%</td>
</tr>
<tr>
<td>2021</td>
<td>15%</td>
</tr>
</tbody>
</table>
## Respondent Characteristics

### Demographics

<table>
<thead>
<tr>
<th>Demographics</th>
<th>ECU 18</th>
<th>ECU 21</th>
<th>Carnegie 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>60%</td>
<td>61%</td>
<td>57%</td>
</tr>
<tr>
<td>White</td>
<td>62%</td>
<td>60%</td>
<td>54%</td>
</tr>
<tr>
<td>Black</td>
<td>20%</td>
<td>17%</td>
<td>13%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8%</td>
<td>11%</td>
<td>19%</td>
</tr>
<tr>
<td>Asian</td>
<td>3%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>First-generation</td>
<td>44%</td>
<td>40%</td>
<td>45%</td>
</tr>
<tr>
<td>Disability (self-reported)</td>
<td>11%</td>
<td>10%</td>
<td>14%</td>
</tr>
</tbody>
</table>

- Weighted by sex and enrollment status.
- ECU is compared to institutions of the same Carnegie Classification (i.e., Doctoral University with High Research Activities) who participated in NSSE 2021.

<table>
<thead>
<tr>
<th>First-year Students</th>
<th>ECU 18</th>
<th>ECU 21</th>
<th>Carnegie 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-time first-year</td>
<td>97%</td>
<td>95%</td>
<td>88%</td>
</tr>
<tr>
<td>Full-time</td>
<td>97%</td>
<td>93%</td>
<td>94%</td>
</tr>
<tr>
<td>&lt;Age =19</td>
<td>95%</td>
<td>96%</td>
<td>91%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Modality</th>
<th>ECU 18</th>
<th>ECU 21</th>
<th>Carnegie 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mostly remote</td>
<td>3%</td>
<td>92%</td>
<td>67%</td>
</tr>
<tr>
<td>Hybrid learning</td>
<td>18%</td>
<td>9%</td>
<td>30%</td>
</tr>
<tr>
<td>Mostly in-person</td>
<td>79%</td>
<td>0%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Retention Outcome of ECU 2021 Respondents

Retention to Fall 2021

- Retained
- Transfer-out
- Stop-out

Transfer Schools

- NC State
- UNC Chapel Hill
- Pitt Community College
- Wayne Community College
- Wake Technical Community College
- Appalachian State University
NSSE Engagement Indicators (EI)
(Note: each EI is scored on a 60-point scale)

- Higher-Order Learning
- Reflective & Integrative Learning
- Learning Strategies
- Quantitative Reasoning
- Collaborative Learning
- Discussions with Diverse Others
- Student-Faculty Interaction
- Effective Teaching Practice
- Quality of Interactions
- Supportive Environment
- Academic Challenge
- Learning with Peers
- Experiences with Faculty
- Campus Environment
### Comparison with Carnegie Institutions: 2021

<table>
<thead>
<tr>
<th>Engagement Indicators</th>
<th>ECU 18</th>
<th>ECU 21</th>
<th>Sig.</th>
<th>Carnegie 21</th>
<th>Sig.</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Challenge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher-Order Learning</td>
<td>38.3</td>
<td>35.2</td>
<td>▼</td>
<td>36.6</td>
<td>▼</td>
<td>-.10</td>
</tr>
<tr>
<td>Reflective &amp; Integrative Learning</td>
<td>35.2</td>
<td>33.9</td>
<td></td>
<td>34.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Strategies</td>
<td>39.6</td>
<td>36.8</td>
<td>▼</td>
<td>37.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantitative Reasoning</td>
<td>29.1</td>
<td>28.2</td>
<td></td>
<td>27.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning with Peers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaborative Learning</td>
<td>35.2</td>
<td>26.7</td>
<td>▼</td>
<td>25.2</td>
<td>△</td>
<td>.10</td>
</tr>
<tr>
<td>Discussions w. Diverse Others</td>
<td>42.6</td>
<td>38.2</td>
<td>▼</td>
<td>35.9</td>
<td>△</td>
<td>.14</td>
</tr>
<tr>
<td><strong>Experiences with Faculty</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student-Faculty Interaction</td>
<td>25.2</td>
<td>19.4</td>
<td>▼</td>
<td>18.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Teaching Practices</td>
<td>37.8</td>
<td>33.9</td>
<td>▼</td>
<td>36.5</td>
<td>▼</td>
<td>-.19</td>
</tr>
<tr>
<td><strong>Campus Environment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of Interaction</td>
<td>42.5</td>
<td>40.6</td>
<td></td>
<td>40.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supportive Environment</td>
<td>39.3</td>
<td>33.9</td>
<td>▼</td>
<td>31.4</td>
<td>△</td>
<td>.17</td>
</tr>
</tbody>
</table>
ECU Multi-Year Analysis: Continuous Declines

Higher Order Learning

Effective Teaching Practices

Survey Year

Survey Year
Higher Order Learning

% responding “very much” or “quite a bit” about how much coursework emphasized...

- Applying facts, theories, or methods to practical problems or new situations: ECU 2018 69%, ECU 2021 60%, Carnegie 2021 66%
- Analyzing an idea, experience, or line of reasoning in depth by examining its parts: ECU 2018 70%, ECU 2021 61%, Carnegie 2021 65%
- Evaluating a point of view, decision, or information source: ECU 2018 71%, ECU 2021 65%, Carnegie 2021 68%
- Forming a new idea or understanding from various pieces of information: ECU 2018 67%, ECU 2021 64%, Carnegie 2021 67%
How Students Spent Their Time

Estimated Hours per Week Preparing for Class (ECU Students)

<table>
<thead>
<tr>
<th>Survey Year</th>
<th>Hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>'13</td>
<td>13.8</td>
</tr>
<tr>
<td>'14</td>
<td>14.4</td>
</tr>
<tr>
<td>'15</td>
<td>14.4</td>
</tr>
<tr>
<td>'16</td>
<td>14.4</td>
</tr>
<tr>
<td>'17</td>
<td>14.4</td>
</tr>
<tr>
<td>'18</td>
<td>15.0</td>
</tr>
<tr>
<td>'19</td>
<td>16.0</td>
</tr>
<tr>
<td>'20</td>
<td></td>
</tr>
<tr>
<td>'21</td>
<td></td>
</tr>
</tbody>
</table>

Estimated Hours per Week Working for Pay On- and Off-Campus

<table>
<thead>
<tr>
<th></th>
<th>On-campus</th>
<th>Off-campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECU 15</td>
<td>2.1</td>
<td>1.3</td>
</tr>
<tr>
<td>ECU 18</td>
<td>3.6</td>
<td>1.5</td>
</tr>
<tr>
<td>ECU 21</td>
<td>9.2</td>
<td>2.6</td>
</tr>
<tr>
<td>Carnegie 18</td>
<td>4.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Carnegie 21</td>
<td>7.9</td>
<td>1.6</td>
</tr>
</tbody>
</table>

ECU 15: ECU 21: Carnegie 18: Carnegie 21
Effective Teaching Practices

% responding “very much” or “quite a bit” about how much instructors have...

- Clearly explained course goals and requirements: ECU 2018 75%, ECU 2021 67%, Carnegie 2021 73%
- Taught course sessions in an organized way: ECU 2018 72%, ECU 2021 66%, Carnegie 2021 67%
- Used examples or illustrations to explain difficult points: ECU 2018 73%, ECU 2021 60%, Carnegie 2021 61%
- Provided feedback on a draft or work in progress: ECU 2018 63%, ECU 2021 55%, Carnegie 2021 61%
- Provided prompt and detailed feedback on tests or completed assignments: ECU 2018 56%, ECU 2021 47%, Carnegie 2021 54%
Supportive Campus Environment

% responding “very much” or “quite a bit” about how much the institution emphasized...

- Providing support to help students succeed academically: ECU 2018 (80%), ECU 2021 (70%), Carnegie 2021 (66%)
- Using learning support services: ECU 2018 (81%), ECU 2021 (76%), Carnegie 2021 (67%)
- Encouraging contact among students from diff. backgrounds: ECU 2018 (65%), ECU 2021 (61%), Carnegie 2021 (56%)
- Providing opportunities to be involved socially: ECU 2018 (77%), ECU 2021 (61%), Carnegie 2021 (56%)
- Providing support for your overall well-being: ECU 2018 (80%), ECU 2021 (62%), Carnegie 2021 (59%)
- Helping you manage your non-academic responsibilities: ECU 2018 (48%), ECU 2021 (39%), Carnegie 2021 (34%)
- Attending campus activities and events: ECU 2018 (75%), ECU 2021 (51%), Carnegie 2021 (45%)
- Attending events that address social, economic, or political issues: ECU 2018 (59%), ECU 2021 (46%), Carnegie 2021 (40%)
High Impact Practices – Overall Participation*

High Impact Practices in NSSE

- Service Learning*
- Learning Community*
- Research with Faculty*
- Internship or Field Experience
- Study Abroad
- Culminating Senior Experience

(*Overall participation indicates the percentage of first-year students who participated in at least one of the HIPs with an “*”.* )
High Impact Practices – Done or In Progress

Participated in Two or More HIPs

- ECU 18: 46% (15% in 2 or more HIPs, 31% in 1 HIP)
- ECU 21: 40% (10% in 2 or more HIPs, 30% in 1 HIP)
- Carnegie 21: 42% (7% in 2 or more HIPs, 35% in 1 HIP)

Participation Rate by Activity Type

- Service Learning
  - ECU 18: 55%
  - ECU 21: 41%
  - Carnegie 21: 44%
- Learning Community
  - ECU 18: 20%
  - ECU 21: 15%
  - Carnegie 21: 11%
- Research
  - ECU 18: 5%
  - ECU 21: 4%
  - Carnegie 21: 3%

*In 2021, female students were more likely to engage in (i.e., done or plan to do) learning communities than male students.*
Summary of Findings

• The pandemic had a significant, negative impact on student engagement as measured by NSSE.

• Comparing to 2018, 7 out of 10 EI scores had a significant drop in 2021:
  • No significant change between 2018 and 2021 in Reflective & Integrative Learning, Quantitative Reasoning, and Quality of Interactions.
  • ECU continuously outperformed Carnegie Peers in Supportive Campus Environment.
  • ECU needs to pay attention to Higher Order Learning and Effective Teaching Practices.

• In 2021, first-year students spent more time studying and working off-campus.

• When comparing within demographic groups at ECU:
  • Engagement Indicators
    • Male students scored significantly higher than female students on Quantitative Reasoning.
    • Disabled students scored significantly higher than non-disabled students on Discussions with Diverse Others
  • High Impact Practices
    • Female students reported significantly higher participation than male students in Learning Communities
Retention and Satisfaction
Overall Satisfaction with Educational Experience

• Student satisfaction with their educational experience declined in 2021 as compared to 2018.

• In terms of satisfaction level, there is no difference between ECU students and their counterparts in the institutions of the same Carnegie classification.

• No significant differences in levels of satisfaction were found between any demographic groups within ECU (sex, minority, first-gen, disability, Pell, or retention outcome).
Intent to Return Next Year

• Compared to 2018, a higher percentage of 2021 first-year students indicated that they were "not sure" whether they could return to ECU in the next year, an increase of 4 percentage points.

• In 2021, ECU first-year students were as likely as their counterparts to return for the next year.

• Female and White respondents were significantly more likely to state that they intend to return.

• Retained respondents were significantly more likely to state that they intend to return.

• No significant differences in levels of satisfaction were found by other characteristics such as first-gen, disability, and Pell.
Helping Students Adapt to Changes Brought on by COVID-19

• 65% of ECU first-year students thought ECU faculty and staff have helped them adapt to the changes brought on by the Covid-19 pandemic "very much" or “quite a bit,” compared to 71% of their counterparts in other doctoral universities with high research activity.

• Of all NSSE respondents, 73% said faculty and staff had helped them substantially (NSSE, 2021).

• No significant differences were found between any demographic groups within ECU (sex, minority, first-gen, disability, Pell, or retention outcome).
Summary of Findings

• Student satisfaction with their educational experience declined in 2021 as compared to 2018, but no difference compared to Carnegie class.

• More 2021 first-year students were "not sure" whether they could return to ECU next year, but no difference compared to Carnegie class. Female and White respondents were significantly more likely to intend to return.

• Fewer first-year students thought ECU faculty and staff have helped them adapt to the pandemic, compared to both our Carnegie Class and all schools participating in NSSE.
Appendix: NSSE 2021 Doctoral Research II Institutions

- Ball State University (Muncie, IN)
- Bowling Green State University (Bowling Green, OH)
- Cleveland State University (Cleveland, OH)
- East Tennessee State University (Johnson City, TN)
- Indiana-Purdue University Indianapolis (Indianapolis, IN)
- Jackson State University (Jackson, MS)
- Miami University-Oxford (Oxford, OH)
- Montclair State University (Montclair, NJ)
- Rutgers University-Camden (Camden, NJ)
- Rutgers University-Newark (Newark, NJ)
- Southern Illinois University Carbondale (Carbondale, IL)
- Tennessee State University (Nashville, TN)
- Tennessee Technological University (Cookeville, TN)
- Texas A&M University - Corpus Christi (Corpus Christi, TX)
- Texas A&M University-Kingsville (Kingsville, TX)
- Texas State University (San Marcos, TX)
- University of California-Merced (Merced, CA)
- University of Colorado Colorado Springs (Colorado Springs, CO)
- University of Massachusetts Dartmouth (North Dartmouth, MA)
- University of Memphis (Memphis, TN)
- University of Missouri-St. Louis (Saint Louis, MO)
- University of North Dakota (Grand Forks, ND)
- The University of Toledo (Toledo, OH)
- Wichita State University (Wichita, KS)
- Wright State University (Dayton, OH)
Questions and Discussion
Contact Information

Institutional Planning, Assessment and Research: https://ipar.ecu.edu/

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