Probation Management: Identification, Intervention, and Reduction

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Presentation: bit.ly/probation-management

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Irvine Valley College
What is your institution doing to move the completion needle?

“Cohort Grouping”

“SI; Early Alert; student-to-student mentoring programs...”

“SI; Early Alert; student-to-student mentoring programs; pathways”

“Supplemental instruction, building success teams, scaling affinity groups”

“Focusing on our entering college transfer students”

“Embedded support”

“Talking about it. Ab705”

“...”
What is Probation?

• **Academic Probation**: *Attempted* at least 12 units cumulatively and has a cumulative GPA of 2.0 (with course repeats taken into consideration)

• **Progress Probation**: *Enrolled* in at least 12 units cumulatively and has a cumulative ratio of W/NP/NC/I grades of above 50% of all grades earned.

• **Dismissal**: Students on probation (Progress Probation or GPA < 1.75 for Academic Probation) for 3 consecutive semesters could get dismissed from the district

* Attempted units, also known as graded units, consist of all units in which the students earn a letter grade (A, B, C, D, or F)
## Legacy Probation Process

<table>
<thead>
<tr>
<th>First Probation</th>
<th>Subsequent Probations</th>
<th>Dismissal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration hold</td>
<td>Notification</td>
<td>Registration hold</td>
</tr>
<tr>
<td>Attend probation workshop</td>
<td></td>
<td>Attend a dismissal workshop and submit an appeal form to continue</td>
</tr>
<tr>
<td>Registration hold removed</td>
<td></td>
<td>Otherwise: dismissed from district</td>
</tr>
</tbody>
</table>
Probation Workshop/Intervention

... through 2016

2017

2018

2019 and beyond

Workshop
• In-person
• Review probation policies
• Why students are on probation
• How to get off probation

Workshop
• In-person and online
• Previous material
• + Time Management
13-15% of students get on probation

Academic Standing (Recalculated)
IVC Credit Students

<table>
<thead>
<tr>
<th>Semester</th>
<th>Progress</th>
<th>Academic</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>F2012</td>
<td></td>
<td></td>
<td>11,027 (87.4%)</td>
</tr>
<tr>
<td>S2013</td>
<td></td>
<td></td>
<td>10,946 (86.3%)</td>
</tr>
<tr>
<td>F2014</td>
<td></td>
<td></td>
<td>11,340 (87.0%)</td>
</tr>
<tr>
<td>S2015</td>
<td></td>
<td></td>
<td>10,689 (85.4%)</td>
</tr>
<tr>
<td>F2016</td>
<td></td>
<td></td>
<td>10,963 (87.2%)</td>
</tr>
<tr>
<td>S2017</td>
<td></td>
<td></td>
<td>10,600 (85.2%)</td>
</tr>
<tr>
<td>F2018</td>
<td></td>
<td></td>
<td>10,785 (85.8%)</td>
</tr>
<tr>
<td>S2019</td>
<td></td>
<td></td>
<td>11,125 (87.7%)</td>
</tr>
<tr>
<td>F2020</td>
<td></td>
<td></td>
<td>10,698 (86.2%)</td>
</tr>
<tr>
<td>S2021</td>
<td></td>
<td></td>
<td>10,931 (87.5%)</td>
</tr>
<tr>
<td>F2022</td>
<td></td>
<td></td>
<td>1,470 (11.8%)</td>
</tr>
<tr>
<td>S2023</td>
<td></td>
<td></td>
<td>1,604 (12.9%)</td>
</tr>
</tbody>
</table>
Why do we care about students on probation?
Research Data

- Terms: Fall 2012 – Spring 2018
- First non-dual enrolled term after Fall 2012
- IVC students enrolling in credit courses
Impact of Probation

1 in 5 will get dismissed
22.1%

1/3 as likely to earn Award

1/2 as likely to transfer
39.1%
19.3%

Bar chart showing the impact of probation on different outcomes.

- Dismissal: 22.1% (Never on Probation)
- Certificate: 13.3% (Never on Probation), 4.2% (Been on Probation)
- Degree: 8.5% (Never on Probation), 3.0% (Been on Probation)
- Award: 13.6% (Never on Probation), 4.4% (Been on Probation)
- Transfer: 39.1% (Never on Probation), 19.3% (Been on Probation)
Equity Groups More Likely of Probation

- Overall rate = 19.3%
- Black or African American: 24.5% (N = 935)
- DSPS: 30.1% (N = 1,668)
- First Gen: 21.6% (N = 14,512)
- Foster Youth: 42.0% (N = 410)
- Hispanic/Latino: 29.3% (N = 9,419)
- Military: 28.3% (N = 678)
Can students get off probation?
Time To First Probation

Semester of First Probation

- 1: 6.8%
- 2: 12.0%
- 3: 5.2%
- 4: 2.1%
- 5: 1.3%
- 6: 0.8%
- 7: 0.7%
- 8: 0.6%
- 9: 0.9%
- 10 or no probation: 69.6%
Progress After First Probation

Probation
N = 5,223
Progress After First Probation

- Probation: 51.3%
  - Stopped: 32.6%
  - Good: 16.1%

- Sem_1: 49.7%
  - Stopped: 62.3%
  - Good: 19.3%

- Sem_2: 31.0%
  - Good: 19.0%

- Sem_3: 18.7%
Probation is sticky
Probation Risk Model
and
Managing Students with High Need
Time to try something new

Existing probation workshop does not work.

Case Management

- Help students identify challenges
- Refer students to resources to overcome challenges
- Follow up with students
- Repeated touch points
Who should we focus on?

Case management is effort-intensive

Not yet ready to scale to all students
  – Need evidence that it works
  – Need more resources to be allocated

**Solution**: build a probation risk model, and focus on a subset
Risk Score: 0 – 100 %

Risk: likelihood of being on probation at the end of term

Case Management List

<table>
<thead>
<tr>
<th>Student ID</th>
<th>Risk Score</th>
<th>Other Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456</td>
<td>80 %</td>
<td></td>
</tr>
<tr>
<td>987654</td>
<td>79 %</td>
<td></td>
</tr>
<tr>
<td>963852</td>
<td>77 %</td>
<td></td>
</tr>
<tr>
<td>999999</td>
<td>75 %</td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
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</table>
What do you think is most predictive of a student's likelihood of getting on probation?

- Demographics (e.g., age, ethnicity, socioeconomic status, etc): 50%
- High school GPA: 50%
- High school: 10%
- College GPA: 10%
- Past probation status: 20%
- Other: 20%
Useful Variable Derivations

• Academic Probation - **impossible**: less than 12 units at end of term or with a 0.0 GPA, student will not be on probation

• Academic Probation - **for sure**: even with a 4.0 GPA this term, student will still be on probation

• Minimum Target Term GPA to not be on probation

• Similar variables for Progress Probation

Goal: Predict Probation (Yes/No)

Build model using “Train” set, and validate on “Test” and “Out-of-time” samples
Method: Gradient Boosted Trees
Model Performance

1. Sort students by risk
2. Group students into buckets of risk
3. Compare: average risk score vs. actual probation
4. Repeat for: Train, Test, and Out-of-time sets

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</tr>
<tr>
<td>999999</td>
<td>75 %</td>
<td></td>
</tr>
<tr>
<td>...</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Model Performance

Model appears to validate well!
GPA-, units-, and probation-related variables dominate!
With a probation risk model, who would you focus your case management efforts on?

- Lowest risk students: 10%
- Middle of the pack students: 50%
- Highest risk students: 20%
- Students currently on probation: 20%
Spring 2019 Pilot

Focus: students **currently** on academic probation with a minimum target GPA of **2.0 – 3.0**

- Within “reach” of altering trajectory

- ~ 500 students

- Pilot with 133 students
Spring 2019 Pilot

Contact List

Questionnaire: challenges -> resources

TO DO LIST

SELF ASSESSMENT
Daily Email/Report

Daily report to counselors

- Student action items -> Yes/No -> Follow-up via phone/email

<table>
<thead>
<tr>
<th>Event_Name</th>
<th>N_Students</th>
<th>N_Complete</th>
<th>Pct_Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Can't track: Online Probation Workshop</td>
<td>133</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>2 Probation Counseling Team</td>
<td>133</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>3 Counseling - Probation</td>
<td>133</td>
<td>6</td>
<td>4.51</td>
</tr>
<tr>
<td>4 Self-assessment</td>
<td>133</td>
<td>19</td>
<td>14.29</td>
</tr>
<tr>
<td>5 Success Workshop</td>
<td>133</td>
<td>31</td>
<td>23.31</td>
</tr>
<tr>
<td>6 Counseling - Personal</td>
<td>10</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>7 Time Management Workshop</td>
<td>10</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>8 Counseling - Academic Planning</td>
<td>8</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>9 Counseling - Academic/Career/Transfer</td>
<td>8</td>
<td>2</td>
<td>25.00</td>
</tr>
<tr>
<td>10 Student Success Center</td>
<td>7</td>
<td>1</td>
<td>14.29</td>
</tr>
<tr>
<td>11 Math/Writing Center</td>
<td>7</td>
<td>2</td>
<td>28.57</td>
</tr>
<tr>
<td>12 Health Center Counseling</td>
<td>4</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>13 Choosing a Major Workshop</td>
<td>3</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>14 Study Skills Workshop</td>
<td>3</td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Next Steps

• Spring 2019: Feasibility / testing pilot

• Fall 2019: Modify logistics (what works, what doesn’t), modify target students, and create a more formal program

• Spring 2020 / RP 2020: Evaluation - reduce number of students on probation (???)
Thank You!