Freshmores on Campus: How Early College Credit Shapes the First-Year Experience

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Outline for Today’s Session

• Background and status of early credit at Iowa State University
• Success of students with early credit
• Institutional impacts of early credit
• Implications for the First-Year Experience
Background
Research Conducted at Iowa State University


Research components:

• Analysis of data (enrollment and student success)
• Survey and focus groups with students who entered with early college credit
• Interviews with faculty/staff
• Review of catalog
Analysis of student participation and student success

- Students entering Fall 2000 through Fall 2010
- Early Credit defined as AP, college credit (earned through community college or 4-year school) and IB. (Did not include CLEP or other test outs)
## Participation

<table>
<thead>
<tr>
<th></th>
<th>2000 Entering Class</th>
<th>2006 Entering Class</th>
<th>2010 Entering Class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entering Class Size</strong></td>
<td>4,260</td>
<td>3,982</td>
<td>4,552</td>
</tr>
<tr>
<td><strong>Students with Credit</strong></td>
<td>1,456</td>
<td>2,088</td>
<td>2,834</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td>13,647</td>
<td>25,552</td>
<td>44,613</td>
</tr>
<tr>
<td><strong>Mean Credits per Student</strong></td>
<td>9.4</td>
<td>12.2</td>
<td>15.7</td>
</tr>
<tr>
<td><strong>Median Credits per Student</strong></td>
<td>6.0</td>
<td>10.0</td>
<td>13.0</td>
</tr>
<tr>
<td><strong>% of Students with Credit</strong></td>
<td>34%</td>
<td>52%</td>
<td>62%</td>
</tr>
</tbody>
</table>
Types of early credit – Iowa Residents

Note: 95% of transfer credit from community colleges
Demographics

- Gender: women take advantage of early credit at a higher rate – and the gap is growing (2% gap in 2000, 5% in 2010)
- Race/ethnicity: non-minority students take advantage of early credit at higher rate – and the gap is growing (4% gap in 2000, 15% in 2010)
- The profile of students taking the greatest amount of early credit (top quartile – 19 or more credits) is changing (reduction of ACT scores and high school ranks)
ACT Composite Scores of Students

- 19 or more
- 11 to 18
- 7 to 10
- 1 to 6
- 0

First-Year Experience Conference
February 19, 2012
## Top 5 Early Credits Courses

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Number of Students</th>
<th>Percent of New Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition I</td>
<td>1,294</td>
<td>28%</td>
</tr>
<tr>
<td>Calculus I</td>
<td>848</td>
<td>19%</td>
</tr>
<tr>
<td>Composition II</td>
<td>716</td>
<td>16%</td>
</tr>
<tr>
<td>Intro to Psychology</td>
<td>667</td>
<td>15%</td>
</tr>
<tr>
<td>Public Speaking</td>
<td>460</td>
<td>10%</td>
</tr>
</tbody>
</table>
Factors influencing their decision to take ECC courses

- Get head start on college: 4.5
- Save money: 4.1
- Academic challenge: 4.0
- Graduate on time: 3.6
- Be able to take lighter class load: 3.3
- Graduate in less than 4 years: 2.8
If you had the opportunity to redo your high school career, would you earn ECC?

97% said “yes”
Why they’d do it again...

- Be better prepared for college
- Get general education courses done
- Save money
- Be able to take lighter class loads
- Academic challenge
- Shorten time to degree
Student Success
Methodologies

• Descriptive statistics
• Regressions
  – Controlling for variables such as ACT scores, high school GPA, and high school rank
• Propensity score matching
  – Controlling for variables such as ACT scores, high school GPA, high school rank, residency, first semester credit hours, and academic major
Results: Number of credits first term

• Very little difference between students with or without early credit or between students with different amounts of early credit
• The results were not what we initially expected.
Results: GPA, retention, and graduation rates

• Compared to students without ECC, students with ECC had higher:
  – GPA first semester and first year (.04-.09)
  – One-year and two-year retention rates (1.7-3%)
  – Graduation rates (4%)

• No statistically significant difference for these outcomes when comparing among students with different levels of ECC.
Results: Impact on course sequences

• Students earning Calculus I credit through a community college while in HS earn significantly lower grades in Calculus II than students completing both at ISU
• Where students completed Comp I courses had no influence on subsequent grades in Comp II taken at ISU
• Identified potential issues for math (which may not be as critical for English courses):
  – Course alignment between institutions
  – Gap in time between first and second course
  – Difference in contact hours/teaching styles, grading systems, etc.
Results: Majors and Minors

- Students with ECC had fewer changes of major than students without ECC.
- Students with 1-10 ECC were more likely to complete a minor than those without ECC.
- Students with $\geq 19$ ECC are more likely to graduate with second majors.
Results: Time to graduation

• ECC resulted in shorter time to graduation
  – ECC students graduate one semester earlier than students without ECC
  – The greater number of ECC the greater the likelihood student would graduate in 4 years.
• Fewer changes of major will impact time to graduation.
• For some programs course sequencing dictates 4 years
# Years to Degree by College

(Students entering 2002-2005)

<table>
<thead>
<tr>
<th>College</th>
<th>No ECC</th>
<th>1-6 credits</th>
<th>7-10 credits</th>
<th>11-18 credits</th>
<th>19+ credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ag &amp; Life Sci.</td>
<td>4.1</td>
<td>4.0</td>
<td>4.0</td>
<td>3.8</td>
<td>3.6</td>
</tr>
<tr>
<td>Business</td>
<td>4.2</td>
<td>4.1</td>
<td>3.9</td>
<td>3.8</td>
<td>3.7</td>
</tr>
<tr>
<td>Design</td>
<td>4.4</td>
<td>4.2</td>
<td>4.3</td>
<td>4.3</td>
<td>4.2</td>
</tr>
<tr>
<td>Engineering</td>
<td>4.6</td>
<td>4.5</td>
<td>4.3</td>
<td>4.3</td>
<td>4.2</td>
</tr>
<tr>
<td>Human Sci.</td>
<td>4.1</td>
<td>3.9</td>
<td>3.9</td>
<td>3.8</td>
<td>3.7</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sci.</td>
<td>4.3</td>
<td>4.1</td>
<td>4.0</td>
<td>3.9</td>
<td>3.8</td>
</tr>
</tbody>
</table>
Institutional Impact Beyond Student Success
Student Survey Question:

What advice would you give to students earning college credit and planning to attend ISU?

74% say students in high school should know how ECC credits will apply to ISU.
Types of courses students would recommend other students take as ECC

- Degree-related: 40%
- Gen Ed: 32%
- For challenge/Doesn’t matter: 12%
- Explore interests: 16%
What ISU students would caution future students with ECC to expect related to classes at ISU

- Work more: 53%
- May want to repeat: 22%
- Harder classes: 16%
- May be in advanced courses: 9%
Student Survey Question:

What advice would you give to Iowa State faculty, advisers and administrators regarding the transition for students with ECC?
Student Advice on ISU Policy & Practice

- Better articulation and course placement: 60
- More information to students: 50
- Acceptance of credits towards degree: 15
- Transfer in GPA for ECC courses: 10
- Increased communication with counselors: 5
- Tuition policies: 1
Faculty/Staff Perspective
Two Major Issues/Themes Emerged

• Lack of awareness/knowledge among K-12 students, families and counselors regarding the applicability of these credits.
• Concern for the student development and academic success of students with early credit
Additional Institutional Challenges

• Challenges building first semester class schedules for students:
  – All transcripts are not submitted before scheduling the first term
  – Needed courses are not ones we hold for orientation
  – In high school students take what is available not necessarily what is needed
  – To provide appropriate courses for first semester schedules while not overwhelming the student
Additional Institutional Challenges

• Course-based learning communities
• Continued use of the term “Freshmen” for courses, programs and scholarship eligibility.
• Increased workload for Admissions and Registrar’s Staff, and academic advisers.
• Admissions criteria
Additional Institutional Challenges

• Negative impact on small departments who depend on the exploratory nature of 1st year students for budget support
• Policies and prerequisites that are based on number of credits earned
Institutional Benefits

- Increased enrollment in second major areas, study abroad, internships, National Student Exchange Program, etc.
- Increase in 4-year graduation rates.
- Reducing time to graduation potentially reduces student debt
Implications for First-Year Experience
Implications for FYE

• As common courses become less common – the ‘experience’ part of the first-year experience becomes more critical.
• The “First-Year” of college credits occurs while students are still in high school.
• Academic advisors are central to adapting the FYE.
Implications for FYE

• Concerns about adding yet another level of risk to students already potentially ‘at risk’
• The norm/average student has changed
• Need to re-evaluate course-based Learning Communities that are often part of FYE programs
• First-year students in ‘second-year or higher’ courses
Discussion

Other ideas on implications for the First-Year Experience?
Acknowledgement of Task Force Members

- Paul Castleberry – College of Engineering
- Jonathan Compton – Office of the Registrar
- Maura Flaschner – Admissions
- Jane Jacobson – College of Liberal Arts and Sciences
- Dayle Nickerson – College of Human Sciences
- Tom Polito – College of Ag & Life Sciences
- Jason Pontius – Office of the Exec. VP and Provost
- Dana Schumacher – University Honors Program
- Karen Zunkel (Chair) – Office of the Exec. VP and Provost

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