Dual Credit in Illinois: Research and an Innovative Application

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Eric Lichtenberger, IERC
Jason Taylor, OCCRL

Scaling up: Effective Practices in Higher Education Conference in Normal, Illinois

October 31st, 2013
Agenda

• Background on Dual Credit
• Access to Dual Credit based on High School Characteristics
• Impact of Dual Credit on Enrollment and Degree Completion
  – Without controlling for selection bias
  – Controlling for selection bias
• Application-An early start to college at LLCC
## Dual Credit vs. Dual Enrollment

<table>
<thead>
<tr>
<th></th>
<th>Dual Credit</th>
<th>Dual Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What credit is earned?</strong></td>
<td>Earns college AND high school credit</td>
<td>Earns college credit; may earn high school credit</td>
</tr>
<tr>
<td><strong>Articulation agreement required?</strong></td>
<td>Yes. Reflect well established secondary –postsecondary articulation and alignment</td>
<td>Not required</td>
</tr>
<tr>
<td><strong>Who initiates?</strong></td>
<td>Students do not need to initiate contact or petition the high school to accept the credit</td>
<td>Often student initiated, not administratively facilitated</td>
</tr>
<tr>
<td><strong>Where are courses offered?</strong></td>
<td>At the college, high school, area career center, online or via distance learning</td>
<td>At the college</td>
</tr>
</tbody>
</table>

Source: Illinois Community College Board
## Dual Credit Policy Development in Illinois

<table>
<thead>
<tr>
<th>Year</th>
<th>Policy Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1990</td>
<td>ICCB’s Administrative Rules</td>
</tr>
<tr>
<td>1996</td>
<td>ICCB changed administrative rules to allow student to be counted for ADA &amp; FTE</td>
</tr>
<tr>
<td>2001</td>
<td>ICCB initiates ACE grants ($55/credit hour to colleges)</td>
</tr>
<tr>
<td>2003</td>
<td>ACE grants expanded &amp; renamed “P-16 Grants”</td>
</tr>
<tr>
<td>2008</td>
<td>P-16 Grant eliminated</td>
</tr>
<tr>
<td>2008</td>
<td>Dual Credit Task Force Report Recommendations: 1) Ensure quality; 2) improve access, equity, and attainment; 3) increase accountability</td>
</tr>
<tr>
<td>2009</td>
<td>Dual Credit Quality Act Sections: 1) Student access, attainment, and eligibility; 2) standards; 3) oversight, review, and reporting; 4) accountability</td>
</tr>
<tr>
<td>2013</td>
<td>ICCB’s Dual Credit Enhancement Grants</td>
</tr>
</tbody>
</table>

Source: Taylor (2013)
DATA AND STATEWIDE TRENDS

Source: Illinois Community College Board
Access based on High School Characteristics

• Source: Taylor and Lichtenberger (2013)
• Joint IERC/ OCCRL Research Brief

Research Question-
What is the relationship between high school dual credit participation rates and high school characteristics?
High School Dual Credit Participation Rates

Taylor & Lichtenberger (2013)
# High School Dual Credit Quartiles

<table>
<thead>
<tr>
<th>Dual Credit Quartile</th>
<th>Proportion Range</th>
<th>Number of Schools</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest Quartile</td>
<td>0% to 5.2%</td>
<td>162</td>
<td>25%</td>
</tr>
<tr>
<td>Second Quartile</td>
<td>5.3% to 10.7%</td>
<td>160</td>
<td>25%</td>
</tr>
<tr>
<td>Third Quartile</td>
<td>10.8% to 23.3%</td>
<td>161</td>
<td>25%</td>
</tr>
<tr>
<td>Highest Quartile</td>
<td>23.4% to 88.8%</td>
<td>161</td>
<td>25%</td>
</tr>
</tbody>
</table>

Source: Taylor & Lichtenberger (2013)
High School Dual Credit Quartiles by Locale

Source: Taylor & Lichtenberger (2013)
High School Dual Credit Quartiles by Region

Chicago (n=76)
- Lowest Quartile: 45%
- Second Quartile: 32%
- Third Quartile: 21%
- Highest Quartile: 3%

Northeast (n=148)
- Lowest Quartile: 34%
- Second Quartile: 39%
- Third Quartile: 20%
- Highest Quartile: 8%

Northwest (n=91)
- Lowest Quartile: 35%
- Second Quartile: 29%
- Third Quartile: 22%
- Highest Quartile: 14%

West Central (n=97)
- Lowest Quartile: 22%
- Second Quartile: 21%
- Third Quartile: 37%
- Highest Quartile: 21%

East Central (n=92)
- Lowest Quartile: 16%
- Second Quartile: 25%
- Third Quartile: 33%
- Highest Quartile: 26%

Southwest (n=79)
- Lowest Quartile: 11%
- Second Quartile: 9%
- Third Quartile: 25%
- Highest Quartile: 54%

Southeast (n=61)
- Lowest Quartile: 2%
- Second Quartile: 16%
- Third Quartile: 77%
- Highest Quartile: 5%

Source: Taylor & Lichtenberger (2013)
High School Dual Credit Quartiles by District Size

Small (n=120)
- Lowest Quartile: 21%
- Second Quartile: 19%
- Third Quartile: 23%
- Highest Quartile: 37%

Medium (n=257)
- Lowest Quartile: 22%
- Second Quartile: 20%
- Third Quartile: 28%
- Highest Quartile: 30%

Large (n=259)
- Lowest Quartile: 30%
- Second Quartile: 31%
- Third Quartile: 23%
- Highest Quartile: 15%

Source: Taylor & Lichtenberger (2013)
High School Dual Credit Quartiles by Race/Ethnicity and Low-Income

Source: Taylor & Lichtenberger (2013)
High School Dual Credit Quartiles by ACT

- Science ACT
- Reading ACT
- Math ACT
- English ACT
- Composite ACT
High School Dual Credit Quartiles by AYP

Did Meet AYP (n=351)
- Lowest Quartile: 21%
- Second Quartile: 20%
- Third Quartile: 26%
- Highest Quartile: 33%

Did Not Meet AYP (n=291)
- Lowest Quartile: 31%
- Second Quartile: 30%
- Third Quartile: 24%
-Highest Quartile: 15%

Taylor & Lichtenberger (2013)
### High School Dual Credit Quartiles by Attendance, Graduation, Truant, and Dropout Rates

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Lowest Quartile (Mean)</th>
<th>Second Quartile (Mean)</th>
<th>Third Quartile (Mean)</th>
<th>Highest Quartile (Mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance Rate ( (n=643) )</td>
<td>92%</td>
<td>93%</td>
<td>92%</td>
<td>94%</td>
</tr>
<tr>
<td>Graduation Rate ( (n=640) )</td>
<td>87%</td>
<td>87%</td>
<td>88%</td>
<td>91%</td>
</tr>
<tr>
<td>Chronic Truant Rate ( (n=643) )</td>
<td>4.3%</td>
<td>3.2%</td>
<td>3.9%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Drop Out Rate ( (n=643) )</td>
<td>5.7%</td>
<td>4.3%</td>
<td>4.3%</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

Source: Taylor & Lichtenberger (2013)
Dual Credit by Sector

## Dual Credit and Select Demographics

<table>
<thead>
<tr>
<th>Region</th>
<th>Community College Dual Enrollment</th>
<th>Four-Year Dual Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago</td>
<td>5.1%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Northeast</td>
<td>8.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Northwest</td>
<td>11.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>West Central</td>
<td>17.6%</td>
<td>0.3%</td>
</tr>
<tr>
<td>East Central</td>
<td>16.6%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Southwest</td>
<td>33.9%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Southeast</td>
<td>44.8%</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

Enrollment by Community College Dual Credit

<table>
<thead>
<tr>
<th>Enrollment Duration</th>
<th>Four-Year Starter</th>
<th>Two-Year Starter</th>
<th>Delayed</th>
<th>Never/Not Yet Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Dual Credit</td>
<td>31.4%</td>
<td>20.6%</td>
<td>14.0%</td>
<td>34.1%</td>
</tr>
<tr>
<td>One Semester</td>
<td>33.8%</td>
<td>39.1%</td>
<td>16.8%</td>
<td>10.2%</td>
</tr>
<tr>
<td>Two Semesters</td>
<td>40.6%</td>
<td>38.4%</td>
<td>13.0%</td>
<td>8.0%</td>
</tr>
<tr>
<td>Three Semesters</td>
<td>43.6%</td>
<td>38.2%</td>
<td>12.3%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Four or More Semesters</td>
<td>47.3%</td>
<td>35.1%</td>
<td>11.0%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Total</td>
<td>32.1%</td>
<td>22.9%</td>
<td>14.1%</td>
<td>30.8%</td>
</tr>
</tbody>
</table>

Enrollment by Four-Year College Dual Credit

- **No Dual Credit**: 31.9% Four-Year Starter, 23.0% Two-Year Starter, 14.2% Delayed, 30.9% Never/Not Yet Enrolled
- **One or More Semesters**: 76.2% Four-Year Starter, 8.3% Two-Year Starter, 10.5% Delayed, 5.0% Never/Not Yet Enrolled
- **Total**: 32.1% Four-Year Starter, 22.9% Two-Year Starter, 14.1% Delayed, 30.8% Never/Not Yet Enrolled

# Dual Credit and Enrollment Patterns

<table>
<thead>
<tr>
<th></th>
<th>High Income Model</th>
<th>Mid-High Income Model</th>
<th>Mid-Low Income Model</th>
<th>Low Income Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Four-Year</td>
<td>Two-Year</td>
<td>Four-Year</td>
<td>Two-Year</td>
</tr>
<tr>
<td></td>
<td>Odds</td>
<td>Odds</td>
<td>Odds</td>
<td>Odds</td>
</tr>
<tr>
<td>Semesters Dually Enrolled ICCB</td>
<td>4.124</td>
<td>5.305</td>
<td>3.349</td>
<td>4.026</td>
</tr>
<tr>
<td>Semesters Dually Enrolled 4-yr</td>
<td>9.121</td>
<td>4.187</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*shaded cells indicate statistical significance at the p≤.001 level.*

## Dual Credit and Bachelor’s Degree Completion

<table>
<thead>
<tr>
<th></th>
<th>High Income</th>
<th>Mid-High Income</th>
<th>Mid-Low Income</th>
<th>Low Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semesters Dually Enrolled ICCB</td>
<td>1.034</td>
<td>1.014</td>
<td>1.046</td>
<td>1.098</td>
</tr>
<tr>
<td>Semesters Dually Enrolled 4-yr</td>
<td>1.027</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*shaded cells indicate statistical significance at the p ≤ 0.001 level.

• Research Questions:

1. What is the impact of community college dual credit on college enrollment and completion?

2. What is the differential impact of community college dual credit on college enrollment and completion for low-income students and students of color?

Source: Taylor (2013)
• Method: Descriptive and quasi-experimental
• Dataset: IERC dataset – ACT Student Information Survey & ACT records, National Student Clearinghouse (2003-2010)
• Sample:
  – 12 Dual Credit Community College Districts
  – CCC, DACC, KCC, LCCC, LLCC, PC, PSC, RLC, SEIC, SWIC, TC, JWC
  – 41, 737 students in 2002-03 HS senior class
    – 5,315 DC students and 36,422 non-DC students
• Examined sub-samples of low-income students and students of color

Source: Taylor (2013)
## Descriptive Results: College Enrollment and Completion

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Total (Percent)</th>
<th>Dual Credit (Percent)</th>
<th>Non-Dual Credit (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full Sample</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Enrollment</td>
<td>0.66</td>
<td>0.91</td>
<td>0.63</td>
</tr>
<tr>
<td>College Completion</td>
<td>0.31</td>
<td>0.52</td>
<td>0.29</td>
</tr>
<tr>
<td><strong>Students of Color</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Enrollment</td>
<td>0.64</td>
<td>0.91</td>
<td>0.62</td>
</tr>
<tr>
<td>College Completion</td>
<td>0.24</td>
<td>0.43</td>
<td>0.23</td>
</tr>
<tr>
<td><strong>Low-Income Students</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Enrollment</td>
<td>0.60</td>
<td>0.85</td>
<td>0.58</td>
</tr>
<tr>
<td>College Completion</td>
<td>0.20</td>
<td>0.34</td>
<td>0.18</td>
</tr>
</tbody>
</table>

Source: Taylor (2013)
## Descriptive Results: College Enrollment and Completion

<table>
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<tr>
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<td></td>
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<td>0.34</td>
<td>0.18</td>
</tr>
</tbody>
</table>

Source: Taylor (2013)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Before (mean or proportion)</th>
<th>After (mean or proportion)</th>
<th>Percent Bias Before &amp; After</th>
<th>Percent Bias Reduction</th>
</tr>
</thead>
</table>
| ACT English | DC: 20.2  
Non-DC: 18.2  
(p=.00) | DC: 20.0  
Non-DC: 19.8  
(p=.22) | Before: 33.4%  
After: 2.7% | 91.8% |
| Gender     | (p=.00)  | (p=.616) | Before: 8.7%  
After: -1.1% | 86.9% |
| Female     | DC: 0.56  
Non-DC: 0.52 | DC: 0.55  
Non-DC: 0.56 | Before: 8.7%  
After: -1.1% | 86.9% |
| Male       | DC: 0.43  
Non-DC: 0.48 | DC: 0.44  
Non-DC: 0.43 | Before: -8.2%  
After: 1.4% | 83.3% |
| Missing    | DC: 0.00  
Non-DC: 0.01 | DC: 0.00  
Non-DC: 0.01 | Before: -3.0%  
After: -1.7% | 45.5% |

Source: Taylor (2013)
Propensity Score Matching—Matched Sample of DC and non-DC students

- Academic preparation and achievement
- Demographic
- High school extracurricular activities
- Academic and career expectations and aspirations
- Family-related variables (parent’s income, ability to pay, siblings, etc.)

<table>
<thead>
<tr>
<th>Matched Samples</th>
<th>Dual Credit (n)</th>
<th>Non-Dual Credit (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample</td>
<td>4,727</td>
<td>17,639</td>
</tr>
<tr>
<td>Students of Color</td>
<td>684</td>
<td>4,379</td>
</tr>
<tr>
<td>Low-Income Students</td>
<td>668</td>
<td>2,159</td>
</tr>
</tbody>
</table>

Source: Taylor (2013)
## What is the effect of community college dual credit on college enrollment?

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Odds Ratios</th>
<th>Marginal Effects (Difference between DC and non-DC)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full Sample</td>
<td>Students of Color</td>
</tr>
<tr>
<td>College Enrollment</td>
<td>7.44***</td>
<td>5.78***</td>
</tr>
</tbody>
</table>

Source: Taylor (2013)
### What is the impact of community college dual enrollment on completion?

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Odds Ratios</th>
<th>Marginal Effects (Percent Difference between DC and non-DC)</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>College Enrollment</td>
<td>7.44***</td>
<td>5.78***</td>
</tr>
<tr>
<td>College Completion</td>
<td>2.62***</td>
<td>1.85***</td>
</tr>
</tbody>
</table>

- Dual credit has a positive effect for all students and underrepresented students but the effect is not equitable.

Source: Taylor (2013)
What Do These Data Mean?
• In Illinois:
  – Need more recent data to account for policy changes
  – More nuanced data: effects of course location, course discipline, course intensity, student-level variables, etc.
  – Qualitative data on program and policy implementation
  – Equity and Student Eligibility
  – Tension between access and quality

Source: Taylor (2013)
AN EARLY START TO COLLEGE: A PRACTICAL APPLICATION
DUAL CREDIT MODELS

Academic or Career and Technical Education (CTE)

• High school faculty are qualified and the college courses are taught in the high school
• High school students come to the college campus to take college courses (prior approval may be needed for high school credit)
• College faculty go to the high school and provide college courses
First Semester

Cover Page of Brochure

First Semester @ New Berlin High School

A collaboration between Lincoln Land Community College and surrounding school districts.
Mission and Vision Statements

• **Mission Statement:**
  “First Semester” will provide a college level experience to high school seniors allowing them to earn dual credit, and develop the necessary readiness and skills for continued postsecondary academic success.

• **Vision Statement:**
  Students will leave high school prepared for continued success in postsecondary educational pursuits.
Goals and Benefits

Goals:
• To provide educational opportunities for high school students in the Lincoln Land Community College (LLCC) district;
• To enhance the current high school curriculum;
• To address students’ unique interests, abilities, and attitudes; and,
• To improve the transition of students from high school to college.

Benefits:
• Credit earned is posted as college credit on an official LLCC transcript.
• Courses offered in district high schools make college more accessible to area high school students.
• Students still participate in high school activities.
Student/High School Benefit

- Average Daily Attendance for high school (1/2 day)
- Students allowed to participate in high school activities, i.e., graduation, sports, band, prom, etc.
- Students follow college schedule (class time, breaks, holidays)
- Students will be exposed to the online learning environment
- Students will become more accustomed to the rigors and demands of college level work
- Students are in a comfortable environment
- Students will earn 14 credit hours of college credit
Other Important Information

• Parent/student information session held the year prior to program offering.

• Students’ final high school GPA is considered complete after their December semester.

• High school transcript credit is pass/fail but college transcript is assigned a grade.
• High school graduation requirements must be met prior to admission to First Semester program so that any course failure does not impact high school graduation.

• Students follow the college schedule. Arrangements are made to hold class at the college campus when the high school has a planned closure.

• There is contact with the high school counselor and FERPA waivers are signed to allow for this. (may need to verify for IHSA sports eligibility or student/LLCC faculty needs to talk to the high school counselor)
LLCC Benefit

- Collaborative efforts with the high school that provides dual credit/early start options to students who may not otherwise have opportunities (limited dual credit opportunities due to faculty teaching requirements)
- Tuition and fees are collected
- Headcount for apportionment
- LLCC faculty are more comfortable with this arrangement
- LLCC exposure/experience to parents and students
Student Guidelines

• At least ACT = 21 in English and Reading or placement exam
• High School unweighted GPA >= 3.0
• All high school graduation requirements must be met by December 2013
• Complete high school application and LLCC application
• Counselor recommendation
## Course Schedule

<table>
<thead>
<tr>
<th>Day of the Week</th>
<th>Course Number/Topic</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>M/W</td>
<td>HIS 112 J77/United States History Since 1877 – 3 credit hours (IAI: S2 901)</td>
<td>8:00am – 9:15am</td>
<td>Winters</td>
</tr>
<tr>
<td>M/W</td>
<td>PSY 101 J77/Introduction to Psychology – 3 credit hours (IAI: S6 900)</td>
<td>9:30am – 10:45am</td>
<td>Dow</td>
</tr>
<tr>
<td>T</td>
<td>LIT 114 J77/Introduction to Film as Literature – 3 credit hours (IAI: HF 908)</td>
<td>8am – 11:50am</td>
<td>Myers</td>
</tr>
<tr>
<td>TH (F, if more than 24 students)</td>
<td>CMN 101 J77/Introduction to Public Speaking – 3 credit hours (IAI:C2 900)</td>
<td>8am – 10:50am</td>
<td>Disney</td>
</tr>
<tr>
<td>OL</td>
<td>CSS 100 OL77/College Success Skills – 2 credit hours</td>
<td>Online</td>
<td>Chernowsky</td>
</tr>
</tbody>
</table>

### Tuition and fees
- $1576.00 + textbooks

Courses do not have prerequisites but a couple have reading advisories.

A balanced schedule was planned based on reading/writing requirements along with spreading gen ed courses across multiple areas; also considered what was currently provided for dual credit at the high schools.
Enrollments

- Spring 2012 - 15 students – 15 completed program
- Spring 2013 - 32 students – 31 completed program
- Spring 2014 - 15 students (still enrolling)
  - Another cohort is being developed at another location
- Enrollments vary by class year
- Schools participating vary by year
Disadvantages

• Students are not high school graduates and therefore cannot apply for financial aid
• Scenario is similar in some aspects to the college experience but not completely
• Students’/parents’ understanding of a full load without the apparent clock hour requirements
• There is a lack of diversity in the classroom that proves to be advantageous to college student learning
Questions?

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