# How Teachers Approach Data

## Meet Teachers Where They Are in Order to Bring Data Driven Instruction Into the Mainstream

### Research with Teachers

We talked to and surveyed teachers across the country in a wide range of schools.

### Approaches to Data Driven Instruction

Teachers take 6 distinct approaches to using data to drive instruction. These approaches map to a classic technology adoption curve.

<table>
<thead>
<tr>
<th>DATA MAVENS</th>
<th>GROWTH SEEKERS</th>
<th>ASPIRATIONAL USERS</th>
<th>SCOREKEEPERS</th>
<th>PERCEPTIVES</th>
<th>TRADITIONALISTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am a true believer in data-driven instruction.</td>
<td>Data-driven instruction is a two-way street.</td>
<td>Data can help me, but it’s overwhelming.</td>
<td>I use data to focus on preparing for state assessments.</td>
<td>I use observations to drive instruction.</td>
<td>I use students’ grades as a basis for adapting my instruction.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APPROACH TO ADAPTING WITH DATA</th>
<th>ADOPION PROFILE</th>
<th>INVOLVEMENT IN TECH DECISIONS</th>
<th>TYPES OF DATA</th>
<th>INNOVATORS AND EARLY ADOPTERS</th>
<th>EARLY AND LATE MAJORITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole student performance-based adapting</td>
<td>First to adopt tools that enable greater personalization</td>
<td>Some/very involved</td>
<td>Trend data</td>
<td>Student growth</td>
<td>Student strength/weakness</td>
</tr>
<tr>
<td>Holistic student and teacher approach adapting</td>
<td>Quicker to adopt if they receive district support</td>
<td>Some involvement</td>
<td>Feedback as teacher</td>
<td>Time spent on task</td>
<td>Student strength/weakness</td>
</tr>
<tr>
<td>Varied instructional strategy-based adapting</td>
<td>Slower to adopt due to a lack of time to investigate</td>
<td>Little to none</td>
<td>Instructional strategies</td>
<td>Student strength/weakness</td>
<td>Ways to differentiate instruction</td>
</tr>
<tr>
<td>Assessment-based adapting</td>
<td>Don’t know which data to use beyond assessment data, and struggle to invent the time to learn.</td>
<td>Little to none</td>
<td>Observing students</td>
<td>Student self-reflection</td>
<td>Student growth</td>
</tr>
<tr>
<td>Non-digital adapting</td>
<td>Consider digital tools inconvenient, and unproven.</td>
<td>Some involvement</td>
<td>Evaluating written assignments</td>
<td>Questions missed most</td>
<td>Time spent on task</td>
</tr>
<tr>
<td>Grade-based adapting</td>
<td>Struggle to understand how to make use of tools and data on their own.</td>
<td>Little to none</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### In addition to these five types of data, teachers also use:

- Grades in the gradebook
- Class average grade
- # of misconceptions
- # correct
- % of students meeting or missing min. score
- Observing students
- Student self-reflection
- Student growth
- Student engagement
- Ways to differentiate instruction
- Grades in gradebook
- Class average grade
- Evaluating written assignments
- Questions missed most
- Time spent on task

### A small number of innovative schools and tech forward teachers are designing their own tools or bending existing tools to fit their vision of personalized instruction. For them data driven instruction is at the center of their vision of meeting students’ needs.

The majority of teachers may use digital tools but they struggle to integrate them into their daily routines and find it difficult to use them to create new, more effective approaches to instruction in the classroom.
Tech Forward Teachers are Optimistic and Supported

Teachers early on the adoption curve have a more positive outlook on digital data’s impact on what they believe is most important: helping each one of their students succeed. These teachers are more prevalent in schools that invest in creating environments supportive of technology and data.

Use of technology in the class makes my day easier.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditionalists</td>
<td>DATA MAVENS</td>
</tr>
<tr>
<td>26</td>
<td>89</td>
</tr>
</tbody>
</table>

The immediacy of digital information makes me much more responsive to student needs.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditionalists</td>
<td>DATA MAVENS</td>
</tr>
<tr>
<td>36</td>
<td>84</td>
</tr>
</tbody>
</table>

Digital tools help identify gaps in student learning that would have been missed through traditional means.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceptives</td>
<td>DATA MAVENS</td>
</tr>
<tr>
<td>32</td>
<td>80</td>
</tr>
</tbody>
</table>

Bridging the Gap to Support All Teachers

Teachers in the early and late majority have neither a clear enough vision of data’s usefulness nor the patience to adapt tools to meet their needs. If they are to adopt tools for data driven instruction those tools will have to meet them where they are.

When we meet these majority teachers where they are, and make our tools work for them, we can truly put data to work in classrooms.

Opportunities for Developers

Teachers need tools that

- Simplify data management
- View students holistically
- Assess student agency
- Empower students with data
- Analyze at the speed of teaching
- Detail performance against standards
- Reveal progress not snapshots
- Make normative data practical
- Adapt to student level

Find out more at www.teachersknowbest.org/reports/making_data_work

Opportunities for Schools

Look for ways to replicate the environments of early adopters

- Increase principal tech proficiency
- Invest in technology and staff to integrate it
- Support dedicated time and processes to make use of data
- Give teachers flexibility to choose tools

Tech forward schools

- 22% of schools are tech forward (37% data mavens)
- 13% of schools are aspirational users
- 15% of schools are score keepers
- 13% of schools are growth seekers
- 20% of schools are aspirational
- 18% of schools are score keepers
- 13% of schools are growth seekers
- 17% of schools are perceptive
- 18% of schools are score keepers
- 7% of schools are growth seekers
- 13% of schools are perceptive
- 15% of schools are score keepers
- 12% of schools are traditionalists

Tech traditionalist schools

- 77% of schools are tech traditionalist (32% traditionalists)
- 12% of schools are aspirational users
- 12% of schools are score keepers
- 12% of schools are growth seekers
- 20% of schools are asperational
- 18% of schools are score keepers
- 7% of schools are growth seekers
- 7% of schools are perceptive
- 17% of schools are score keepers
- 12% of schools are traditionalists