Minot St. First Year Teacher Effect on Student Outcomes

## 1 NDSA State Growth Percentile Comparisons

Using the 2015-2016 and 2016-2017 North Dakota State Assessment results ('NDSA'), students were included in this study if they were in grades 4-8 in 2016-17 with NDSA results in both the 2015-16 and 2016-17 school years. If a student fell under this criteria, they were divided into one of three groups:

1. Students taught in 2016-2017 by a Minot State University graduate who completed their degree in either Fall 2015, Spring 2016, or Summer 2016 semesters.
2. Students taught in 2016-2017 by a first-year teacher who was not a Minot State University graduate who completed their degree in either Fall 2015, Spring 2016, or Summer 2016 semesters.
3. Students taught in 2016-2017 by a teacher who was not identified as a first-year teacher.

### 1.1 NDSA Math

Figure 1 and Table 1 below compares students of Minot State University first-year teachers to students of all North Dakota non-first year teachers and students of first-year teachers not from Minot State University. The values compared are the state growth percentiles on the 2016-2017 NDSA Math assessment. For example, a growth percentile of 30 would mean that a student's increase from 2015-2016 to 2016-2017 NDSA Math score is greater than the score increase seen by $30 \%$ of students at the same grade level.


Figure 1: 2016-2017 NDSA Math State Growth Percentile Distribution by Teacher Group

| Group | \# Students | 10th | 25th | 40th | 50th | 60th | 75th | 90th |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| ND Non-First Year Teacher | 35091 | 10 | 25 | 40 | 50 | 60 | 75 | 90 |
| ND First Year Teacher | 1131 | 10 | 24 | 39 | 49 | 60 | 75 | 88 |
| Minot St. First Year Teacher | 976 | 8 | 20 | 34 | 44 | 54 | 72 | 88.5 |

Table 1: 2016-2017 NDSA Math State Growth Percentile Distributions by Teacher Group

The figures and tables below show the NDSA Mathematics proficiency levels in grades 4-8 for students of first-year Minot St. teachers compared to those of non-first year teachers, along with their transition between levels during the 2015-16 and 2016-17 school year. The 2015-16 results for students of Minot St. teachers are before the teacher arrived, while the 2016-17 results show those proficiency levels after approximately one year with the teacher. Please note that the tables show row percentages, showing what proportion of each 2015-16 group scored in 2016-17.

## Student NDSA Mathematics Proficiency Before/After First Year Teacher For Students Of Minot St. First Year Teachers



| $\downarrow 2015-16\| \| 2016-17 \rightarrow$ | Novice | Part. Proficient | Proficient | Advanced |
| :--- | ---: | ---: | ---: | ---: |
| Novice | $82.2 \%$ | $17.5 \%$ | $0.3 \%$ | $0.0 \%$ |
| Part. Proficient | $33.3 \%$ | $50.1 \%$ | $15.6 \%$ | $1.0 \%$ |
| Proficient | $3.4 \%$ | $41.5 \%$ | $42.9 \%$ | $12.2 \%$ |
| Advanced | $1.4 \%$ | $10.1 \%$ | $37.7 \%$ | $50.7 \%$ |

Table 2: Student NDSA Proficiency Before/After Minot St. First Year Teacher
*Percentages listed are row percentages.

## Student NDSA Mathematics Proficiency <br> For Students Of Non-First Year Teachers



| $\downarrow 2015-16 \\| 2016-17 \rightarrow$ | Novice | Part. Proficient | Proficient | Advanced |
| :--- | ---: | ---: | ---: | ---: |
| Novice | $74.4 \%$ | $23.6 \%$ | $1.9 \%$ | $0.1 \%$ |
| Part. Proficient | $26.3 \%$ | $56.9 \%$ | $15.6 \%$ | $1.1 \%$ |
| Proficient | $3.2 \%$ | $34.8 \%$ | $48.2 \%$ | $13.8 \%$ |
| Advanced | $0.3 \%$ | $5.1 \%$ | $31.1 \%$ | $63.5 \%$ |

Table 3: Student NDSA Proficiency For Non-First Year Teachers
*Percentages listed are row percentages.

### 1.2 NDSA Reading

Figure 2 and Table 2 below compares students of Minot State University first-year teachers to students of all North Dakota non-first year teachers and students of first-year teachers not from Minot State University. The values compared are the state growth percentiles on the 2016-2017 NDSA Reading assessment. For example, a growth percentile of 30 would mean that a student's increase from 2015-2016 to 2016-2017 NDSA Reading score is greater than the score increase seen by $30 \%$ of students at the same grade level.

*25th, 50th, and 75th percentiles are labeled

Figure 2: 2016-2017 NDSA Reading State Growth Percentile Distribution by Teacher Group

| Group | \# Students | 10th | 25 th | 40 th | 50 th | 60th | 75th | 90 th |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| ND Non-First Year Teacher | 35027 | 10 | 25 | 40 | 50 | 60 | 75 | 90 |
| ND First Year Teacher | 1120 | 8 | 26 | 40 | 51 | 60 | 76 | 89 |
| Minot St. First Year Teacher | 971 | 9 | 21 | 35 | 45 | 55 | 73 | 91 |

Table 4: 2016-2017 NDSA Reading State Growth Percentile Distributions by Teacher Group

The figures and tables below show the NDSA Reading proficiency levels in grades 4-8 for students of first-year Minot St. teachers compared to those of non-first year teachers, along with their transition between levels during the 2015-16 and 2016-17 school year. The 2015-16 results for students of Minot St. teachers are before the teacher arrived, while the 2016-17 results show those proficiency levels after approximately one year with the teacher. Please note that the tables show row percentages, showing what proportion of each 2015-16 group scored in 2016-17.

## Student NDSA Language Proficiency Before/After First Year Teacher For Students Of Minot St. First Year Teachers



| $\downarrow$ 2015-16 \|| 2016-17 $\rightarrow$ | Novice | Part. Proficient | Proficient | Advanced |
| :--- | ---: | ---: | ---: | ---: |
| Novice | $64.7 \%$ | $31.2 \%$ | $4.0 \%$ | $0.0 \%$ |
| Part. Proficient | $29.4 \%$ | $48.2 \%$ | $22.1 \%$ | $0.3 \%$ |
| Proficient | $3.9 \%$ | $32.1 \%$ | $53.9 \%$ | $10.0 \%$ |
| Advanced | $0.0 \%$ | $2.8 \%$ | $49.1 \%$ | $48.1 \%$ |

Table 5: Student NDSA Proficiency Before/After Minot St. First Year Teacher
*Percentages listed are row percentages.

## Student NDSA Language Proficiency <br> For Students Of Non-First Year Teachers



| $\downarrow$ 2015-16 \|| 2016-17 $\rightarrow$ | Novice | Part. Proficient | Proficient | Advanced |
| :--- | ---: | ---: | ---: | ---: |
| Novice | $68.8 \%$ | $26.2 \%$ | $4.9 \%$ | $0.1 \%$ |
| Part. Proficient | $27.4 \%$ | $46.0 \%$ | $25.3 \%$ | $1.3 \%$ |
| Proficient | $6.1 \%$ | $27.3 \%$ | $55.8 \%$ | $10.8 \%$ |
| Advanced | $0.7 \%$ | $5.2 \%$ | $40.8 \%$ | $53.3 \%$ |

Table 6: Student NDSA Proficiency For Non-First Year Teachers
*Percentages listed are row percentages.

