Recruitment, Retention and Teacher Salaries

Christiana Stoddard
Douglas J. Young
Montana State University

Thanks

• Linda Atwood, Madalyn Quinlan, OPI
• Tom Bilodeaux, MEA
• Brad Eldridge, DOL
• Claudette Morton, Small Schools
• Jim Standaert, LFD
• Katie Genadek, Brandon Scarborough, MSU

Questions

1. How are recruitment and retention related to salary and other factors?
2. How would salary increases affect recruitment/retention?
Research Methods
• Many Factors Affect Recruitment and Retention
• These Factors are Confounded
• Findings Based on Regression Analyses
• Present: One Factor at Time

Assessing the Effect of Salary on Recruitment and Retention
• Compare Experience of MT over Time
• Compare Experience of MT with Other States
• Compare Districts within MT

Schools and Staffing Survey (SASS)
• National Survey 1987-99
• 1078 Teachers in MT in 1999
• 168 Schools
• 124 Districts
Recruitment and Retention Indicators in SASS

- Turnover Rate = New Hires/Positions
- Size of Pool
  - % New BAs who leave MT for another state
  - % New BAs from other states who come
- % Schools report “Very difficult”
- % Teachers w/o Major/Minor in Field
- % Teachers Uncertified in Field

Recruitment and Retention Over Time in Montana

<table>
<thead>
<tr>
<th>Year</th>
<th>MT Salary/US Avg.</th>
<th>5 Yr Student Growth</th>
<th>% New Hires</th>
<th>% New BA leave</th>
<th>% Report Difficult</th>
</tr>
</thead>
<tbody>
<tr>
<td>'87</td>
<td>.85</td>
<td>-9.3%</td>
<td></td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>'90</td>
<td>.88</td>
<td>-2.3%</td>
<td>10</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>'93</td>
<td>.79</td>
<td>7.8%</td>
<td>7</td>
<td>26</td>
<td>42</td>
</tr>
<tr>
<td>'99</td>
<td>.76</td>
<td>-4.8%</td>
<td>12</td>
<td>44</td>
<td>42</td>
</tr>
</tbody>
</table>

Findings: MT 1987-1999

- Turnover in 1999 Highest
- High Salary and Student Population Growth Decrease % of new BAs Who Leave Montana
- Difficulty Hiring Unrelated to Salary
Cross State Comparisons in 1999

<table>
<thead>
<tr>
<th></th>
<th>Salary/US Avg</th>
<th>10 yr Stud Growth</th>
<th>% New Hires</th>
<th>% New BA leave</th>
<th>% New BA come</th>
</tr>
</thead>
<tbody>
<tr>
<td>ND, SD</td>
<td>.71</td>
<td>-9.8%</td>
<td>10</td>
<td>58</td>
<td>27</td>
</tr>
<tr>
<td>MT</td>
<td>.76</td>
<td>-6.3%</td>
<td>12</td>
<td>44</td>
<td>15</td>
</tr>
<tr>
<td>ID, WY</td>
<td>.83</td>
<td>-2.3%</td>
<td>11</td>
<td>33</td>
<td>35</td>
</tr>
<tr>
<td>AZ, CO, NV, WA</td>
<td>.92</td>
<td>34.8%</td>
<td>14</td>
<td>22</td>
<td>37</td>
</tr>
</tbody>
</table>

Cross State Comparisons in 1999 (continued)

<table>
<thead>
<tr>
<th></th>
<th>Salary/US Avg</th>
<th>10 yr Stud Growth</th>
<th>% Difficult</th>
<th>% No Major or Minor</th>
<th>% Not Certified</th>
</tr>
</thead>
<tbody>
<tr>
<td>ND, SD</td>
<td>.71</td>
<td>-9.8%</td>
<td>42</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>MT</td>
<td>.76</td>
<td>-6.3%</td>
<td>42</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>ID, WY</td>
<td>.83</td>
<td>-2.3%</td>
<td>34</td>
<td>19</td>
<td>4</td>
</tr>
<tr>
<td>AZ, CO, NV, WA</td>
<td>.92</td>
<td>34.8%</td>
<td>48</td>
<td>23</td>
<td>8</td>
</tr>
</tbody>
</table>

Findings:
Cross State Comparisons

Higher Salaries Decrease
- Difficulty Hiring (Controlling for Student Growth)
- Fraction of New BAs Who Leave

Higher Salaries Appear Unrelated to
- Teacher Turnover
- % No Major/Minor in Field
- % Uncertified in Field
Analysis of Montana Districts
- FY 2003/2004/2005
- 3-Year Total of 1,311 District-Years with Data for Most Variables
- Missing Data
  - Recruitment Report (47%)
  - Salary (23%)

Statewide Turnover Rates
- Turnover = Teacher Openings/Teacher Staff (FTE)
- If Nonreporting Districts are Similar to Reporting Districts: Turnover = 12.3%
- If Districts Report Only if They Have Openings: Turnover = 8.7%

Recruitment/Retention Indicators
- Turnover
- Difficulty Hiring
  - 1: Easy (Several Qualified Apps.)
  - 2: Possible (Some Qualified Apps.)
  - 3: Difficult (Shortage of Apps.)
  - 4: Very Hard (No Apps., Not Filled, Emergency Measures)
- Misassigned Teacher
**Salary Classes**
(Based on Starting/Low Salaries)

<table>
<thead>
<tr>
<th>Salary</th>
<th>% of Districts</th>
<th>% of FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \leq $20,000 )</td>
<td>19</td>
<td>8</td>
</tr>
<tr>
<td>$20,000 to $23,000</td>
<td>38</td>
<td>35</td>
</tr>
<tr>
<td>( \geq $23,000 )</td>
<td>19</td>
<td>51</td>
</tr>
<tr>
<td>No Data</td>
<td>23</td>
<td>5</td>
</tr>
</tbody>
</table>

**Turnover and Salary**

- \( \leq $20,000 \): 11.1
- $20,000 to $23,000: 8.1
- \( \geq $23,000 \): 8.3

**Difficulty Recruiting and Salary**

- \( \leq $20,000 \): 2.9
- $20,000 to $23,000: 2.4
- \( \geq $23,000 \): 2.1
Montana Findings

- Low Salary Districts:
  - Have Higher Teacher Turnover
  - More Difficulty Attracting Qualified Applicants
  - Are More Likely to Have Misassigned Teachers

Montana Findings - 2

- These Findings Continue to Hold When Controlling for:
  - District Size (FTE)
  - District Type (Elem., HS, K-12)
  - Region
  - Student Characteristics (Nonwhite, Reduced Price/Free Lunch)
  - Isolation
How Can “Isolation” be Measured?

<table>
<thead>
<tr>
<th>Square Miles per Student</th>
<th>% of Districts</th>
<th>% of FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 1</td>
<td>22</td>
<td>62</td>
</tr>
<tr>
<td>1 to 10</td>
<td>51</td>
<td>33</td>
</tr>
<tr>
<td>≥ 10</td>
<td>27</td>
<td>5</td>
</tr>
</tbody>
</table>

Turnover and Isolation

<table>
<thead>
<tr>
<th>≤ 1</th>
<th>1 to 10</th>
<th>≥ 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>9.8</td>
<td>16.4</td>
</tr>
</tbody>
</table>

Difficulty Recruiting and Isolation

<table>
<thead>
<tr>
<th>≤ 1</th>
<th>1 to 10</th>
<th>≥ 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2.5</td>
<td>2.5</td>
</tr>
</tbody>
</table>
Montana Findings - 3

• More Isolated Districts:
  - Have Higher Teacher Turnover
  - More Difficulty Attracting Qualified Applicants
  - Are More Likely to Have Schools with Misassigned Teachers

Salary and Isolation are Related

Average Salary

Misassigned Teachers and Isolation

<table>
<thead>
<tr>
<th></th>
<th>≤ 1</th>
<th>1 to 10</th>
<th>≥ 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>3</td>
<td>13</td>
<td>17</td>
</tr>
</tbody>
</table>
Other Findings

- Smaller Districts have Higher Turnover and More Difficulty
- Districts with More Generous Insurance Plans Have Lower Turnover and Less Difficulty
- Districts with Higher Salary Growth Have Lower Turnover
- High School Districts Report More Misassigned Teachers

If Starting Salaries in the Lowest Paying Districts Are Raised to $21,400, the Estimated Impact Would be to Reduce...

- Turnover by Approximately 2%
- Teacher Difficulty by .2
- Misassignment by 6%

If Starting Salaries are Raised in the Most Isolated Districts...

- A District with 20 Square Miles per Student has 2% Higher Turnover than an Urban District
- Raising Starting Salaries in Low Paying Districts by $2,000 Would Approximately Offset that Difference in Isolation
Suggestion to Improve Future Work

• Better Data Collection
  - Teacher Openings
  - Compensation

Written Report
By September 30

• Details of the Findings
• Openings and Difficulty Hiring for Non-teaching Personnel
• Salary Comparisons Between Schools and Other Employers for Non-teaching Occupations