Results from the Year One Survey of Next Education Workforce (NEW) Teachers
July 2022

Introduction

The Next Education Workforce (NEW) models reimagine the typical classroom of one teacher with one class of students. Instead, the models enable teams of teachers to teach a larger group of students together. One goal of NEW is to develop deeper student learning across both academic and non-academic outcomes. Another purpose is to provide more support to educators, allowing teachers to specialize and develop expertise within their teams (ASU, 2021).

NEW originated at the Mary Lou Fulton Teachers College at Arizona State University (ASU). ASU partnered with the Johns Hopkins Institute for Education Policy to conduct a teacher survey to better understand the thoughts and experiences of teachers who participate in NEW, particularly as compared to other teachers in their same school district.

The following report provides a description of the survey data collection, evidence of validity and reliability of the survey instrument, and analyzes survey results. This report addresses the following objectives:

A. Provide validation evidence of the survey measures (teachers' self-efficacy, job satisfaction, commitment, collaboration, and perceptions of teacher-student interaction);
B. examine the reliability of these survey measures;
C. compare NEW teachers and other teachers in terms of the survey measures; and
D. examine other aspects of teachers' experiences, including their career plans, use of materials and experiences teaching during COVID.

Survey Objectives

This survey seeks to understand NEW participants, and how their experiences compare with peer teachers in the Mesa Public School District ("Mesa"). The NEW team at ASU identified the following teacher constructs as important aspects of NEW teachers' experiences: teachers' self-efficacy, job satisfaction, commitment, collaboration, and perceptions of teacher-student interaction. The Institute developed a survey to measure these constructs by identifying previously validated question sets for each construction. It is important to note that the survey was not developed to be used for teacher evaluation, as evidence of performance, or in any other context in which teachers might have an incentive to adjust their answers for a more favorable outcome.

In addition, to better understand more nuanced experiences of NEW teachers, the survey asks questions about teachers' career plans, use of instructional materials, and experiences during COVID.

Methodology

Sample and Data Collection

The survey was administered to Pre-K-12th grade Mesa teachers between March 14th and April 1st, 2022. Of the 3,264 teachers who received the survey, 2,260 teachers responded, for a response rate of 69.2%. Surveys with at least 50% of the questions answered were analyzed. Out of 2,260 surveys, 62.7% (n=1,418) met this completion criteria and are included in the final sample size in this analysis.

Of the 1,418 teachers in our final sample, 17.1% were currently working on a team of educators implementing a NEW model. Thus, most of the sample was not implementing NEW (N=1171, 82.6%). Four teachers (0.3%) did not respond to the questions used to identify NEW teachers and are not included in comparison analysis of NEW teachers and other Mesa teachers.

Table 1 shows the demographic characteristics of the total sample, NEW participants, and their non-NEW peers in Mesa, including gender, race/ethnicity, and education. For example, both NEW and non-NEW teachers have similar demographic characteristics: the majority of both groups are female and white, and about half have a BA in Education.

Table 1

Demographic Characteristics of Participants

	Total		NEW Teachers		Non-NEW Teachers	
	N	*%*	*N*	*%*	*N*	*%*
Gender						
Female	1,048	73.9	180	74.1	866	74.0
Male	281	19.8	45	18.5	236	20.2
Other	20	1.4	7	2.9	13	1.1
Missing	69	4.9	11	4.5	56	4.8
Race/Ethnicity						
Native American	8	0.6	1	0.4	7	0.6
Asian	26	1.8	4	1.6	22	1.9
Black/African American	15	1.1	3	1.2	12	1.0
Hispanic/Latino	146	10.3	29	11.9	117	10.0
White	1,046	73.8	175	72	869	74.2
Multi-racial	47	3.3	10	4.1	37	3.2
Other	54	3.8	10	4.1	44	3.8
Missing	76	5.4	11	4.5	63	5.4
Education						
BA in Education	693	48.9	128	52.7	564	48.2
University based post-BA program	168	11.8	27	11.1	141	12
Master's in education	398	28.1	66	27.2	331	28.3
Alternative program	39	2.8	6	2.5	33	2.8
Not listed here	52	3.7	4	1.6	48	4.1
Missing	68	4.8	12	4.9	54	4.6

The teaching characteristics of survey respondents, including the subject and grades they teach, as well as their teaching experience are presented in Table 2. Both groups have similar subject distribution. Nearly 47% of NEW teachers, and 40% of other teachers teach ELA. In addition, the sample consists of experienced teachers, with 57.3% of teachers having more than 10 years of teaching experience.

Table 2

Teaching Characteristics of Participants

	Total		NEW Teachers		Non-NEW Teachers	
	N	*%*	*N*	*%*	*N*	*%*
Subject						
ELA	579	40.8	114	46.9	462	39.5
Math	554	39.1	100	41.2	453	38.7
Science	167	11.8	26	10.7	139	11.9
Social Studies	172	12.1	25	10.3	145	12.4
Other	684	48.2	111	45.7	572	48.8
Grade						
Pre-K	201	14.2	29	11.9	172	14.7
Grade 1	185	13.0	42	17.3	143	12.2
Grade 2	172	12.1	31	12.8	141	12.0
Grade 3	187	13.2	34	14.0	153	13.1
Grade 4	204	14.4	33	13.6	170	14.5
Grade 5	207	14.6	40	16.5	167	14.3
Grade 6	210	14.8	33	13.6	175	14.9
Grade 7	199	14.0	38	15.6	161	13.7
Grade 8	201	14.2	35	14.4	165	14.1
Grade 9	293	20.7	46	18.9	247	21.1
Grade 10	308	21.7	28	11.5	280	23.9
Grade 11	319	22.5	29	11.9	290	24.8
Grade 12	301	21.2	30	12.3	271	23.1
Experience						
I am a pre-service teacher	5	0.4	3	1.2	2	0.2
0-2 years	115	8.1	25	10.3	90	7.7
3-5 years	170	12.0	37	15.2	133	11.4
6-10 years	251	17.7	52	21.4	199	17.0
More than 10 years	813	57.3	116	47.7	695	59.4
Missing	64	4.5	10	4.1	52	4.4

Data Analysis

The NEW teacher survey includes existing validated constructs or sub-constructs, outlined below, which have previously been used in peer-reviewed published research. We used Confirmatory Factor Analysis (CFA) to provide validation evidence of the survey measures, objective A. We report descriptive statistics at the item and construct level.

Before conducting CFA, the data was screened, and all assumptions were examined. Based on this analysis, multivariate outliers (N=66, 0.04) were detected. CFA models were conducted with and without outliers. There was not a significant difference between the results, so outliers were not deleted in the results discussed below.

CFA was conducted for each survey construct (i.e., teacher self-efficacy, teacher job satisfaction, teacher commitment, teacher collaboration, teacher-student interaction). In keeping with the structure of the constructs, a three-factor second order model validated the teacher self-efficacy construct, and a three-factor model was conducted for the teacher job satisfaction construct. A two-factor model validated the teacher collaboration construct. One-factor models validated teacher commitment and teacher-student interaction constructs separately. All CFA models are overidentified, which indicates there is more than enough information in the data to estimate the model parameters. CFA models were tested with *M*plus 8 (Muthén & Muthén, 2017) using maximum likelihood estimation with robust standard errors. The first indicator of each latent variable' coefficient was fixed to 1.00.

We assessed model fit using the Chi-square test, and we used the following goodness-of-fit indices: root mean square error of approximation (RMSEA); standardized root mean squared residual (SRMR); and comparative fit index (CFI). The Chi-square test assesses the difference between the given model and an unspecified model that would fit to the covariance matrix of the data perfectly (Kline, 2016, p. 270). While $p>.05$ is desired for Chi-square test, significant p-values may or may not indicate inappropriate model fit in large sample studies. Thus, we used other indices to test how well the model fit the data. RMSEA is based-on error terms; thus, zero is the best result (Kline, 2016, *p*.273). For RMSEA, values greater than .10 may indicate a lack of fit (Browne & Cudeck, 1992). CFI is a goodness-of-fit indices, and CFI values greater than .90 indicates that the proposed model is greater than 90 of than that of the baseline model, serve as an indicator of adequate fit (Kline, 2016). SRMR is standardized measure of the absolute covariance residual, and perfect model fit is indicated by SRMR = 0, and values greater than .10 may indicate poor fit (Kline, 2016).

Objective B aims to examine the reliability of the survey measures. Evidence of reliability is provided through reporting Cronbach's Alpha, which is a reliability index and a measure of internal consistency. Specifically, Cronbach's Alpha shows the relationship between question responses in the same scale. A higher Cronbach's Alpha indicates a higher reliability of the scale. If Cronbach's Alpha is higher than the .70 for a group of questions, then those

questions have an acceptable reliability index (Nunnally, 1978). Cronbach's Alpha and all other statistical analyses were conducted on SPSS 28.

Once we established evidence that the survey constructs were valid and reliable, we next examined the differences in responses between NEW teachers and their non-NEW colleagues, objective C. We used t-tests to examine the difference between perceptions of teacher self-efficacy, teacher job satisfaction, teacher commitment, teacher collaboration, and teacher-student interaction. Note that all data were screened, and assumptions examined before conducting t-tests.

Finally, we examined other aspects of teachers' experiences, or Objective D. The goal of this analysis was better to understand teachers' perceptions of their school, career plans, use of instructional materials, and teaching during COVID. We used descriptive and frequency analyses to examine quantitative responses. In addition, teachers were asked two open-response questions (i.e., why they would or would not recommend teaching in their school to a qualified friend or colleague) and these open-ended survey questions were examined using thematic analysis for NEW teachers. Specifically, the responses were coded and categorized based on the similarities, and frequency of themes were computed for each category.

Results

Survey Validity: Confirmatory Factor Analyses (CFA)

In addition to employing valid constructs from prior research, we conducted CFA to provide evidence of validity from this survey administration. These results show that the data from Mesa do adequately fit the models, and therefore can be used to measure the intended constructs.

Teacher Self Efficacy

Prior research defines teacher self-efficacy as a measure of a teacher's judgment of their own ability to reach desired outcomes (Bandura, 1977). Tschannen-Moran and Hoy (2001) developed the teacher efficacy construct utilized in the NEW teacher survey, which asks teachers questions about how well they can perform various tasks within schools. The full list of teacher self-efficacy questions is listed in Table 3. For example, teachers were asked, *"How well can you respond to difficult questions from your students?"* and *"How well can you help your students value learning*?"

In addition to the validity evidence provided by Tschannen-Moran and Hoy (2001), Nie et al. (2012) also validated the construct. Specifically, they conducted CFA and examined the distinction between the sub-constructs, which are teacher efficacy in relation to: instructional strategies, motivation, and classroom management. Researchers reported high correlations between teacher self-efficacy and teaching strategies, indicating strong prediction validity.

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In keeping with prior research, the goodness-of-fit statistics from this survey administration suggest that the data reasonably fits the model. The chi-square goodness-of-fit statistics were statistically significant, suggesting the model fit is not perfect. However, all other goodness-of-fit statistics provide evidence that the data do adequately fit the model (Chi-square = 450.33 (df=51), $p < .001$; CFI=.941; RMSEA=.074 [90 CI: .068 to .081]; SRMR=.042).

The unstandardized and standardized coefficients for teacher self-efficacy second-order CFA are reported in Table 3. All coefficients were statistically significant ($p<.001$) indicating that the coefficients are larger than zero.

The squared valued of standardized coefficient shows the proportion of explained variance. Therefore, any standardized coefficient that falls below .70 indicates that less than half of the variation in that question response is accounted for in the factor. Thus, Table 3 shows that there are three questions with standardized coefficients below .70, within the Instructional Strategies factor. Although these values are below .7 threshold, they are not far from .7. For example, the standardized coefficient of TS1 was .65, indicating that this question explains 42 of variance in its factor. The appendix contains a visual representation of this model.

Table 3

Unstandardized Coefficients, Standard Error (SE), and Standardized Coefficients (β) for Teacher Self-efficacy CFA Model

		Unstandardized		Standardized
Item ID	Constructs and Questions	β	*SE*	β
Instructional strategies (IS)				
TS1	How well can you respond to difficult questions from your students?	1.00	0.00	0.65
TS2	How well can you provide appropriate challenges for very capable students?	1.21	0.06	0.71
TS3	How well can you implement alternative instructional strategies in your classroom?	1.18	0.07	0.69
TS4	How well can you provide an alternative explanation, for example, when students are confused?	1.01	0.05	0.67
Motivation (MOT)				
TS5	How well can you help your students value learning?	1.00	0.00	0.78
TS6	How well can you motivate students who show low interest in schoolwork?	1.18	0.03	0.84
TS7	How well can you improve the understanding of a student who is failing?	0.90	0.04	0.72
TS8	How well can you get through to the most difficult students?	1.09	0.04	0.77
Classroom management (CM)				
TS9	How well can you make your expectations clear about student behavior?	1.00	0.00	0.74
TS10	How well can you get students to follow classroom rules?	1.27	0.05	0.87
TS11	How well can you control disruptive behavior in the classroom?	1.37	0.05	0.88
TS12	How well can you keep a few problem students from missing an entire lesson?	1.31	0.06	0.75
Teacher Self-efficacy				
	IS	1.00	0.00	0.85
	MOT	1.38	0.09	0.84
	CM	0.99	0.06	0.74

Note. IS=Instructional strategies, MOT= Motivation, CM= Classroom management

The path coefficients between the factors and second order factor are statistically significant at .85, .84 and .74 for instructional strategies, motivation, and classroom management, respectively. These factors explain 72, 70 and 55 of the variance in teacher self-efficacy, respectively.

Teacher Job Satisfaction

Job satisfaction can generally be defined as having a positive reaction to the workplace (Worrell et al., 2006). Within the field of education, research suggests that teacher job satisfaction may come from several different sources. For example, research suggests that positive social relationships are more likely to increase teacher job satisfaction (Sylvia & Hutchinson, 1985) and might also play a crucial role for teachers (Van Droogenbroeck et al., 2014). In addition, research also suggests that positive relationships with colleagues, parents, students are related to teacher satisfaction (Cano-Garcia et al., 2005; Gavish & Firedman, 2010; Skaalvik & Skaalvik, 2011).

The NEW teacher survey reflects these different sources of teacher satisfaction as three sub-constructs: satisfaction with co-workers, students, and parents. The full list of teacher satisfaction questions is listed in Table 4. For example, teachers were asked, "*How satisfied are you with the following aspect of the school: The extent to which your co-workers encourage you and support you in your work,*" and "*How satisfied with the following aspect of the school: The degrees of interest shown by parents in the education of their children.*"

The construct used in the NEW teacher survey was validated with a large international sample, including the United States, using confirmatory factor analysis (Pepe, 2011; Pepe et al., 2017). The researchers found that teacher job satisfaction can be measured as three sub-constructs. Thus, research provides evidence that this teacher job satisfaction scale is an appropriate tool to understanding teachers' level of job satisfaction.

Analysis of from this survey administration shows that the data reasonably fit this teacher satisfaction model. Specifically, the chi-square goodness-of-fit statistics are statistically significant, suggesting that the model fit is not perfect. However, the other goodness-of-fit statistics suggest that the data are a reasonable fit for the model (Chi-square = 117.84 (df=24), $p < .001$; CFI=.986; RMSEA=.053 [90 CI: .043 to .062]; SRMR=.033).

The unstandardized and standardized coefficients for teacher job satisfaction CFA are reported in Table 4. All coefficients are statistically significant ($p<.001$). All the standardized coefficients are above .70, indicating that over half of the variance is accounted for in the model. For instance, JS1's the standardized coefficient is .88 and this item explains 78 of the variance in its factor.

The standardized correlation coefficients between factors range from .29, .30 and .62 for students with co-workers, parents with co-workers and parents with students, respectively. These correlation coefficients are similar to the results in Pepe et al. (2017).

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Table 4

Unstandardized Coefficients, Standard Error (SE), and Standardized Coefficients (β) for Teacher Job Satisfaction CFA Model

Item ID	Constructs & Items	Unstandardized		Standardized
		β	SE	β
	Co-workers (COW)			
JS1	The quality of your relations with co-workers.	1.00	0.00	0.88
JS2	The extent to which your co-workers encourage you and support you in your work.	1.08	0.03	0.91
JS3	Your overall satisfaction with your co-workers.	1.08	0.03	0.94
	Students (ST)			
JS4	The extent to which students act in a self-disciplined manner.	1.00	0.00	0.83
JS5	Your satisfaction with the behavior of students in your school.	1.13	0.03	0.91
JS6	Your overall level of satisfaction with student discipline in your school.	0.99	0.04	0.75
	Parents (PAR)			
JS7	The degree of interest shown by parents in the education of their children.	1.00	0.00	0.87
JS8	The extent to which parents are supportive of the school and its programs.	1.04	0.02	0.94
JS9	Your overall level of satisfaction with parents where you work.	0.99	0.02	0.91
Correlations				
Students with Coworkers		0.24	0.03	0.29
Parents with co-workers		0.27	0.03	0.30
Parents with students		0.60	0.03	0.62

Note. COW=Satisfaction with Co-workers, ST= Satisfaction with Students, PAR= Satisfaction with Parents

Teacher Commitment

Teacher commitment measures how dedicated teachers are to remaining in their profession. Teacher commitment includes four sub-constructs: commitment to students; commitment to teaching; commitment to school; and commitment to the profession.

The NEW teacher survey uses only the sub-construct of commitment to the profession as an indication of teacher commitment. The teacher commitment to the profession construct contains four questions, listed in Table 5. Teachers were asked, for example, "*To what extent do you agree or disagree with the following statements: If I could get a job different from being a teacher and paying the same amount, I would take it.*" and "*To what extent do you agree or*

disagree with the following statements: *One of the best decisions that I have ever made was to become a teacher."*

The teacher commitment measure was developed and validated by Thien et al. (2014). The researchers analyzed the results of over 600 teacher respondents using exploratory and confirmatory factor analysis. Their results provide evidence of construct validity for the teacher commitment scale.

Analysis of from this survey administration provides evidence that the data reasonably fit this teacher commitment model. Since Chi-square goodness-of-fit statistics are statistically significant, the model fit is not perfect. However, the other goodness-of-fit statistics suggest that reasonable fit for the model (Chi-square = 7.67 (df=2), $p < .001$; CFI=.995; RMSEA=.045 [90 CI: .015 to .080]; SRMR=.009).

The unstandardized and standardized coefficients for teacher job satisfaction CFA are reported in Table 5. All coefficients are statistically significant ($p<.001$). Squared valued of standardized coefficient demonstrate the proportion of the explained variance. Note that one of the standardized coefficients is below .70, indicating that over half of the variance is unaccounted for in the model. Specifically, the standardized coefficient for CMT1R is .63, indicating that it explains only 39 of the variance in its factor.

Table 5

Unstandardized Coefficients, Standard Error (SE), and Standardized Coefficients (β) for Teacher Commitment CFA Model

Item ID	Constructs and Items	Unstandardized		Standardized
		β	SE	β
	Teacher Commitment			
CMT1R	If I could get a job different from being a teacher that pays the same amount, I would take it. (Reverse coded)	1.00	0.00	0.63
CMT2R	If I could do it all over again, I would choose not to work in the teaching profession. (Reverse coded)	1.29	0.06	0.80
CMT3R	I am disappointed that I ever entered the teaching profession. (Reverse coded)	1.15	0.05	0.86
CMT4	One of the best decisions that I have ever made was to become a teacher.	1.08	0.05	0.79

Teacher Collaboration

The NEW teacher survey measures collaboration in two sub-constructs. The first construct measures formal collaboration within the school and asks teachers questions such as, *"To what extent do you agree or disagree with the following statements: Collaboration in this school occurs formally (e.g., common planning times, grade-level meetings, PLCs)."* The second construct measures the frequency of teachers' collaboration activities. Teachers are asked questions such as, *"This school year, how often have you worked with colleagues to develop materials or activities for particular classes/lessons?"* The full list of teacher collaboration questions is listed in Table 6.

Goddard et al. (2010) validated the teacher collaboration construct by conducting structural equation modeling with a sample of 1600 teachers from 96 schools. The teacher collaboration construct consists of three sub-construct which are formal collaboration, frequency of collaboration on instruction and collaboration on instructional policy. The results showed evidence for construct validity. Note that only formal collaboration and frequency of collaboration were used in this survey.

Analysis from this survey administration shows that the data reasonably fit this teacher collaboration model. The chi-square goodness-of-fit statistics suggests that the model fit is not perfect. However, the other goodness-of-fit statistics suggest an acceptable model fit for the model (Chi-square = 267.69 (df=19), $p < .001$; CFI=.947; RMSEA=.096 [90 CI: .086 to .106]; SRMR=.04).

The unstandardized and standardized coefficients for teacher job satisfaction CFA are reported in Table 6. All coefficients are statistically significant ($p<.001$). All the standardized coefficients are above .70, indicating that over half of the variance is accounted for in the model.

The standardized correlation coefficients between formal collaboration and the frequency of collaboration on instruction is shown at the bottom of Table 6 and is .51. This means formal collaboration and frequency of collaboration has 25 of shared variance, which is considered acceptable.

Table 6

Unstandardized Coefficients, Standard Error (SE), and Standardized Coefficients (β) for Teacher Collaboration CFA Model

Item ID	Constructs & Items	Unstandardized		Standardized
		β	SE	β
Formal Collaboration				
COL1	The principal, teachers, and staff collaborate to make this school run effectively.	1.00	0.00	0.82
COL2	Collaboration in this school occurs formally (e.g., common planning times, grade-level meetings, PLCs).	0.80	0.04	0.77
COL3	When teachers in this school collaborate, our collaboration time is typically structured; we stick to an agenda, and/or we systematically work on a particular goal.	0.78	0.04	0.71
COL4	The principal at this school participates in instructional planning with groups of teachers.	1.02	0.03	0.75
Frequency of collaboration on instruction				
COL5	This school year, how often have you worked with colleagues to develop materials or activities for particular classes/lessons?	1.00	0.00	0.84
COL6	Please respond to the following statements on Frequency of Collaboration on Instruction: - This school year, how often have you worked with colleagues to develop instructional strategies?	1.10	0.02	0.91
COL7	This school year, how often have you worked with colleagues to make teaching decisions using student assessment data?	0.95	0.03	0.81
COL8	This school year, how often have you worked with colleagues to discuss what helps students learn best?	0.99	0.03	0.81
Correlation				
Frequency of collaboration on instruction with Formal collaboration		0.48	0.03	0.51

Teacher-Student Interaction

The survey measures teacher-student interactions as one construct that includes five questions, listed in Table 7. These questions focus on interpersonal interactions. For example, teachers are asked*, "To what extent do you agree with the following statements: My students share their concerns with me,"* and "*To what extent do you agree with the following statements: My students express their feelings."* Brand et al. (2008) validated this scale as a part of school

climate survey for teachers with a sample of 234 teachers. The researchers provide evidence for construct validity based on confirmatory factor analysis.

Analysis from this survey administration provides evidence that the data reasonably fit this teacher-student interaction model. Specifically, the chi-square goodness-of-fit statistics are statistically significant, which suggestions that the model fit is not perfect. However, the other goodness-of-fit statistics suggest that a reasonable fit for the model (Chi-square = 27.52 (df=5), p < .001; CFI=.987; RMSEA=.056 [90 CI: .037 to .078]; SRMR=.019).

The unstandardized and standardized coefficients for teacher job satisfaction CFA are reported in Table 7. All coefficients were statistically significant (p<.001). All the standardized coefficients were above .70, indicating that over half of the variance is accounted for in the model. For example, INT1' standardized coefficient was .79 and it explains 63 of the variance in its factor.

Table 7

Unstandardized Coefficients, Standard Error (SE), and Standardized Coefficients (β)for Teacher-Student Interaction CFA Model

Item ID	Constructs & Items	Unstandardized		Standardized
		β	*SE*	β
	Teacher-student interaction			
INT1	My students share their concerns with me.	1.00	0.00	0.79
INT2	My students ask for comfort or support when needed.	1.18	0.04	0.82
INT3	My students express their feelings.	1.05	0.04	0.82
INT4	My students talk about their homes and families.	1.13	0.04	0.79
INT5	My students join class discussions.	0.87	0.05	0.61

The constructs in the NEW survey were selected from validated survey instruments. However, this section provides additional validity evidence, based on internal structure for these survey constructs using data from the Mesa survey administration. Results from these analyses show that the data from Mesa do adequately fit the models, and therefore can be used to measure the intended constructs of teacher self-efficacy, job satisfaction, commitment, collaboration, and teacher-student interaction.

Survey Reliability

This next section provides evidence of the survey's reliability. Cronbach's Alpha, a common measure of reliability, is calculated for each scale and sub-scales. Table 8 presents the number of items and item reliability index, Cronbach's Alpha for each construct, described

above. Note that all Cronbach's Alphas are above the .70 cut-off. Therefore, data from this current survey administration provide additional reliability evidence for these scales.

Table 8

Item Analysis of the Scales

Scale	Subscales	Number of items	Cronbach's Alpha
Teacher Self-efficacy		12	.90
	Instructional Strategies	4	.77
	Motivation	4	.85
	Classroom Management	4	.87
Teacher Job Satisfaction		9	.87
	Co-workers	3	.93
	Students	3	.86
	Parents	3	.93
Teacher Commitment		4	.84
Teacher Collaboration		8	.87
	Formal Collaboration	4	.84
	Frequency of Collaboration on Instruction	4	.90
Teacher-Student Interaction		5	.87

Teachers Survey Responses

Given the evidence of validity and reliability from both prior research and survey administrations, as well as this survey administration, we next investigated teachers' responses to the survey. This section compares NEW teachers and non-NEW teachers across each survey construct. The analysis shows that there was not a significant difference between NEW and non-NEW teachers' self-efficacy and teacher commitment. However, NEW teachers did have significantly higher job satisfaction, collaboration, and interactions with students.

Teacher Self-efficacy, Job Satisfaction, Commitment, Collaboration, and Teacher-Student Interaction

We conducted independent sample t-tests to examine the differences between NEW and non-NEW teachers and others in terms of teacher self-efficacy, job satisfaction, commitment, collaboration, and teacher-student interaction. Table 9 presents descriptive statistics and t-test results including confidence intervals and Cohen's d (*d*).

Table 9 shows that there was not a significant difference in teacher self-efficacy, including its subscales (i.e., instructional strategies, motivation and classroom management), in NEW teachers' responses and their colleagues in Mesa. In addition, the table also shows that

there is no significant difference between NEW teachers' responses, and those of their colleagues, for teacher job satisfaction with parents and teacher commitment constructs, at a significance level of $p<.05$.

However, NEW teachers do have significantly higher job satisfaction. Specifically, Table 9 shows that there was a significant difference between NEW teachers (M=3.55, SD=0.76) and non-NEW teachers (M=3.42, SD=0.8) in responses about teacher job satisfaction $t (1412) = 2.26$, $p<.05$, d= 0.16 (small effect size). The t-tests for the subscale of job satisfaction demonstrated that NEW teachers had statistically significantly higher satisfaction with their co-workers ($t (391.81) = 3.45$, $p<.05$, d= 0.22, small effect size) and students ($t (1412) = 2.12$, $p<.05$, d= 0.15, small effect size).

NEW teachers also report a statistically significant higher amount of teacher collaboration ($t (413.46) = 9.98$, $p<.001$, d= 0.61, medium effect size). These differences are also reflected in the subscale responses of teacher collaboration: formal collaboration ($t (379.32) = 5.84$, $p<.001$, d= 0.38, small effect size) and frequency of collaboration on instruction ($t (389.48) = 10.09$, $p<.001$, d= 0.64, medium effect size).

Similarly, there was a statistically significant difference between the NEW teachers and their Mesa colleagues in responses for the teacher-student interaction construct ($t (1410) = 2.44$, $p<.01$, d= 0.17, small effect size).

Note that teacher job satisfaction with co-workers, teacher collaboration, formal collaboration, and frequency of collaboration on instruction and teacher-student interaction did not meet equal variance assumption; thus, t-test results were reported as equal variances not assumed.

Table 9

The Comparison of NEW Teachers and Others based on Teacher Self-efficacy, Job Satisfaction,
Commitment, Collaboration and Interaction with Students

	NEW Teachers			Non-NEW Teachers							
	N	*M*	*SD*	*N*	*M*	*SD*	*t*	*sig.*	*LL*	*UL*	*d*
Teacher self-efficacy	243	3.86	0.61	1,170	3.82	0.55	1.07		-0.04	0.12	
Instructional strategies	243	3.99	0.62	1,169	3.96	0.57	0.58		-0.06	0.10	
Motivation	242	3.57	0.72	1,168	3.48	0.73	1.83		-0.01	0.19	
Classroom management	243	4.02	0.74	1,170	4.01	0.68	0.07		-0.09	0.10	
Teacher job satisfaction	243	3.55	0.76	1,171	3.42	0.80	2.26	*	0.02	0.23	0.16
Co-workers	243	4.32	0.83	1,171	4.11	0.97	3.45	*	0.09	0.33	0.22
Students	243	3.26	1.04	1,171	3.10	1.06	2.12	*	0.01	0.31	0.15
Parents	242	3.07	1.07	1,171	3.06	1.06	0.12		-0.14	0.16	
Teacher commitment	242	3.66	1.04	1,170	3.57	0.99	1.21		-0.05	0.22	
Teacher collaboration	243	3.85	0.69	1,171	3.34	0.85	9.98	***	0.41	0.60	0.61
Formal collaboration	242	3.92	0.82	1,171	3.58	0.92	5.84	***	0.23	0.46	0.38
Frequency of collaboration on instruction	242	3.78	0.91	1,168	3.11	1.06	10.08	***	0.54	0.80	0.64
Teacher-student interaction	242	4.18	0.63	1,170	4.07	0.63	2.44	**	0.02	0.20	0.17

Note. LL = Confidence Interval Lower Limit. UL = Confidence Interval Upper Limit. *p<.05, **p<.01, ***p<.001. Cohen's d: 0.2 small effect, 0.5 medium effect, 0.8 large effect.

Recommending Teaching in Your School and Career Plans

In addition to measuring teachers' perceptions about existing constructs, as described above, the survey asked teachers about their current experiences, including their perceptions of their schools, career plans, use of materials for planning, and experience teaching during COVID. This next section describes teachers' responses to these questions.

Survey respondents were asked if they would recommend teaching in their current school to a qualified friend or colleague, as well as the rationale for their responses. When teachers were

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asked if they would recommend teaching at their school on 0–10-point Likert scale, NEW teachers (M= 6.28, SD= 3.06) and other teachers (M=6.02, SD=3.07) responded similarly. An independent sample t-test demonstrates that there is not a significant difference between NEW teachers and others in terms of recommending their school (t(1435)=1.31, p=19). Thus, responses suggest that NEW teachers and other teachers have similar perspectives regarding recommending teaching in their schools.

Teachers were next asked to explain why they would (or would not) recommend teaching in their schools. Table 10 presents the most common themes and sample responses from NEW teachers who would recommend teaching in their schools. NEW teachers most frequently answered this question by citing specific characteristics of their schools, like collaboration and support (f=62). However, teachers also cited general features of teaching, such as how rewarding the profession is (f=35).

Table 10

Why Would You Recommend Teaching in Your School to a Qualified Friend or Colleague? (NEW Teachers)

Themes	Quotes	*f*
Collaboration and support	"Healthy and positive work environment, a principal who is supportive and gives choices." "I have a ton of support from my teammates and admin at my school. I feel like they are here to coach me and make me a better teacher."	62
Rewarding profession	"Because I firmly believe I make a difference in the lives of my students. Our students are our future, and we need to take this investment seriously." "It is the most rewarding job someone could ever have."	35
Learning environment	"Extremely student led, teacher led learning environments." "My school is an innovative and welcoming environment where teachers are trusted they are doing what is best for kids."	17
Need for teachers	"I want my school to have good quality teachers." "There's a need for math and science teachers always."	4

If teachers did not recommend teaching in their current school, they were also asked to explain their response. Table 11 displays common themes and examples from NEW teachers' responses. NEW teachers cited both factors specific to their schools, like lack of appreciation

(f=15) and behavioral issues (f=10), as well as factors broader than their school, such as state, districts and school policies (f=17).

Table 11

Why would you not recommend teaching in your school to a qualified friend or colleague? (NEW Teachers)

Themes	Quotes	f
State, district and school policies	"Arizona was ranked the worst place in the country to be a teacher before Covid and has gotten much harder. The entire education system in broken in the state and their answer has been school choice. Arizona leads the country in school choice, but now ranks 50th in education. Arizona has a problem with corruption and is running the same system that failed all over the country years ago. There is no future in teaching in this state. If you want to teach you have to leave Arizona." "Our state does not support public education, class sizes are large, teachers are villainized."	17
Little appreciation	"I feel unappreciated in my career, and I know others feel the same." "The lack of respect is astounding, the exhaustion is real, and my school has so many issues it makes it difficult to work at."	15
Behavioral issues	"Behaviors from students and parents is really difficult to handle. There are more issues than I feel like I have the capacity to handle." "Student behavior and lack of consistent discipline."	10
Low pay	"Low pay." Overworked, underappreciated and underpaid.	8
Lack of NEW model support	"Because the model we're implementing is such a new thing, there are so many things that still need worked out, figured out, communicated, and needed support which adds another level of stress to teaching." "Dysfunctional/unstable team dynamics."	3

Teachers were also asked about their future career plans. Specifically, when asked about what their career plans were for five years from now, 49.4 of NEW teachers and 47 of other teachers indicated teaching as their plan. Table 12 presents five-year career plans for NEW and other teachers. There is not a significant difference between NEW teachers and other Mesa

teachers in the distribution of 5-year career plan responses $(p>.05)$. Overall, both groups have somewhat similar perspectives regarding their career plans.

Table 12

5-year Career Plans

	NEW Teachers		Non-NEW Teachers	
	f	*%*	*f*	*%*
Teaching	120	49.4	550	47.0
Something else in education	52	21.4	216	18.4
Working in a different field	33	13.6	137	11.7
Retired	35	14.4	250	21.3
Not working	3	1.2	15	1.3
Missing Data			3	0.3
Total	243	100.0	1,171	100.0

Instructional Resources Used in your Classroom

Teachers were asked about their instructional materials in their classroom for ELA, math, science and social studies. Elementary teachers were only asked about their ELA and math planning. In addition, teachers were asked to check all forms of planning in which they engage. Table 13 presents instructional resources in their classroom. NEW and non-NEW teachers' reported materials use is not significantly different in any subject $(p>.05)$.

The results show that NEW teachers and other teachers have similar use of instructional materials. However, there are differences in how ELA and math teachers plan, compared to science and social studies teachers. For example, in ELA and math, more teachers rely on district suggested or purchased published materials than they do on self-developed materials. This finding is not consistent amongst science and social studies teachers.

Table 13

Instructional Resources in your Classroom (Check all that apply)

	NEW Teachers		Non-NEW Teachers	
	f	*%*	*f*	*%*
ELA				
District/school suggested/purchased published materials	65	57.0	281	60.8
Materials created by the district/school.	21	18.4	116	25.1
Self-selected published materials	31	27.2	196	42.4
Materials I developed myself from online or non-published sources.	57	50.0	272	58.9
Materials I developed with my colleagues from online or non-published sources.	50	43.9	228	49.4
Math				
District/school suggested/purchased published materials	56	56.0	275	60.7
Materials created by the district/school.	22	22.0	116	25.6
Self-selected published materials	39	39.0	157	34.7
Materials I developed myself from online or non-published sources.	47	47.0	244	53.9
Materials I developed with my colleagues from online or non-published sources.	36	36.0	197	43.5
Science				
District/school suggested/purchased published materials	15	57.7	56	40.3
Materials created by the district/school.	7	26.9	45	32.4
Self-selected published materials	11	42.3	43	30.9
Materials I developed myself from online or non-published sources.	17	65.4	87	62.6
Materials I developed with my colleagues from online or non-published sources.	12	46.2	67	48.2
Social Studies				
District/school suggested/purchased published materials	10	40.0	66	45.5
Materials created by the district/school.	6	24.0	40	27.6
Self-selected published materials	9	36.0	49	33.8
Materials I developed myself from online or non-published sources.	14	56.0	93	64.1
Materials I developed with my colleagues from online or non-published sources.	9	36.0	76	52.4

Table 14 displays the time teachers spend on planning and selecting instructional materials for ELA, math, science and social studies lessons. Note that teachers were asked to distinguish the amount of time they spend planning "lessons using the district-purchased materials and instructional resources" (indicated by "planning") and time spent "Selecting and/or developing instructional resources (i.e., NOT from the district-purchased curriculum and instructional resources available)" (indicated by "selecting and/or developing"). Independent t-test results show that there is not a statistically significant difference between NEW and non-NEW teachers in terms of time spend for planning in ELA, math, science and social studies.

Teachers' answers across all subjects indicate that they spend more time selecting and developing materials than they do planning from district-purchased materials. However, the difference in time between these two activities varies by subject. For example, teachers spend a similar amount of time, on these two activities in math. However, in social studies, teachers indicate that they spend, more than 3 extra hours per week on selecting and developing materials, compared to planning from published district-purchased materials.

Table 14

Time Spend Planning and Selecting Instructional Resources

	N	M	SD	N	M	SD	t	LL	UL
ELA									
Planning	98	3.76	4.85	376	3.17	5.90	.91	-.68	1.86
Selecting and/or developing	101	4.42	4.85	391	4.77	6.42	-.51	-1.7	1.00
Math									
Planning	87	4.24	7.65	385	3.15	4.98	1.64	-.21	2.38
Selecting and/or developing	84	4.39	7.73	389	4.23	4.95	.24	-1.15	1.47
Science									
Planning	22	3.86	4.47	114	2.39	2.80	1.49	-.57	3.50
Selecting and/or developing	23	7.98	12.23	120	5.48	5.16	.97	-2.86	7.85
Social Studies									
Planning	21	3.50	3.31	113	2.69	3.59	.96	-.86	2.48
Selecting and/or developing	21	3.60	3.22	118	4.19	5.52	-.48	-3.05	1.86

Teaching During Covid

This section examines the teaching experiences of NEW and non-NEW teachers during COVID-19. The purpose of this portion of the survey is to examine how NEW teachers' experiences compare to their colleagues who do not work in a team of educators.

First, we examined if there is evidence of differences in school attendance within NEW and non-NEW teachers. Table 15 shows the number of days absent due to COVID in 2021-2022 school year, and there is not a significant difference between NEW and non-NEW teachers ($p>.05$). Roughly 50 of both groups did not miss any school days due to COVID. On the other hand, 21 of NEW teachers and 17.5 of other teachers missed 3-5 days because of COVID.

Table 15|

Absent Days because of COVID-19 in 2021-2022 School Year

	NEW Teachers		Non-NEW Teachers	
	f	*%*	*f*	*%*
0 days	128	52.7	650	55.5
1-2 days	13	5.3	85	7.3
3-5 days	51	21.0	205	17.5
6-10 days	26	10.7	139	11.9
More than 10 days	15	6.2	46	3.9
Missing Data	10	4.1	46	3.9
Total	243	100	1,171	100

Table 16 presents responses regarding who taught students when teachers were absent. The distributions of teachers' responses are not significantly different between NEW and other Mesa teachers ($p>.05$). Nearly 20 of NEW and non-NEW teachers said a substitute teacher taught their class. Some NEW teachers (6) indicated that their NEW team members taught their class. Alternatively, 29 non-NEW teachers (2.5) stated that a NEW team member taught their class.

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Table 16

Who taught your students when you were absent? (Check all that apply).

	NEW Teachers		Non-NEW Teachers	
	f	*%*	*f*	*%*
Substitute teachers	53	21.8	251	21.4
Other school staff or other teachers	20	8.2	128	10.9
My Next Education Workforce team members	15	6.2	29	2.5
My class was divided into other classrooms at my school	3	1.2	65	5.6
Other	14	5.8	251	21.4
Missing Data	138	56.8	698	59.6
Total	243	100.0	1,171	100.0

Teachers were asked about their level of confidence that their students received effective instruction in their absence, and Table 17 presents the results. NEW teachers (16.9) and other teachers (15.3) were somewhat confident about the instruction that their students received. The distributions of teachers' responses to this question are not significantly different between NEW and non-NEW teachers ($p>.05$). However, it is important to note that more than half of both NEW (57.6) and non-NEW teachers (59.6) did not respond to this question.

Table 17

How confident you were that your students were receiving effective instruction in your absence?

	NEW Teachers		Non-NEW Teachers	
	f	*%*	*f*	*%*
Not confident at all	11	4.5	72	6.1
Not very confident	20	8.2	102	8.7
Somewhat confident	41	16.9	179	15.3
Confident	19	7.8	90	7.7
Very confident	12	4.9	30	2.6
Missing Data	140	57.6	698	59.6
Total	243	100.0	1171	100.0

Next, teachers were asked about their opinions regarding the impact of COVID-19 on their students' learning environments. Specifically, teachers were asked, "To what degree have your students and your learning environment been negatively impacted by educator absences related to COVID-19 (i.e., quarantine and/or illness)?" and answered on a 5-point scale from "Not at all impacted" to "Extremely impacted."

As Table 18 indicates, there were some similarities in NEW teachers' compared with non-NEW teachers' responses, and the distributions are not statistically significantly different ($p>.05$). For example, about one third of NEW teachers (36.6) and non-NEW teachers (32.6) thought COVID somewhat negatively impacted their learning environment. In addition, about 20 of both groups indicated that COVID very negatively impacted their learning environment. However, a greater percentage of NEW teachers reported that COVID "extremely impacted their students," 15.6, compared with 10.8 of non-NEW teachers. In addition, a smaller percentage of NEW teachers reported that their students were not impacted or only minimally impacted by COVID, 21.8 of NEW teachers compared with 29.4 of non-NEW teachers.

Table 18

To what degree have your students and your learning environment have been negatively impacted by educator absences related to COVID-19 (i.e., quarantine and/or illness)?

	NEW Teachers		Non-NEW Teachers	
	f	*%*	*f*	*%*
Not impacted at all	20	8.2	108	9.2
Minimally impacted	33	13.6	237	20.2
Somewhat impacted	89	36.6	382	32.6
Very impacted	51	21.0	266	22.7
Extremely impacted	38	15.6	126	10.8
Missing Data	12	4.9	52	4.4
Total	243	100.0	1,171	100.0

Relatedly, teachers were asked to rate their concern regarding their COVID-19 absenteeism on a 5-point scale. Table 19 presents these results and shows that about 13 of NEW teachers and 10 of other teachers were not concerned at all about their COVID-19 absenteeism. At the other end of the distribution, 6.2 of NEW teachers stated that they were very concerned, in comparison to 3.9 of other Mesa teachers. The distributions of responses are similar between NEW and non-NEW teachers ($p>.05$). However, note that more than 50 of NEW teachers (57.2) and non-NEW teachers (59.7) did not respond to the question.

Table 19

How concerned are you about your COVID-19 absenteeism?

	NEW Teachers		Non-NEW Teachers	
	f	*%*	*f*	*%*
Not concerned at all	31	12.8	117	10.0
Minimally concerned	22	9.1	128	10.9
Somewhat concerned	24	9.9	107	9.1
Concerned	12	4.9	74	6.3
Very Concerned	15	6.2	46	3.9
Missing Data	139	57.2	699	59.7
Total	243	100.0	1,171	100.0

Discussion

The survey sought to explore how NEW teachers compare to their non-NEW colleagues working within the same school district. To this end, the NEW team at ASU identified key constructs that they believed would distinguish NEW teachers: teacher self-efficacy, job satisfaction, commitment, collaboration, and teacher-student interaction. The first part of the analysis provides evidence of the validity and reliability of these constructs using this sample. These results indicate that this survey can be used to measure the survey's intended constructs.

Analysis of the survey responses provides evidence that NEW and non-NEW colleagues have similar demographic characteristics. In addition, analysis of teachers' characteristics shows that the teachers have similar educational backgrounds and teaching experience, suggesting similarities between the two groups on important observable characteristics.

Teachers' responses describing their collaboration provide promising evidence that teachers enact key components of NEW as intended. Specifically, NEW teachers responded that they collaborate with other teachers significantly more, both through formal collaboration and in the frequency of their collaborations on instruction.

In addition, teachers' responses suggest that NEW teachers are significantly more satisfied with their job and are more satisfied with their co-workers and students. These results are especially promising, given the challenges that teachers have experienced during COVID. However, teachers' responses do not indicate that their increased satisfaction has translated into an increased commitment to the teaching profession. While NEW teachers' responses to this construct were slightly higher on average, the differences in responses were not statistically significant. Similar rates of intending to stay in the teaching profession within the next five years between NEW and non-NEW teachers provide evidence of similar levels of commitment between the two groups.

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The survey also shows that NEW teachers report more positive interactions with their students. This is especially promising, as NEW teachers interact with more students than non-NEW colleagues. However, these more positive interactions have not translated into reports of higher teacher efficacy, or even stronger teacher efficacy in classroom management. NEW teachers reported no difference, on average, between their efficacy for instructional strategies, motivation, or classroom management when compared to their non-NEW colleagues.

Thus, the survey suggests initial promising evidence of change. Teachers report that they follow NEW and that this work translates into increased teacher collaboration, satisfaction, and interactions with students. However, other changes, such as increased commitment and self-efficacy have yet to follow.

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Appendix A

Table A1

Descriptive Statistics for Teacher Self-efficacy Items and Constructs

Item ID	Items and Constructs	M	SD
	Instructional strategies (IS)	3.97	0.58
TS1	How well can you respond to difficult questions from your students?	4.02	0.72
TS2	How well can you provide appropriate challenges for very capable students?	3.77	0.79
TS3	How well can you implement alternative instructional strategies in your classroom?	3.91	0.79
TS4	How well can you provide an alternative explanation, for example, when students are confused?	4.17	0.70
	Motivation (MOT)	3.50	0.73
TS5	How well can you help your students value learning?	3.68	0.83
TS6	How well can you motivate students who show low interest in schoolwork?	3.32	0.91
TS7	How well can you improve the understanding of a student who is failing?	3.57	0.81
TS8	How well can you get through to the most difficult students?	3.41	0.92
	Classroom management (CM)	4.01	0.69
TS9	How well can you make your expectations clear about student behavior?	4.34	0.71
TS10	How well can you get students to follow classroom rules?	4.07	0.77
TS11	How well can you control disruptive behavior in the classroom?	3.99	0.82
TS12	How well can you keep a few problem students from missing an entire lesson?	3.66	0.92
	Teacher self-efficacy (TS)	3.83	0.56

The teacher self-efficacy second-order CFA model is shown in Figure 1. This figure provides a visual representation of the model. That is, the figure shows how the teacher self-efficacy (ts) construct, relates to the three sub-constructs of instructional strategies (is), motivation (mot), and classroom management (cm). Similarly, the figure shows how each question item relates to subconstructs and the overall construct.

Note that constructs are shown in circles and observed variables, the survey items, were showing in squares. The arrows from circles to circles or squares displayed standardized coefficient, which are displayed in Table 12. The arrows outside of the factors and items (i.e., circles and squares) show the error terms.

Figure A1

Teacher Self-efficacy Second-order CFA Model with Standardized Estimations
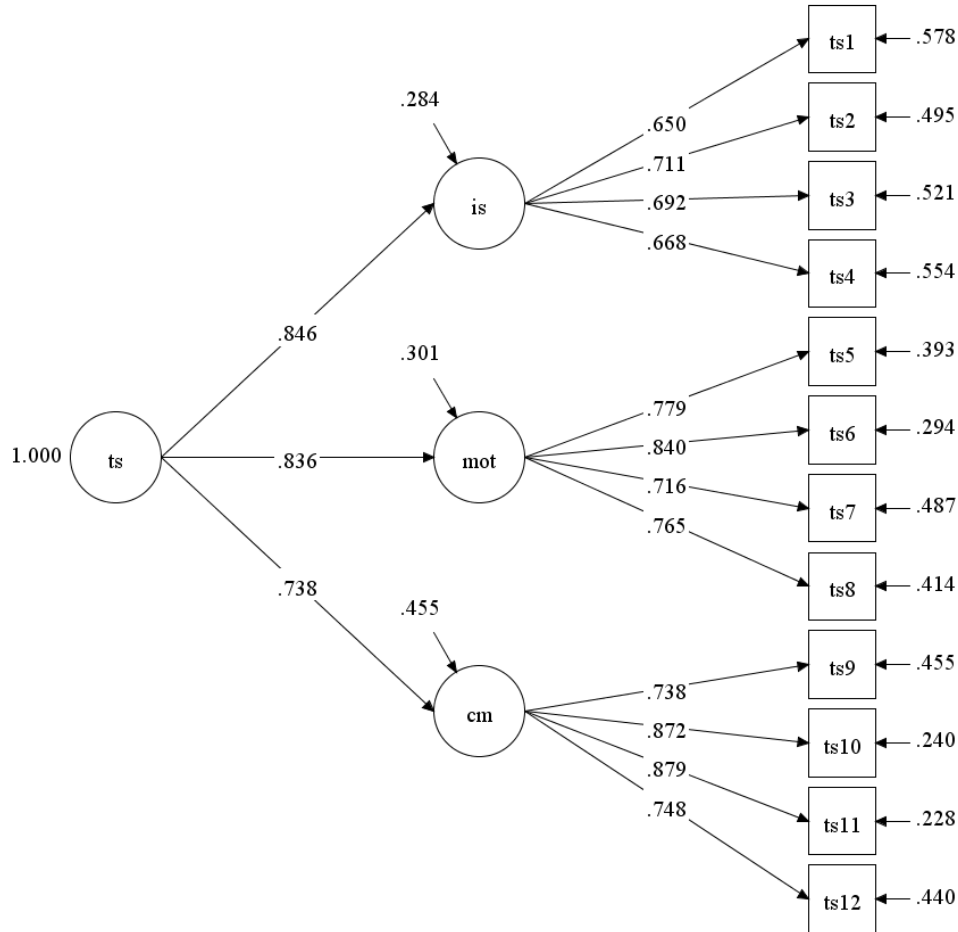
Note. is=Instructional strategies, mot= Motivation, cm= Classroom management, ts=Teacher self-efficacy.

Table A2

Descriptive Statistics for Teacher Satisfaction Items and Constructs

Item ID	Items and Constructs	M	SD
	Satisfaction with Co-workers (COW)	4.14	0.95
JS1	The quality of your relations with co-workers.	4.17	0.99
JS2	The extent to which your co-workers encourage you and support you in your work.	4.13	1.04
JS3	Your overall satisfaction with your co-workers.	4.14	1.00
	Satisfaction with Students (ST)	3.13	1.06
JS4	The extent to which students act in a self-disciplined manner.	3.17	1.15
JS5	Your satisfaction with the behavior of students in your school.	3.16	1.19
JS6	Your overall level of satisfaction with student discipline in your school.	3.06	1.26
	Satisfaction with Parents (PAR)	3.06	1.06
JS7	The degree of interest shown by parents in the education of their children.	2.85	1.16
JS8	The extent to which parents are supportive of the school and its programs.	3.13	1.13
JS9	Your overall level of satisfaction with parents where you work.	3.21	1.10
	Teacher job satisfaction	3.44	0.79

Figure A2

Teacher Job Satisfaction CFA Model with Standardized Coefficients
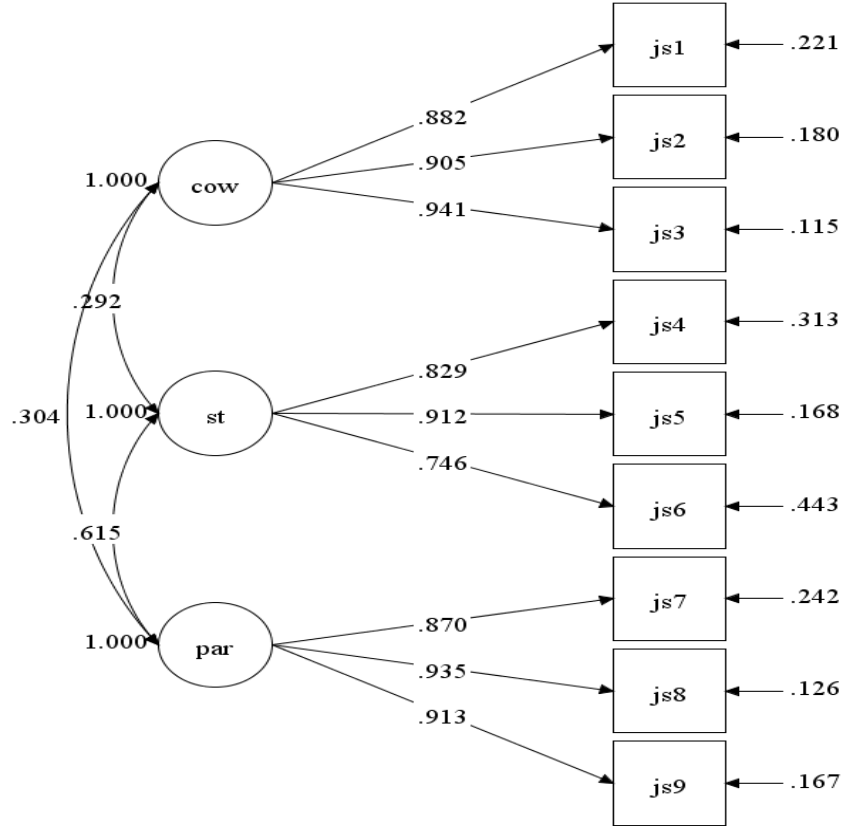
Note. COW=Satisfaction with Co-workers, ST= Satisfaction with Students, PAR= Satisfaction with Parents

Table A3

Descriptive Statistics for Teacher Commitment Items and the Construct

Item ID	Items and Construct	M	SD
CMT1R	If I could get a job different from being a teacher that pays the same amount, I would take it. (Reverse coded)	3.38	1.30
CMT2R	If I could do it all over again, I would choose not to work in the teaching profession. (Reverse coded)	3.40	1.30
CMT3R	I am disappointed that I ever entered the teaching profession. (Reverse coded)	3.89	1.09
CMT4	One of the best decisions that I have ever made was to become a teacher.	3.66	1.11
	Teacher commitment	3.58	0.99

Figure A3

Teacher Commitment CFA Model with Standardized Coefficients
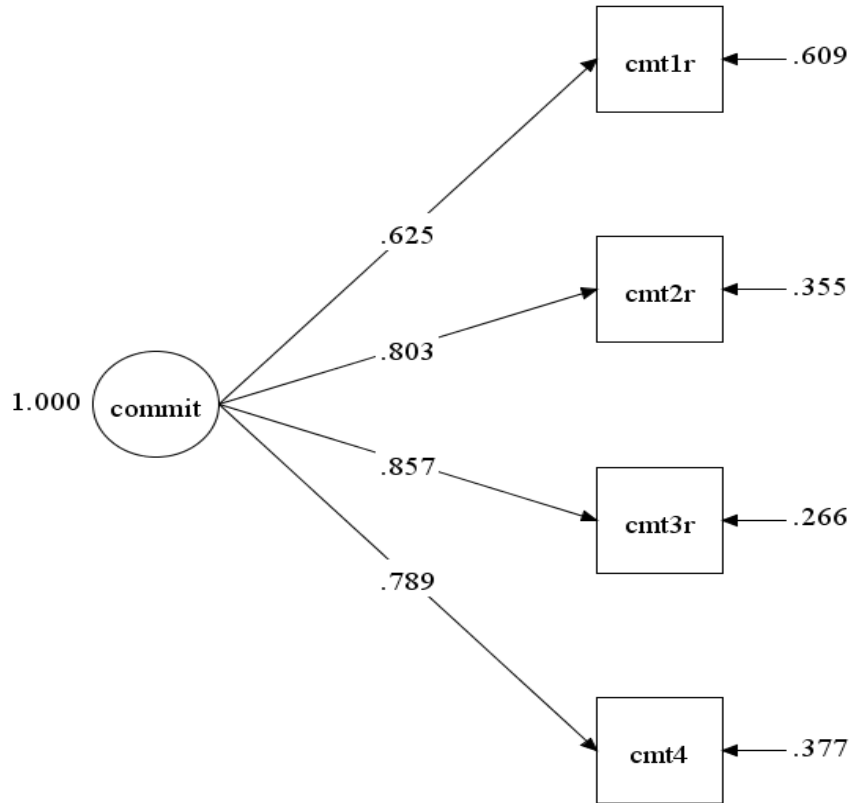
Note. Commit=teacher commitment.

Table A4

Descriptive Statistics for Teacher Collaboration Items and Constructs

Item ID	Items and Constructs	M	SD
	Formal collaboration	3.64	0.92
COL1	The principal, teachers, and staff collaborate to make this school run effectively.	3.66	1.15
COL2	Collaboration in this school occurs formally (e.g., common planning times, grade-level meetings, PLCs).	3.93	0.98
COL3	When teachers in this school collaborate, our collaboration time is typically structured; we stick to an agenda, and/or we systematically work on a particular goal.	3.66	1.03
COL4	The principal at this school participates in instructional planning with groups of teachers.	3.30	1.29
	Frequency of collaboration on instruction	3.22	1.07
COL5	This school year, how often have you worked with colleagues to develop materials or activities for particular classes/lessons?	3.40	1.20
COL6	Please respond to the following statements on Frequency of Collaboration on Instruction: - This school year, how often have you worked with colleagues to develop instructional strategies?	3.15	1.22
COL7	This school year, how often have you worked with colleagues to make teaching decisions using student assessment data?	2.99	1.18
COL8	This school year, how often have you worked with colleagues to discuss what helps students learn best?	3.35	1.23
	Teacher collaboration	3.43	0.85

Figure A4

Teacher Collaboration CFA Model with Standardized Coefficients
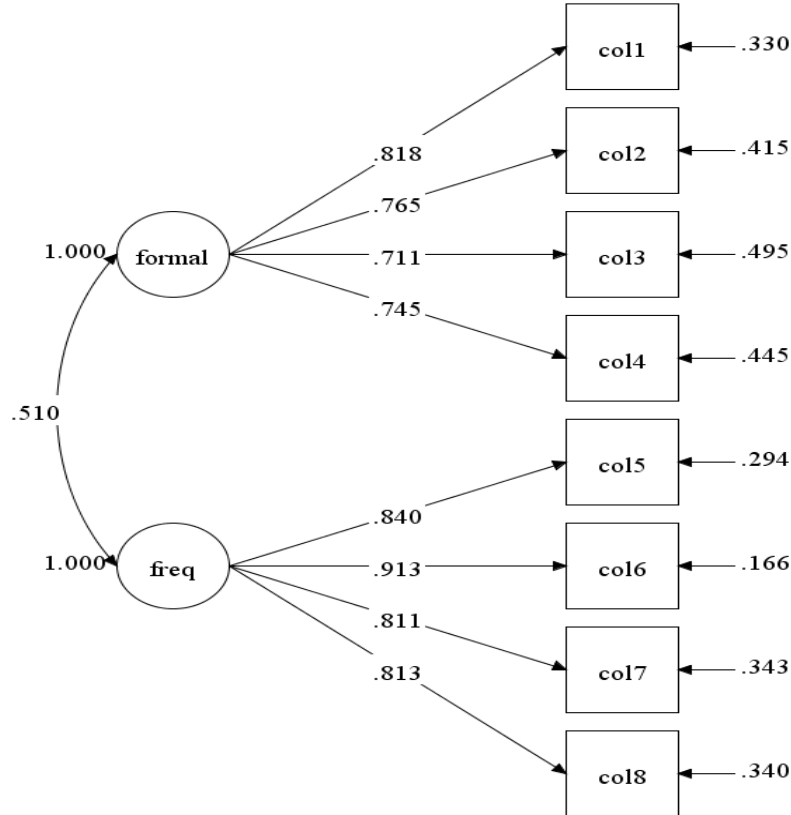
Note. Formal=Formal collaboration, freq.= Frequency of collaboration.

Table A5

Descriptive Statistics for Teacher-Student Interaction Items and the Construct

Item ID	Items and Constructs	M	SD
INT1	My students share their concerns with me.	4.12	0.71
INT2	My students ask for comfort or support when needed.	4.07	0.82
INT3	My students express their feelings.	4.16	0.73
INT4	My students talk about their homes and families.	4.04	0.81
INT5	My students join class discussions.	4.03	0.82
	Teacher-student interaction	4.08	0.63

Figure A5

Teacher-Student Interaction CFA Model with Standardized Coefficients
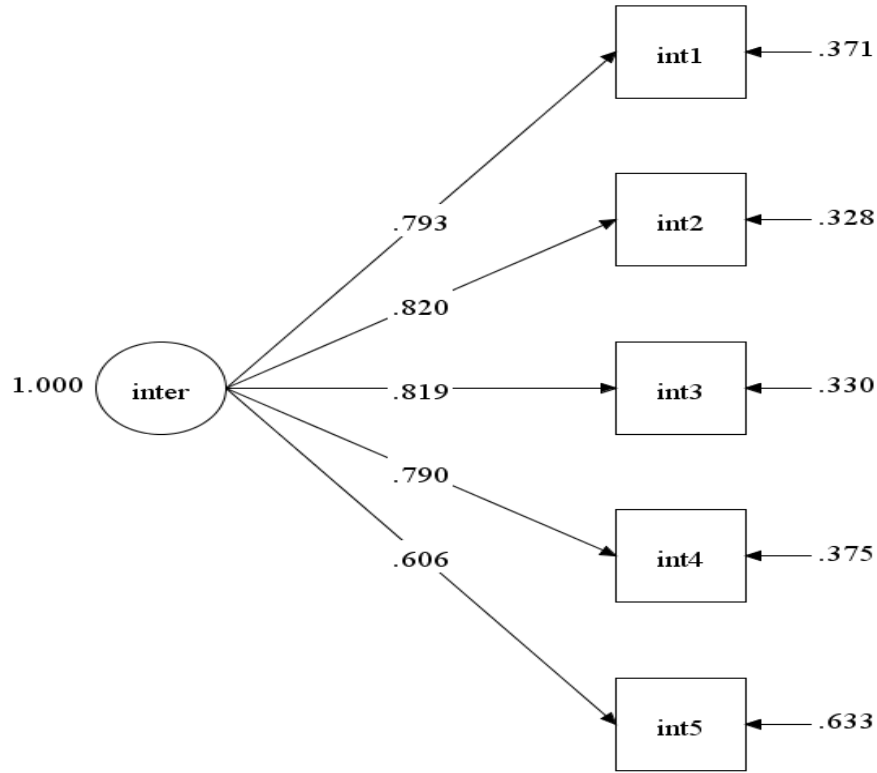
Appendix B

Mesa School District Teacher Survey

The Institute for Education Policy at Johns Hopkins University School of Education is conducting this survey on behalf of Arizona State University and Mesa School District. The purpose of this survey is to learn more about teacher experiences in the classroom. The survey should take less than 10 minutes to complete. All responses are anonymous. By completing this survey, you are consenting take part in this research study. Your participation is voluntary, and you may stop at any time.

Q2.1 Please respond to the following questions on *Instructional Strategies*:

	Not well at all	Slightly well	Moderately well	Very well	Extremely well
How well can you respond to difficult questions from your students?	○	○	○	○	○
How well can you provide appropriate challenges for very capable students?	○	○	○	○	○
How well can you implement alternative instructional strategies in your classroom?	○	○	○	○	○
How well can you provide an alternative explanation, for example, when students are confused?	○	○	○	○	○

Q2.2 Please respond to the following questions on *Motivation*:

	Not well at all	Slightly well	Moderately well	Very well	Extremely well
How well can you help your students value learning?	○	○	○	○	○
How well can you motivate students who show low interest in schoolwork?	○	○	○	○	○
How well can you improve the understanding of a student who is failing?	○	○	○	○	○
How well can you get through to the most difficult students?	○	○	○	○	○

Q2.3 Please respond to the following questions on *Classroom Management*:

	Not well at all	Slightly well	Moderately well	Very well	Extremely well
How well can you make your expectations clear about student behavior?	○	○	○	○	○
How well can you get students to follow classroom rules?	○	○	○	○	○
How well can you control disruptive behavior in the classroom?	○	○	○	○	○
How well can you keep a few problem students from missing an entire lesson?	○	○	○	○	○

Q2.4 Please respond to the following statement: My professional learning opportunities this year made me a more effective educator.

○ Strongly disagree

○ Disagree

○ Neither disagree nor agree

○ Agree

○ Strongly agree

Q3.1 How satisfied are you with the following aspects of the school?

	Extremely dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Extremely satisfied
The quality of your relations with co-workers.	○	○	○	○	○
The extent to which your co-workers encourage you and support you in your work.	○	○	○	○	○
Your overall satisfaction with your co-workers.	○	○	○	○	○
The extent to which students act in a self-disciplined manner.	○	○	○	○	○
Your satisfaction with the behavior of students in your school.	○	○	○	○	○
Your overall level of satisfaction with student discipline in your school.	○	○	○	○	○
The degree of interest shown by parents in the education of their children.	○	○	○	○	○
The extent to which parents are supportive of the school and its programs.	○	○	○	○	○
Your overall level of satisfaction with parents where you work.	○	○	○	○	○

Q4.1 To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
If I could get a job different from being a teacher that pays the same amount, I would take it.	○	○	○	○	○
If I could do it all over again, I would choose not to work in the teaching profession.	○	○	○	○	○
I am disappointed that I ever entered the teaching profession.	○	○	○	○	○
One of the best decisions that I have ever made was to become a teacher.	○	○	○	○	○

Q4.2 How likely are you to recommend teaching in your school to a qualified friend or

colleague?

○   0

○   1

○   2

○   3

○   4

○   5

○   6

○   7

○   8

○   9

○   10

Q4.3 Why would you recommend teaching in your school to a qualified friend or colleague?

_____

Q4.4 Why would you **not** recommend teaching in your school to a qualified friend or colleague?

_____

Q4.5 Given what you know now, what do you expect to be doing in your career 5 years from now?

○   Teaching

○   Something else in education

○   Working in a different field

○   Retired

○   Not working

Q5.1 To what extent do you agree or disagree with the following statements on *Formal Collaboration*:

	Strongly	Disagree	Neither	Agree	Strongly agree

	disagree		disagree nor agree		
The principal, teachers, and staff collaborate to make this school run effectively.	○	○	○	○	○
Collaboration in this school occurs formally (e.g., common planning times, grade-level meetings, PLCs).	○	○	○	○	○
When teachers in this school collaborate, our collaboration time is typically structured; we stick to an agenda, and/or we systematically work on a particular goal.	○	○	○	○	○
The principal at this school participates in instructional planning with groups of teachers.	○	○	○	○	○

Q5.2 Please respond to the following statements on *Frequency of Collaboration on Instruction*:

	Not at all	Several times this year	Monthly	Weekly	Almost daily
This school year, how often have you worked with colleagues to develop materials or activities for particular classes/lessons?	○	○	○	○	○
This school year, how often have you worked with colleagues to develop instructional strategies?	○	○	○	○	○
This school year, how often have you worked with colleagues to make teaching decisions using student assessment data?	○	○	○	○	○
This school year, how often have you worked with colleagues to discuss what helps students learn best?	○	○	○	○	○

Q6.1 To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
My students share their concerns with me.	○	○	○	○	○
My students ask for comfort or support when needed.	○	○	○	○	○
My students express their feelings.	○	○	○	○	○
My students talk about their homes and families.	○	○	○	○	○
My students join class discussions.	○	○	○	○	○

Q7.1 Mesa Public Schools has partnered with ASU's Mary Lou Fulton Teachers College to help build Next Education Workforce models. In these models, teams of educators share a common roster of students and leverage their distributed expertise to deepen and personalize learning for all students. Many teams have attended the Next Education Workforce Summer Institute, Networked Cohorts, or work directly with Lisa Wyatt, Mary Brown or Natalie Nailor.

Q7.2 Do you currently work on a team of educators implementing a Next Education Workforce model (i.e., your team shares a common roster of students, and you distribute your expertise to deepen and personalize learning for all students?)

○ Yes

○ No

Q7.3 Please respond to the following statements about your team:

	Never	Once a week	A few times a week	Everyday	Not applicable
I teach in the same physical space with at least one other educator.	○	○	○	○	○
As a team, we change our schedule to better meet the needs of our students	○	○	○	○	○
As a team, we look at student data together	○	○	○	○	○
As a team, we use student data to create new student groups	○	○	○	○	○
As a team, we look at student work together.	○	○	○	○	○
As a team, we distribute our expertise (each of us has specific and unique roles or responsibilities on the team).	○	○	○	○	○
As a team, we discuss what other expertise we need to bring to our team or develop to better meet the needs of our students	○	○	○	○	○

Q7.4 Would you be interested in working on (or continuing to work on) a team of educators implementing a Next Education Workforce model next year (i.e., your team shares a common roster of students, and you distribute your expertise to deepen and personalize learning for all

students)?

- ○   Yes
- ○   No
- ○   I do **not** know
- ○   I do **not** know about Next Education Workforce

Q7.5 At which school(s) do you teach this school year? Select all that apply (Schools are in

alphabetical order; please hold down Ctrl key to select more than one school).

- ☐ Adams Elementary
- ☐ Brinton Elementary
- ☐ Bush Elementary
- ☐ Carson Junior High
- ☐ Crismon Elementary
- ☐ Crossroads at East Valley Academy
- ☐ Dobson High
- ☐ Eagleridge Enrichment Program
- ☐ Early Education Center
- ☐ East Valley Academy
- ☐ Edison Elementary
- ☐ Eisenhower Center for Innovation
- ☐ Emerson Elementary
- ☐ Entz Elementary
- ☐ Falcon Hill Elementary
- ☐ Field Elementary
- ☐ Franklin at Alma Elementary
- ☐ Franklin East
- ☐ Franklin Elementary at Brimhall
- ☐ Franklin Junior High
- ☐ Franklin Wes
- ☐ Fremont Junior High
- ☐ Guerrero Elementary
- ☐ Hale Elementary
- ☐ Hermosa Vista Elementary
- ☐ Highland Elementary
- ☐ Holmes Elementary
- ☐ Hughes Elementary

- ☐ Irving Elementary
- ☐ Ishikawa Elementary
- ☐ Jefferson Elementary
- ☐ Johnson Elementary
- ☐ Keller Elementary
- ☐ Kerr Elementary
- ☐ Kino Junior High
- ☐ Las Sendas Elementary
- ☐ Lehi Elementary
- ☐ Lincoln Elementary
- ☐ Lindbergh Elementary
- ☐ Longfellow Elementary
- ☐ Lowell Elementary
- ☐ MacArthur Elementary
- ☐ Madison Elementary
- ☐ Mendoza Elementary
- ☐ Mesa Academy for Advanced Studies
- ☐ Mesa Center for Success at Jordan
- ☐ Mesa High
- ☐ Mesa High MDL
- ☐ Mesa Virtual Campus
- ☐ Mountain View High
- ☐ O'Connor Elementary
- ☐ Patterson Elementary
- ☐ Pomeroy Elementary
- ☐ Porter Elementary
- ☐ Poston Junior High
- ☐ Red Mountain Center for Early Education
- ☐ Red Mountain High

- ☐ Red Mountain Ranch Elementary
- ☐ Redbird Elementary
- ☐ Rhodes Junior High
- ☐ Riverview High
- ☐ Robson Elementary
- ☐ Roosevelt Elementary
- ☐ S H A R P
- ☐ Salk Elementary
- ☐ Shepherd Junior High
- ☐ Sirrine Elementary
- ☐ Skyline High
- ☐ Smith Junior High
- ☐ Sousa Elementary
- ☐ Stapley Junior High
- ☐ Stevenson Elementary
- ☐ Summit Academy
- ☐ Superstition High
- ☐ Taft Elementary
- ☐ Taylor Junior High
- ☐ Washington Elementary
- ☐ Webster Elementary
- ☐ Westwood High
- ☐ Whitman Elementary
- ☐ Whittier Elementary
- ☐ Wilson Elementary
- ☐ Zaharis Elementary

Q7.6 Which grades do you teach this school year? (Select all that apply)

- ☐ Pre-K
- ☐ Kindergarten

☐   1st grade

☐   2nd grade

☐   3rd grade

☐   4th grade

☐   5th grade

☐   6th grade

☐   7th grade

☐   8th grade

☐   9th grade

☐   10th grade

☐   11th grade

☐   12th grade

Q7.7 Which subject do you teach? Please select all that apply.

☐   ELA

☐   Math

☐   Science

☐   Social Studies

☐   Other _____

☐   I do **not** teach a specific subject

Q7.8 Please indicate which of the following instructional resources you use in your ELA classroom:

☐   District/school suggested/purchased published materials (indicate in the comment section). _____

☐   Materials created by the district/school.

☐   Self-selected published materials (indicate in the comment section).

_____

☐   Materials I developed myself from online or non-published sources.

☐   Materials I developed with my colleagues from online or non-published sources.

Q7.9 Please provide the approximate number of hours you spend in a typical week doing the following:

	Number of Hours
Planning ELA lessons using the district-purchased materials and instructional resources.	
Selecting and/or developing ELA instructional resources (i.e., NOT from the district-purchased curriculum and instructional resources available).	

Q7.10 Please indicate which of the following instructional resources you use in your math classroom.

☐   District/school suggested/purchased published materials (indicate which materials in the comment section)   _____

☐   Materials created by the district/school

☐   Self-selected published materials (indicate in the comment section)

_____

☐   Materials I developed myself from online or non-published sources

☐   Materials I developed with my colleagues from online or non-published sources

Q7.11 Please provide the approximate number of hours you spend in a typical week doing the following:

	Number of Hours
Planning math lessons using the district-purchased materials and instructional resources.	

Selecting and/or developing math instructional resources (i.e., NOT from the district-purchased curriculum and instructional resources available).	

Q7.12 Please indicate which of the following instructional resources you use in your science classroom:

☐ District/school suggested/purchased published materials (indicate in the comment section). _____

☐ Materials created by the district/school.

☐ Self-selected published materials (indicate in the comment section).

_____

☐ Materials I developed myself from online or non-published sources.

☐ Materials I developed with my colleagues from online or non-published sources.

Q7.13 Please provide the approximate number of hours you spend in a typical week doing the following:

	Number of Hours
Planning science lessons using the district-purchased materials and instructional resources.	
Selecting and/or developing science instructional resources (i.e., NOT from the district-purchased curriculum and instructional resources available).	

Q7.14 Please indicate which of the following instructional resources you use in your social studies classroom:

☐ District/school suggested/purchased published materials (indicate in the comment section). _____

☐ Materials created by the district/school.

☐ Self-selected published materials (indicate in the comment section).

_____

☐   Materials I developed myself from online or non-published sources.

☐   Materials I developed with my colleagues from online or non-published sources.

Q7.15 Please provide the approximate number of hours you spend in a typical week doing the following:

	Number of Hours
Planning social studies lessons using the district-purchased materials and instructional resources.	
Selecting and/or developing science instructional resources (i.e., NOT from the district-purchased curriculum and instructional resources available).	

Q8.1 How many days have you been absent because of COVID-19 in the 2021-2022 school year?

○   0 days

○   1-2 days

○   3-5 days

○   6-10 days

○   More than 10 days

Q8.2 Who taught your students when you were absent? (check all that apply)

○   Substitute teachers

○   Other school staff or other teachers

○   My Next Education Workforce team members

○   My class was divided into other classrooms at my school

○   Other (7) _____

Q8.3 How confident were you that your students were receiving effective instruction in your

absence?

- ○ No confident at all
- ○ Not very confident
- ○ Somewhat confident
- ○ Confident
- ○ Very confident

Q8.4 To what degree have your students and your learning environment been negatively impacted by educator absences related to COVID-19 (i.e., quarantine and/or illness)?

- ○ Not impacted at all
- ○ Minimally impacted
- ○ Somewhat impacted
- ○ Very impacted
- ○ Extremely impacted

Q8.5 How concerned are you about your COVID-19 absenteeism?

- ○ Not concerned at all
- ○ Minimally concerned
- ○ Somewhat concerned
- ○ Concerned
- ○ Very Concerned

Q8.6 How has teacher COVID-19 absenteeism affected your teaching this school year?

_____

Q9.1 How many years of teaching experience do you have?

- ○ I am a pre-service teacher
- ○ 0-2 years
- ○ 3-5 years
- ○ 6-10 years
- ○ More than 10 years

Q9.2 Please indicate your Teacher Education Program or Certification Pathway:

o   Bachelor's degree in education, which led to certification

o   College-University based Post-Baccalaureate education program,
         which led to certification

o   Master's degree in education, which led to certification

o   Alternative program (no degrees awarded), which led to certification

o   Not listed here   _____

Q9.3 What is your gender?

o   Male

o   Female

o   Other

Q9.4 What is your ethnicity/race? (Please check all that apply)

o   American Indian (Native American)

o   Asian

o   Black

o   Hispanic

o   White

o   Multi-racial

o   Other

Q9.5 Is there anything else — including feedback on this survey — you would like to share with Institute researchers?

         _____