

# High School Teachers' Perceptions and Use of Personalized Learning

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Technical Appendixes

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## Preface

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This document contains the technical appendixes to a report on personalized learning in U.S. high schools, *High School Teachers' Perceptions and Use of Personalized Learning* (Elizabeth D. Steiner, Christopher Joseph Doss, and Laura S. Hamilton, Santa Monica, Calif.: RAND Corporation, RR-A322-1, 2020).

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## Appendix A. Sample, Data, and Methodology

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### Sample and Data

As described in the main report, the American Teacher Panel is a nationally representative panel of U.S. school teachers. Teachers were recruited by probabilistic sampling methods. The panel is designed to be of sufficient size to facilitate national analyses as well as analyses of prevalent subgroups at the national level (e.g., teachers in urban schools, teachers in high-poverty schools, and novice teachers). This survey was administered to 1,818 teachers who taught at least one core academic subject (i.e., mathematics, English language arts, science, or social studies) in at least one high school grade (9–12). Of those teachers, 995 completed the survey and 14 partially completed the survey, for an analytic sample of 1,009 teachers (a response rate of 56 percent).

One main weight was created to ensure national representation of the analytical sample and to mitigate potential bias from nonresponses. The main weight was calculated by using a variety of characteristics to model the probability that an educator was selected to participate in the panel and the probability that the educator responded to the request. The weight was then calibrated such that the analytic sample matched the known national teacher populations across these characteristics. Characteristics include individual (e.g., gender, professional experience) and school (e.g., urbanicity, socioeconomic status, grade level, enrollment) descriptors.

Teacher responses were merged to data from the National Center for Education Statistics's 2015–2016 Common Core of Data (CCD) to obtain demographic information on schools and districts.<sup>1</sup> Table 1 presents selected demographic characteristics of the teachers and students in the sample, when weighted to be nationally representative. On average, teachers have about 14 years of experience; there is no detectable difference in experience among subgroups of schools in the sample. White students compose the majority of the student body in the schools in which sampled teachers teach (about 55 percent) with smaller numbers of black and Hispanic students (about 15 and 21 percent, respectively). Urban and high-poverty schools have more black and Hispanic students and fewer white students compared with nonurban and low-poverty school counterparts in the sample. The average school enrollment in the sample is 1,369 students. Although urban schools in the sample enroll more students than their nonurban counterparts, there is no detectable difference in size between high- and low-poverty schools in the sample.

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<sup>1</sup> Common Core of Data files for the 2016–2017 school year are available. We choose to use the 2015–2016 data in our analyses because that year's data were used in creating the survey weights during the design of the 2018 American Teacher Panel survey. We use the variables from the 2015–2016 Common Core of Data in our models to be consistent with the data used to calculate the weights.

**Table A.1. American Teacher Panel Demographics**

Demographic Variables	Full Sample	Urban	Nonurban	Significance (urban versus nonurban)	High Poverty	Low Poverty	Significance (high versus low poverty)
Sample size	1,009	253	756	N/A	148	861	N/A
Teacher years of experience	14.09	15.33	13.64		15.15	13.91	
School characteristics							
Percentage white	55.48	36.36	62.26	**	16.04	62.00	**
Percentage black	15.28	21.53	13.06	**	31.48	12.60	**
Percentage Hispanic	20.72	32.47	16.54	**	44.07	16.85	**
Percentage Asian	4.09	5.53	3.58	**	3.06	4.26	
Enrollment	1,369	1,712	1,248	**	1,438	1,358	

NOTES: School background characteristics were obtained from the CCD from the 2015–2016 school year. Means were calculated using survey weights, which were calibrated to match the national average for teachers and school leaders. A school is defined as *high poverty* if at least 75 percent of its student body is eligible for free and reduced-price lunch. This follows the definition set forth by National Center for Education Statistics (2017). The definition of urban schools comes from the CCD files. Educator characteristics are self-reported. At most, five teachers (0.05 percent) were missing demographic variables. Missing characteristics were imputed with the respective sample’s mean. \*\* indicates  $p < 0.01$ .

## Estimation Strategy

Our primary estimation strategy consisted of weighted averages of the relevant survey items in the full sample. When comparing responses between subgroups of interest (urban versus nonurban schools, high- versus low-poverty schools, and novice versus experienced teachers<sup>2</sup>), we used the following model:

$$Y_{is} = \beta_0 + \beta_1 X_{is} + \varepsilon_{is}. \tag{Eq. 1}$$

Equation 1 is a linear probability model with a dichotomous response as the dependent variable and an indicator for the subgroup of interest as the independent variable. The survey response,  $Y_{is}$ , of teacher  $i$  in school  $s$  is regressed on an indicator for the subgroup of interest,  $X_{is}$ . In these models, the constant is an estimate of the average response for the reference group (nonurban or low poverty schools or novice teachers), and the coefficient on the independent variable is the estimate of the difference in responses among teachers in the subgroup of interest.

<sup>2</sup> We defined an *experienced teacher* as one who has more than three years of experience and is therefore tenured in most districts.

Survey weights were used in all models, and linearized standard errors were used to determine statistical significances in response differences between subgroups.

When looking at differences in responses by subgroup, we also employed supplementary models of the following form:

$$Y_{is} = \beta_0 + \beta_1 X_{is} + \mathbf{W}_{is} \boldsymbol{\beta}_2 + \alpha_s + \varepsilon_{is}. \quad (\text{Eq. 2})$$

Equation 2 is identical to Equation 1, except that we included the vector of school and educator characteristics,  $\mathbf{W}_{is}$ , and state fixed effects,  $\alpha_s$ .  $\mathbf{W}_{is}$  includes indicators for urbanicity, poverty status of the school, being an experienced teacher (if not already a subgroup of interest), and total school enrollment. The goal of the supplemental analyses is to ensure that the differences by subgroup are not driven by school characteristics we tested in the report, school size, or the state context. We did not control for a more extensive set of covariates, including school-level student race/ethnicity, special education status, English language learner status, free or reduced-price lunch status, and Title I status. We decided not to control for important characteristics that make some contexts of interest unique, as many elements in the larger set of covariates are highly correlated with school urbanicity and poverty level. For example, urban schools tend to enroll more minority students, students who qualify for free or reduced-price lunch, and are more likely to be Title I schools. Controlling for these characteristics would control for many characteristics that define the urban school context. We report weighted averages that are not adjusted for the covariates used in our supplementary analyses (i.e., from models in Equation 1) so that results are easy to interpret. However, we denote a result as significant only if the result is robust to the supplementary analyses.

Finally, a set of analyses explores how teacher responses to one question are associated with responses to another question. For example, we explored how teachers' perceptions of school data systems were related to their reported use of personalized and mastery-based practices.

Each question (perceptions of data systems, teacher practices, etc.) contains multiple items. To reduce the dimensionality of each question, we used exploratory factor analysis to understand how items within a question (and, therefore, on the same underlying Likert scale) were related. We used the results of these analyses to inform decisions about scale construction, combining items into scales based on the factor on which each item loaded most highly after conducting a varimax rotation of the factors. The score for each scale was calculated by averaging the teacher responses to the items assigned to that scale. Table A.2 shows which items were averaged to create the scales used in the report (see Appendix B for full list of questions and items).

One can easily run a regression to see how the two scales are related, but the magnitude and meaning of the point estimates would be difficult to interpret. For ease of exposition, we dichotomized the scale by creating an indicator for having an average response that is above the midpoint of the Likert scale. For example, if a Likert scale ranged from 1 to 4, we created an

indicator variable for having an average response that is greater than 2.5. Then we used the following model:

$$Scale1\ Indicator_{is} = \beta_0 + \beta_1 Scale2\ Indicator_{is} + \varepsilon_{is}. \quad (Eq. 3)$$

We used Equation 3 to relate responses on scale 1 to responses on scale 2.  $\beta_0$  represents the estimate of the percentage of teachers whose average response on scale 1 is above the scale midpoint when their average response on scale 2 is below that scale's midpoint.  $\beta_0 + \beta_1$  represents the estimate of the percentage of teachers whose average scale score is above the midpoint for both questions. The statistical significance of  $\beta_1$  denotes whether these two percentages are statistically significantly different from each other. A positive and significant  $\beta_1$  therefore suggests that higher responses on scale 2 are related to higher responses on scale 1. A negative and significant  $\beta_1$  suggests that higher responses on scale 2 are related to lower responses on scale 1.

**Table A.2. Scales Included in Regression Analyses**

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**Measure Name: Use of Student Achievement Data (Underlying Likert Scale 1–5)**  
**Question: This school year (2017–2018), to what extent have you used student achievement or mastery data for each of the following purposes?**

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- Tailoring the pace of instruction to individual students' needs
  - Tailoring the content of instruction to individual students' needs
  - Tailoring the instructional strategies to individual students' needs
  - Developing recommendations for tutoring or other educational support services for particular students
  - Assigning or reassigning students to groups within my class(es)
  - Identifying topics requiring more or less emphasis in instruction
  - Identifying areas where I need to strengthen my content knowledge or teaching skills
  - Reflecting on and discussing teaching and learning with other teachers
  - Reflecting on and discussing learning with my students
- 

**Measure Name: Access to High-Quality Data (Underlying Likert Scale 1–4)**  
**Question: Please rate your level of agreement with each of the following statements.**

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- I have access to high-quality data that help me adapt the pace, content, or strategies of instruction to meet students' needs.
- I can use the school's data systems to easily produce the views or reports I need.
- Our school's data system provides real-time data that are actionable.
- Our school's data system and assessments enable me to make good decisions about mastery-based progression for individual students (i.e., using data to determine whether students have mastered a set of competencies and should move on to new material).
- Our school's data system and assessments provide adequate information about students' progress toward specific learning objectives.



Students have access to information from data systems that track their progress on particular tasks, skills, or for the course overall.

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**Measure Name: Emphasis on Personalized and Mastery-Based Practices (Underlying Likert Scale 1–4)**

**Question: Teachers take a variety of approaches to personalizing, or customizing, learning opportunities for their students. Please indicate the extent to which you emphasize the following practices related to personalization.**

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Students have opportunities to choose what instructional materials (such as books or computer software) they use in class.

Students have opportunities to choose what topics they focus on in class.

I frequently adapt course content to meet students' needs by providing additional assignments, resources, and activities for remediation or enrichment.

I clearly present the goal or objective for each assignment.

I have adopted strategies that allow students to keep track of their own learning progress.

I require students to demonstrate mastery of a topic before they can move onto a new topic.

Different students work on different topics or skills at the same time.

I give students the chance to work through instructional material at a faster or slower pace than other students in this class.

Students keep track of their own learning progress using technology (for example, by using an online gradebook or portfolio).

Students have opportunities to review or practice new material until they fully understand it.

When students are working independently, I require them to get through a certain amount of material even if they are working at their own pace.

I frequently regroup students for instruction to address changing learning needs and interests.

Students are able to access instructional materials both in and outside of the classroom.

I provide a variety of materials or instructional approaches to accommodate individual needs and interests.

I connect what students are learning with experiences they have throughout the rest of the school day or outside of school.

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**Measure Name: Use of Mastery-Based Assessment and Variable Pacing (Underlying Likert Scale 1–4)**

**Question: Please rate the extent to which each of the following descriptions resemble your instructional practices.**

---

Students have multiple opportunities, throughout a unit or throughout the year, to demonstrate mastery of certain content and skills.

Students can make multiple attempts at a given task that counts toward mastery.

Student work counts toward mastery only when it reaches an adequate performance level.

Students are considered to have achieved mastery only when they have demonstrated the knowledge or skills consistently (i.e., multiple times, on different tasks, in multiple ways).

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**Measure Name: Use of Mastery-Based Assessment to Tailor Instruction (Underlying Likert Scale 1-4)**

**Question: Please rate the extent to which each of the following descriptions resemble your instructional practices.**

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When starting on a new topic or competency, I first identify students' prior knowledge and skills with a diagnostic assessment or task.

Students attempt a task that is assessed for mastery when I believe they have a good chance at success on it (when they have demonstrated the knowledge/skills through other activities or tasks already).

Students receive the task that will be assessed for mastery at the beginning of the unit, and they work on it in pieces throughout the unit.

Tasks that are assessed for mastery closely resemble tasks that students have already seen or experienced.

Tasks that are assessed for mastery require students to apply knowledge and skills they have learned to a new problem or context.

Tasks that are assessed for mastery of a given competency differ in difficulty, depending on the student's ability level.

Mastery is assessed as what students can accomplish mostly independently (i.e., without extensive peer support or scaffolds).

Students are considered to have achieved mastery when they have completed the expected number of tasks.

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**Measure Name: Frequency of Receipt of Student Data (Underlying Likert Scale 1–8)**

**Question: In general, how frequently do you receive the following types of information about the performance of your students?**

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Information about student performance on specific concepts or skills

Identification of specific students who have achieved mastery

Identification of specific students who need extra assistance

Identification of specific students who are at risk of dropping out or not progressing to the next grade

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## Appendix B. Supplementary Tables

**Table B.1. Proportion of Teachers Reporting Emphasizing Practices Related to Personalization**

Item	Full Sample	Urban	Nonurban	High Poverty	Low Poverty	Experienced Teacher	Novice Teacher
I frequently adapt course content to meet students' needs by providing additional assignments, resources, and activities for remediation or enrichment.	63	64	63	70	62	64	52
I provide a variety of materials or instructional approaches to accommodate individual needs and interests.	76	73	77	82	75	76	74
Students have opportunities to choose what instructional materials they use in class.	36	38	36	29	37	36	36
Students have opportunities to choose what topics they focus on in class.	28	30	27	24	28	28	33
I frequently regroup students for instruction to address changing learning needs and interests.	52	53	52	56	51	52	60
I connect what students are learning with experiences they have throughout the rest of the day or outside of school.	71	69	72	77	70	71	67

Original Question (Question 7 in Appendix C): "Teachers take a variety of approaches to personalizing, or customizing, learning opportunities for their students. Please indicate the extent to which you emphasize the following practices related to personalization." Response options were *have not emphasized*, *emphasized to a small extent*, *emphasized to a moderate extent*, and *emphasized to a large extent*.

NOTE: Responses were dichotomized as "emphasized to a moderate or large extent" versus "have not emphasized or emphasized to a small extent." Linear probability models were used to estimate differences among teacher responses in urban versus nonurban schools, high- versus low-poverty schools, and novice versus experienced teachers. Survey weights were used in all cases. Some of the entries in this table might differ slightly from the figures in the main report because of rounding;  $n = 998$ . No differences were statistically significant.

**Table B.2. Proportion of Teachers Reporting Emphasizing Practices Related to Mastery and Variable Pacing**

Item	Full Sample	Urban	Nonurban	High Poverty	Low Poverty	Experienced Teacher	Novice Teacher
I require students to demonstrate mastery of a topic before they can move onto a new topic.	42	39	42	48	41	41	55
Different students work on different topics or skills at the same time.	43	44	42	47	42	42	45
I give students the chance to work through instructional material at a faster or slower pace than other students in this class.	59	63	58	70	58	60	56
Students have opportunities to review or practice new material until they fully understand it.	68	71	67	66	69	69	57
When students are working independently, I require them to get through a certain amount of material even if they are working at their own pace.	66	59	69	71	66	66	76
Students are able to access instructional materials both in and outside of the classroom.	81	73	83*	78	81	81	81
I clearly present the goal or objective for each assignment.	86	87	85	84	86	86	87
I have adopted strategies that allow students to keep track of their own learning progress.	54	58	53	67	52**	55	39
When students are working on an assignment or activity, they know what the goals of the assignment or activity are.	86	84	87	79	87	86	75
Students keep track of their own learning progress using technology (for example, by using an online gradebook or portfolio).	62	55	65*	64	62	63	48

Original Question (Question 7 in Appendix C): “Teachers take a variety of approaches to personalizing, or customizing, learning opportunities for their students. Please indicate the extent to which you emphasize the following practices related to personalization.” Response options were *have not emphasized*, *emphasized to a small extent*, *emphasized to a moderate extent*, and *emphasized to a large extent*.

NOTE: Responses were dichotomized as “emphasized to a moderate or large extent” versus “have not emphasized or emphasized to a small extent.” Linear probability models were used to estimate differences among teacher responses in urban versus nonurban schools, high- versus low-poverty schools, and novice versus experienced teachers. Survey weights were used in all cases. Some of the entries in this table might differ slightly from the figures in the main report because of rounding;  $n = 998-999$ . \*  $p < 0.05$ ; \*\*  $p < 0.01$ .

**Table B.3. Proportion of Teachers Reporting Emphasizing Mastery-Based Assessment Practices**

Item	Full Sample				Low Poverty	Experienced Teacher	Novice Teacher
	Urban	Nonurban	High Poverty	Low Poverty			
When starting on a new topic or competency, I first identify students' prior knowledge and skills with a diagnostic assessment or task.	63	66	61	69	61	63	61
Students attempt a task that is assessed for mastery when I believe they have a good chance at success on it (when they have demonstrated the knowledge/skills through other activities or tasks already).	80	83	79	80	80	80	91
Students receive the task that will be assessed for mastery at the beginning of the unit, and they work on it in pieces throughout the unit.	56	59	55	58	56	56	51
Tasks that are assessed for mastery closely resemble tasks that students have already seen or experienced.	85	87	85	85	85	84	100**
Tasks that are assessed for mastery require students to apply knowledge and skills they have learned to a new problem or context.	87	86	87	92	86	86	97**
Tasks that are assessed for mastery of a given competency differ in difficulty, depending on the student's ability level.	50	53	49	54	49	50	58
Mastery is assessed as what students can accomplish mostly independently (i.e., without extensive peer support or scaffolds).	85	80	87	87	85	85	90
Students have multiple opportunities, throughout a unit or throughout the year, to demonstrate mastery of certain content and skills.	90	89	91	91	90	90	95
Students can make multiple attempts at a given task that counts toward mastery.	74	78	72	81	72	73	81
Students are considered to have achieved mastery when they have completed the expected number of tasks.	52	52	52	53	52	51	73
Student work counts toward mastery only when it reaches an adequate performance level.	69	65	70	67	69	68	89**
Students are considered to have achieved mastery only when they have demonstrated the knowledge or skills consistently (i.e., multiple times, on different tasks, in multiple ways).	83	80	83	87	82	82	93**

Original Question (Question 10 in Appendix C): "Please rate the extent to which each of the following descriptions resemble your instructional practices." Response options were *not at all*, *to a slight extent*, *to a moderate extent*, and *to a great extent*.

NOTES: Responses were dichotomized as "not at all or to a slight extent" versus "to a moderate or great extent." Linear probability models were used to estimate differences among teacher responses in urban versus nonurban schools, high- versus low-poverty schools, and novice versus experienced teachers. Survey weights were used in all cases. Some of the entries in this table might differ slightly from the figures in the main report because of rounding;  $n = 810-811$ . \*\*  $p < 0.01$ .

**Table B.4. Proportion of Teachers Reporting Emphasizing Practices Related to Social and Emotional Learning**

Item	Full Sample	Urban	Nonurban	High Poverty	Low Poverty	Experienced Teacher	Novice Teacher
I connect academic content to themes related to social and emotional learning	69	68	70	74	69	69	77
I greet each student by name when they come to class.	79	82	78	83	78	79	78
I actively establish one-on-one relationships with each of my students.	87	87	87	85	88	87	95
I give students opportunities to display their nonacademic talents in class.	60	54	62	56	60	60	61

Original Question (Question 8 in Appendix C): "Teachers take a variety of approaches to supporting students' social and emotional growth and developing relationships with students. Please indicate the extent to which you emphasize the following practices related to social and emotional learning." Response options were *have not emphasized*, *emphasized to a small extent*, *emphasized to a moderate extent*, and *emphasized to a large extent*.

NOTE: Responses were dichotomized as "emphasized to a moderate or large extent" versus "have not emphasized or emphasized to a small extent." Linear probability models were used to estimate differences among teacher responses in urban versus nonurban schools, high- versus low-poverty schools, and novice versus experienced teachers. Survey weights were used in all cases. Some of the entries in this table might differ slightly from the figures in the main report because of rounding;  $n = 998$ . No differences were statistically significant.

**Table B.5. Proportion of Teachers Reporting Addressing Social and Emotional Learning Topics in Their Instruction**

Item	Full Sample	Urban	Nonurban	High Poverty	Low Poverty	Experienced Teacher	Novice Teacher
Collaborating with other students	88	90	87	84	88	88	88
Understanding and managing emotions	67	70	67	68	67	67	72
Handling stress	72	68	73	72	72	71	84
Persisting through challenging tasks	90	88	91	81	92*	90	96
Making responsible decisions	91	89	91	90	91	90	97
Establishing and maintaining positive relationships	87	86	88	85	88	87	96
Feeling and showing empathy for others	81	77	83	83	81	81	82
Learning mindsets (e.g., growth mindset, sense of purpose and belonging)	76	77	76	79	76	76	83
Communicating their thoughts and emotions	77	72	79	73	78	77	85
Developing a sense of identity	74	74	74	73	74	73	80

Original Question (Question 9 in Appendix C): "Teachers take a variety of approaches to supporting students' social and emotional growth and developing relationships with students. Please indicate to what extent you address each of the following topics in your instruction." Response options were *not addressed*, *to a small extent*, *to a moderate extent*, and *to a large extent*.

NOTE: Responses were dichotomized as "to a moderate or large extent" versus "not addressed or addressed to a small extent." Linear probability models were used to estimate differences among teacher responses in urban versus nonurban schools, high- versus low-poverty schools, and novice versus experienced teachers. Survey weights were used in all cases. Some of the entries in this table might differ slightly from the figures in the main report because of rounding;  $n = 998$ . \*  $p < 0.05$ .



**Table B.6. Proportion of Teachers Reporting Using Student Achievement Data for Various Purposes**

Item	Full Sample	Urban	Nonurban	High Poverty	Low Poverty	Experienced Teacher	Novice Teacher
Tailoring the pace of instruction to individual students' needs	43	45	42	54	41	43	47
Tailoring the content of instruction to individual students' needs	43	43	43	50	41	43	34
Tailoring the instructional strategies to individual students' needs	47	48	47	57	46	47	50
Developing recommendations for tutoring or other educational support services for particular students	43	47	41	45	43	43	48
Assigning or reassigning students to groups within my class(es)	42	48	40	50	41	41	61
Allowing students to skip units or lessons if they have demonstrated mastery of the content in some other way	18	24	15	24	16	18	17
Allowing students to skip courses or grades if they have demonstrated mastery of the content in some other way	12	16	11	13	12	12	12
Recommending students for extended learning opportunities (for example, extended-day programs, Saturday classes, or an extended school year)	26	35	22**	31	25	25	34
Identifying topics requiring more or less emphasis in instruction	51	54	50	55	50	51	58
Identifying areas where I need to strengthen my content knowledge or teaching skills	49	54	47	58	47	49	48
Reflecting on and discussing teaching and learning with other teachers	44	50	42	51	43	44	48
Reflecting on and discussing learning with my students	49	48	49	52	48	48	63
Providing college/career advice or guidance	30	31	30	32	30	30	41
Revising our school's strategic goals or educational plan	23	20	25	29	23	23	31

Original Question (Question 5 in Appendix C): "This school year (2017–2018), to what extent have you used student achievement or mastery data for each of the following purposes? (Consider data provided by instructional software, interim assessments or quizzes, unit or end of course tests, state accountability tests, district benchmark or interim tests, the Measure of Academic Progress tests and other standardized tests.) If the activity is something that you don't do (for example, if you never tailor the pace of instruction), please mark "I don't do this." Response options were *I don't do this*, *I do this but do not use data for it*, *used data to a small extent*, *used data to a moderate extent*, and *used data to a large extent*.

NOTE: Responses were dichotomized as "used data to a moderate or large extent" versus "I don't do this, I do this but do not use data, used data to a small extent." Linear probability models were used to estimate differences among teacher responses in urban versus nonurban schools, high- versus low-poverty schools, and novice versus experienced teachers. Survey weights were used in all cases. Some of the entries in this table might differ slightly from the figures in the main report because of rounding;  $n = 999-1,000$ . \*\*  $p < 0.01$ .



**Table B.7. Proportion of Teachers Agreeing with Statements About Their Professional Learning Opportunities**

Item	Full Sample	Urban	Nonurban	High Poverty	Low Poverty	Experienced Teacher	Novice Teacher
Addressed strategies for personalizing instruction	72	69	73	76	71	71	78
Addressed strategies for implementing a mastery-based approach to instruction	67	72	65	69	66	67	57
Provided guidance for addressing students' social and emotional learning needs	64	63	64	64	64	63	70
Helped me integrate social and emotional learning into academic instruction	57	54	57	55	57	56	63
Helped me develop caring, consistent relationships with students	71	67	72	65	72	70	78
Helped me understand how to address the needs of students who have experienced trauma	50	50	49	52	49	49	60
Have been aligned to what I do in the classroom	77	73	78	85	75**	77	67
Provided opportunities to try out new ideas	83	77	85*	83	83	83	82
Were responsive to my needs and preferences	66	66	66	69	65	66	66
Provided opportunities to review and discuss examples of student work or grading schemes	63	65	62	69	62	63	62
Included opportunities for me to receive feedback on my instruction	63	69	61	56	64	62	77

Original Question (Question 2 in Appendix C): "Please rate your level of agreement with the following statements about the professional learning opportunities in which you participated over the past school year (2017–2018). Consider all forms of formal and informal professional learning such as district- or school-sponsored sessions, common planning time with other teachers, coaching, and professional learning communities.

My professional learning opportunities. . . " Response options were *strongly disagree*, *disagree*, *agree*, and *strongly agree*.

NOTE: Responses were dichotomized as "agree or strongly agree" versus "disagree or strongly disagree." Linear probability models were used to estimate differences among teacher responses in urban versus nonurban schools, high- versus low-poverty schools, and novice versus experienced teachers. Survey weights were used in all cases. Some of the entries in this table might differ slightly from the figures in the main report because of rounding;  $n = 1,006-1,008$ . \*  $p < 0.05$ ; \*\*  $p < 0.01$ .

**Table B.8. Proportion of Teachers Reporting Obstacles to Their Efforts to Personalize Learning**

Item	Full Sample	Urban	Nonurban	High Poverty	Low Poverty	Experienced Teacher	Novice Teacher
Too much diversity in achievement levels among my students	61	62	61	68	60	62	43
Lack of flexibility in the curriculum I am required to teach (i.e., need to teach specific material in a specific timeframe)	56	54	57	53	57	56	57
Pressure to cover specific material as a result of state or district standards or testing requirements	70	64	72	79	68*	69	73
Excessive amounts of time I need to spend developing content that meets individual students' needs	66	65	66	73	65	66	60
Inadequate opportunities to participate in professional development related to personalizing learning	53	51	53	51	53	53	51
Inadequate data to help me personalize instruction for students	51	47	52	52	51	51	51
Lack of high-quality content or materials	59	65	57	68	58	59	59
High levels of student absenteeism	75	72	76	80	74	74	93**
High levels of student disciplinary problems	61	61	61	70	59	61	67
Scheduling constraints	69	65	70	68	69	69	70

Original Question (Question 3 in Appendix C): "Please indicate the extent to which each of the following conditions is an obstacle to your efforts to personalize students' learning to address their individual learning needs and interests. If the condition does not exist in your school, please mark 'N/A'—condition does not exist in my school." Response options were: *N/A—condition does not exist in my school, condition exists but is not an obstacle, condition exists and is a minor obstacle, and condition exists and is a major obstacle.* Teachers who responded that the condition does not exist were dropped from the analysis. NOTE: Responses were dichotomized as "condition exists and is a minor or major obstacle" versus "condition exists but is not an obstacle." Linear probability models were used to estimate differences among teacher responses in urban versus nonurban schools, high- versus low-poverty schools, and novice versus experienced teachers. Survey weights were used in all cases. Some of the entries in this table might differ slightly from the figures in the main report because of rounding;  $n = 766-880$ . \*  $p < 0.05$ ; \*\*  $p < 0.01$ .

**Table B.9. Proportion of Teachers Reporting Receiving Information on Student Performance at Least Once a Month**

Item	Full Sample	Urban	Nonurban	High Poverty	Low Poverty	Experienced Teacher	Novice Teacher
Scores on district or state assessments in mathematics	10	10	10	14	10	10	11
Scores on district or state assessments in language arts	10	11	10	15	9	10	17
Scores on district or state assessments in science	9	10	8	12	8	9	17
Scores on district or state assessments in subjects other than mathematics, language arts, or science	10	10	10	10	10	10	15
Information about student performance on specific concepts or skills	36	45	33	33	37	36	53
Assessment data that is built in to curriculum software	26	29	25	39	24	26	38
Identification of specific students who need extra assistance	40	40	40	46	39	39	65*
Identification of specific students who have achieved mastery	28	33	26	30	28	28	37
Youth development outcomes (for example, student behavior, attitudes, or motivation)	28	28	28	35	27	27	46
Identification of specific students who are at risk of dropping out or not progressing to the next grade	28	24	29	24	28	27	35

Original Question (Question 4 in Appendix C): "In general, how frequently do you receive the following types of information about the performance of your students?" Response options were *never, once a year, a few times per year, approximately monthly, a few times per month, approximately weekly, a few times per week, and at least daily*.

NOTE: Responses were dichotomized as "approximately monthly, a few times per month, approximately weekly, a few times per week, or at least daily" versus "never, once a year, or a few times per year." Linear probability models were used to estimate differences among teacher responses in urban versus nonurban schools, high- versus low-poverty schools, and novice versus experienced teachers. Survey weights were used in all cases. Some of the entries in this table might differ slightly from the figures in the main report because of rounding;  $n = 1,002-1,004$ . \*  $p < 0.05$ .

**Table B.10. Proportion of Teachers Agreeing with Statements About Their School Data Systems**

Item	Full Sample	Urban	Nonurban	High Poverty	Low Poverty	Experienced Teacher	Novice Teacher
I have access to high-quality data that help me adapt the pace, content, or strategies of instruction to meet students' needs.	54	53	55	59	53	54	53
I can use the school's data system to easily produce the views or reports I need.	57	55	58	60	57	57	58
Our school's data system provides real-time data that are actionable.	54	51	55	54	54	54	47
I have the necessary skills and experience to use data to guide my instruction.	82	78	83	87	81	82	70
Our school's data system and assessments enable me to make good decisions about mastery-based progression for individual students (i.e., using data to determine whether students have mastered a set of competencies and should move on to new material).	53	50	54	62	51	53	44
Our school's data system and assessments provide adequate information about students' progress toward specific learning objectives.	53	52	53	56	52	53	55
Students have access to information from data systems that track their progress on particular tasks, skills, or for the course overall.	57	59	57	63	56	58	49
Students regularly review data on their own progress using the school's data system.	44	44	44	42	44	44	47

Original Question (Question 6 in Appendix C): "Please rate your level of agreement with each of the following statements." Response options were *strongly disagree*, *disagree*, *agree*, and *strongly agree*.

NOTE: Responses were dichotomized as "agree or strongly agree" versus "disagree or strongly disagree." Linear probability models were used to estimate differences among teacher responses in urban versus nonurban schools, high- versus low-poverty schools, and novice versus experienced teachers. Survey weights were used in all cases. Some of the entries in this table might differ slightly from the figures in the main report because of rounding;  $n = 999-1,000$ . No differences were statistically significant.

**Table B.11. Predicting Teacher Practice with Data Access and Use**

<b>Panel A: Predicting High Use of Personalized and Mastery-Based Practices with High Access to High-Quality Data</b>	
High use of personalized and mastery-based practices	High access to high-quality data 0.265** (0.042)
Constant	0.473** (0.034)
<b>Panel B: Predicting High Use of Mastery-Based Assessment to Tailor Instruction with High Use of Student Achievement Data</b>	
High use of mastery-based assessment to tailor instruction	High use of student achievement data 0.110** (0.042)
Constant	0.733** (0.036)
<b>Panel C: Predicting High Use of Mastery-Based Assessment and Variable Pacing with High Use of Student Achievement Data</b>	
Mastery-based assessment and variable pacing	High use of student achievement data 0.086** (0.033)
Constant	0.831 (0.028)

NOTES: Linearized standard errors are used in Linear Probability Models. Indicators for high use of personalized and mastery-based practices, high use of mastery-based assessment to tailor instruction, high use of mastery-based assessment and variable pacing, high access to high-quality data, and high use of student achievement data were constructed from their underlying scales. Scales were made by averaging responses to questions for each construct. If a respondent's average was higher than the midpoint of the scale, they were designated "high" on that construct.  $n = 1,009$ . \*\*  $p < 0.01$ .

## Appendix C. Survey Questions

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1. Including this school year (2017–2018), how many total years have you been teaching, regardless of location? Value must be between 1 and 75, inclusive.

Years

2. Please rate your level of agreement with the following statements about the professional learning opportunities in which you participated over the past school year (2017–2018). Consider all forms of formal and informal professional learning such as district- or school-sponsored sessions, common planning time with other teachers, coaching, and professional learning communities.

My professional learning opportunities . . .

	Strongly Disagree	Disagree	Agree	Strongly Agree
addressed strategies for personalizing instruction (i.e., adapting the pace and content of instruction to students' strengths and learning goals and using data strategically to adjust instruction)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
addressed strategies for implementing a mastery-based approach to instruction (i.e., linking student advancement to demonstrated mastery of content and providing students with multiple opportunities to demonstrate mastery)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
provided guidance for addressing students' social and emotional learning needs (i.e., develop interpersonal and intrapersonal competencies such as collaboration, relationship building, and emotion management)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
helped me integrate social and emotional learning into academic instruction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
helped me to develop caring, consistent relationships with students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
helped me understand how to address the needs of students who have experienced trauma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
have been aligned with what I do in the classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
provided opportunities to try out new ideas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
were responsive to my needs and preferences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
provided opportunities to review and discuss examples of student work or grading schemes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
included opportunities for me to receive feedback on my instruction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Please indicate the extent to which each of the following conditions is an obstacle to your efforts to personalize students' learning to address their individual learning needs and interests. If the condition does not exist in your school, please mark "N/A—condition does not exist in my school."

	<b>N/A—Condition Does Not Exist in My School</b>	<b>Condition Exists but Is Not an Obstacle</b>	<b>Condition Exists and Is a Minor Obstacle</b>	<b>Condition Exists and Is a Major Obstacle</b>
Too much diversity in achievement levels among my students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of flexibility in the curriculum I am required to teach (i.e., need to teach specific material in a specific timeframe)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pressure to cover specific material as a result of state or district standards or testing requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Excessive amounts of time I need to spend developing content that meets individual students' needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inadequate opportunities to participate in professional development related to personalizing learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inadequate data to help me personalize instruction for students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of high-quality content or materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High levels of student <i>absenteeism</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High levels of student <i>disciplinary problems</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scheduling constraints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. In general, how frequently do you receive the following types of information about the performance of your students?

	Never	Once A Year	A Few Times per Year	Approximately Monthly	A Few Times per Month	Approximately Weekly	A Few Times per Week	At Least Daily
Scores on district or state assessments in mathematics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scores on district or state assessments in language arts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scores on district or state assessments in science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scores on district or state assessments in subjects other than mathematics, language arts, or science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information about student performance on specific concepts or skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assessment data that is built in to curriculum software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identification of specific students who need extra assistance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identification of specific students who have achieved mastery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Youth development outcomes (for example, student behavior, attitudes, or motivation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identification of specific students who are at risk of dropping out or not progressing to the next grade	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



5. This school year (2017–2018), to what extent have you used *student achievement or mastery data* for each of the following purposes? (Consider data provided by instructional software, interim assessments or quizzes, unit or end of course tests, state accountability tests, district benchmark or interim tests, the [Measure of Academic Progress] tests, and other standardized tests.) If the activity is something that you don't do (for example, if you never tailor the pace of instruction), please mark "I don't do this."

	I Don't Do This	I Do This but Do Not Use Data For It	Used Data to a Small Extent	Used Data to a Moderate Extent	Used Data to a Large Extent
Tailoring the <i>pace</i> of instruction to individual students' needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tailoring the <i>content</i> of instruction to individual students' needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tailoring the <i>instructional strategies</i> to individual students' needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing recommendations for tutoring or other educational support services for particular students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assigning or reassigning students to groups within my class(es)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allowing students to skip <i>units or lessons</i> if they've demonstrated mastery of the content in some other way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allowing students to skip <i>courses or grades</i> if they've demonstrated mastery of the content in some other way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recommending students for extended learning opportunities (for example, extended-day programs, Saturday classes, or an extended school year)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identifying topics requiring more or less emphasis in instruction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identifying areas where I need to strengthen my content knowledge or teaching skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reflecting on and discussing <i>teaching and learning with other teachers</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reflecting on and discussing <i>learning with my students</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Providing college/career advice or guidance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Revising our school's strategic goals or educational plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please rate your level of agreement with each of the following statements.

	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>
I have access to high-quality data that help me adapt the pace, content, or strategies of instruction to meet students' needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can use the school's data system to easily produce the views or reports I need.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our school's data system provides real-time data that are actionable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have the necessary skills and experience to use data to guide my instruction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our school's data system and assessments enable me to make good decisions about mastery-based progression for individual students (i.e., using data to determine whether students have mastered a set of competencies and should move on to new material).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our school's data system and assessments provide adequate information about students' progress toward specific learning objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students have access to information from data systems that track their progress on particular tasks, skills, or for the course overall.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students regularly review data on their own progress using the school's data system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Teachers take a variety of approaches to personalizing, or customizing, learning opportunities for their students. Please indicate the extent to which you emphasize the following practices related to personalization.

	Have Not Emphasized	Emphasized to a Small Extent	Emphasized to a Moderate Extent	Emphasized to a Large Extent
Students have opportunities to choose what instructional materials (such as books or computer software) they use in class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students have opportunities to choose what topics they focus on in class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I frequently adapt course content to meet students' needs by providing additional assignments, resources, and activities for remediation or enrichment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I clearly present the goal or objective for each assignment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have adopted strategies that allow students to keep track of their own learning progress.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I require students to demonstrate mastery of a topic before they can move onto a new topic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Different students work on different topics or skills at the same time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I give students the chance to work through instructional material at a faster or slower pace than other students in this class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When students are working on an assignment or activity, they know what the goals of the assignment or activity are.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students keep track of their own learning progress using technology (for example, by using an online gradebook or portfolio).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students have opportunities to review or practice new material until they fully understand it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When students are working independently, I require them to get through a certain amount of material even if they are working at their own pace.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I frequently regroup students for instruction to address changing learning needs and interests.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students are able to access instructional materials both in and outside of the classroom.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I provide a variety of materials or instructional approaches to accommodate individual needs and interests.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I connect what students are learning with experiences they have throughout the rest of the school day or outside of school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Teachers take a variety of approaches to supporting students' social and emotional growth and developing relationships with students. Please indicate the extent to which you emphasize the following practices related to social and emotional learning.

	Have Not Emphasized	Emphasized to a Small Extent	Emphasized to a Moderate Extent	Emphasized to a Large Extent
I connect academic content to themes related to social and emotional learning (e.g., by discussing resilience in the context of a character in book or emphasizing perseverance or time management in solving math problems).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I greet each student by name when they come to class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I actively establish one-on-one relationships with each of my students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I give students opportunities to display their nonacademic talents in class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Please indicate to what extent you address each of the following topics in your instruction.

	Not Addressed	To a Small Extent	To a Moderate Extent	To a Large Extent
Collaborating with other students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Understanding and managing emotions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handling stress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Persisting through challenging tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Making responsible decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Establishing and maintaining positive relationships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling and showing empathy for others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learning mindsets (e.g., growth mindset, sense of purpose and belonging)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communicating their thoughts and emotions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing a sense of identity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Please rate the extent to which each of the following descriptions resemble your instructional practices.

	Not at All	To a Slight Extent	To a Moderate Extent	To a Great Extent
When starting on a new topic or competency, I first identify students' prior knowledge and skills with a diagnostic assessment or task.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students attempt a task that is assessed for mastery when I believe they have a good chance at success on it (when they have demonstrated the knowledge/skills through other activities or tasks already).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students receive the task that will be assessed for mastery at the beginning of the unit, and they work on it in pieces throughout the unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tasks that are assessed for mastery <i>closely resemble tasks that students have already seen or experienced.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tasks that are assessed for mastery <i>require students to apply knowledge and skills they have learned to a new problem or context.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tasks that are assessed for mastery of a given competency <i>differ in difficulty, depending on the student's ability level.</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mastery is assessed as what students can accomplish mostly independently (i.e., without extensive peer support or scaffolds).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students have multiple opportunities, throughout a unit or throughout the year, to demonstrate mastery of certain content and skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students can make multiple attempts at a given task that counts toward mastery.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students are considered to have achieved mastery when they have completed the expected number of tasks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Student work counts toward mastery only when it reaches an adequate performance level.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Students are considered to have achieved mastery only when they have demonstrated the knowledge or skills consistently (i.e., multiple times, on different tasks, in multiple ways).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## References

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National Center for Education Statistics, “Concentration of Public School Students Eligible for Free or Reduced-Price Lunch,” March 2017. As of November 25, 2019:  
[https://nces.ed.gov/programs/coe/pdf/Indicator\\_CLB/coe\\_clb\\_2017\\_05.pdf](https://nces.ed.gov/programs/coe/pdf/Indicator_CLB/coe_clb_2017_05.pdf)