



Renewing Educator Preparation

US PREP K-12 STUDENT PERCEPTION
PROJECT

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K-12 STUDENT PERCEPTION PROJECT

The K-12 Student Perception Project, was developed and implemented by the University-School Partnerships for the Renewal of Educator Preparation (US PREP). The Project was modeled after the Measures of Effective Teaching (MET) project, developed and implemented by The Colorado Education Initiative and was funded by the Bill & Melinda Gates Foundation.

The K-12 Student Perception Project was grounded on the belief that teacher candidates should teach all students rather than simply teach “down the middle”. The purpose of the Project was to examine teacher candidates’ behavioral and instructional changes motivated by student perceptions of the teaching and classroom environment.

The Project used the Student Perception Survey (SPS) in a pre-posttest intervention design during the student teaching residency year to measure quantifiable changes in student perceptions. Approximately 450 teacher candidates formulated improvement plans based on SPS responses from over 3,600 K-12 students. Additionally, qualitative data was collected from mentor teachers, and teacher candidates with the purpose of (a) ascertaining how SPS data had informed improvement plans and how these plans motivated instructional and behavioral practices of teacher candidates; (b) understanding mentor teacher and teacher candidates’ value of SPS data, and (c) determining the effect that teacher candidate improvement plans had on the school district partner.

The K-12 Student Perception Project was implemented within the Lubbock Independent School District. The school district has a population of nearly 30, 000 student. Of these students, nearly 23% are Anglo/Other, 60% are Hispanic, and 14% are African-American and nearly 65% of the student are considered economically disadvantaged (Demographics of Lubbock ISD, 2015). Further, the state considers that 49% of the students in Lubbock ISD are at risk of dropping out, while 4% have limited English Proficiency (The Texas Tribune, 2016). Also, according to the Texas Tribune (2016), Lubbock ISD in 2016 was rated as meeting the state of Texas standard of academic accountability. This accountability system is formulated with data from four-year graduation rates and school dropout rates.

PROJECT SUMMARY

OBJECTIVE

To understand how student perceptions of teacher candidates can motivate improvement plans, and these in turn, motivate academic achievement of said students.

DESIGN

The Project utilized a nonrandomized pretest-posttest with intervention design. The SPS was administered to students who had a participating TC in their class. An intervention group (focus group) was selected based on the results of the SPS. The inclusion criteria for the focus group was: (a) rate the TC low on the pre SPS, and (b) be considered of low academic performance.

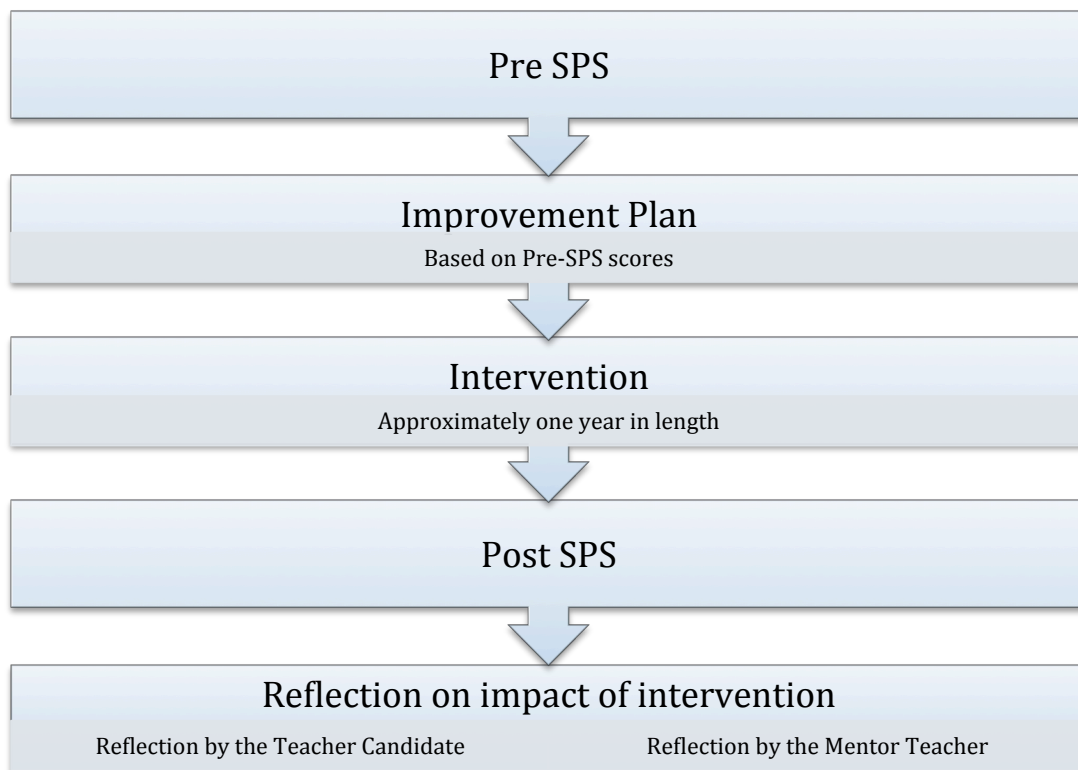
All students from elementary school through high school who had a participating TC, rated the TC using the SPS (pretest). The TCs selected, at least five students to participate in a focus group based on the pre-determined criteria. Upon completion of the academic term, all students completed the SPS again (posttest).

Broadly, the Project was implemented following the steps outlined below:

1. Teacher candidates received professional development through the Student Teaching Course on how to administer the SPS and how to interpret the responses.
2. Administer the SPS a month into the student teaching residency year.
3. Based on SPS Teacher candidates completed an assignment where they will use the student responses on the CEI to correlate with the students' benchmark scores.
4. Using this data, teacher candidates will develop an intervention improvement plan to enhance student academic engagement and achievement, of all students but with a focus on the lowest performing students.
5. Teacher candidates will work closely with their site coordinator and mentor teacher to create and implement the improvement plan.

6. Have the student teacher examine the attitudes and scores of all students but particularly the scores of the students scoring in the lowest quartile on the benchmark assessment
7. Collect post-test data and compare pre- to post-test score changes for the targeted students and students as a whole.

Figure 1 summarizes the SPS data project design.



DATA SOURCES

Student Perception Survey: The Student Perception Survey (SPS; CEI, 2013) is a 34-item instrument designed to assess student's perceptions of their teachers and their classroom experience. The SPS is organized into four elements: (a) student learning (SL), (b) student-centered environment (SCE), (c) classroom community (CC), (d) and classroom management (CM). The SPS was administered in a pre-posttest manner.

Teacher candidate improvement plans: The Teacher Candidate improvement plans are assignments that TCs are required to complete. The improvement plans based SPS scores and academic performance of their students and delineate specific interventions that will support students who are struggling with engagement, integration, and academically.

Teacher candidate reflection assignment: These reflective are intended to elucidate the effect of the TCs improvement plan on students. The capture experiences of self and of TC students that reflect on growth and development.

STUDENT DEMOGRAPHICS

The K-12 Student Perception Data Project collected SPS data from X number of students who corresponded to X number of teacher candidates. Tables 1 through 3 summarize the demographic profile of the K-12 student sample.

Table 1. Sample by Group		
	N	Percent
Non-Focus group	1641	91.5
Focus group	152	8.5
Total	1793	

Table 2. Sample by Gender			
		Frequency	Percent
Non-Focus Group	Male	791	48.2
	Female	850	51.8
	Total	1641	
Focus Group	Male	86	56.6
	Female	66	43.4
	Total	152	

Table 3. Sample by Ethnicity			
		Frequency	Percent
Non-Focus Group	Black/AA	177	10.8
	Hispanic	753	45.9
	Other	187	11.4
	White	475	28.9
	Asian	38	2.3
	Arab	11	.7
	Total	1641	
Focus Group	Black/AA	30	19.7
	Hispanic	92	60.5
	Other	17	11.2
	White	10	6.6
	Asian	1	.7
	Arab	2	1.3
	Total	152	



RESEARCH QUESTIONS

The Student Perceptions Project answered the following six questions:

1. What did teacher candidates learn about their students based on the SPS outcomes?
2. What strategies did the teacher candidates implement and commit to in their classrooms after examining the SPS pre-test results?
3. Did SPS scores change from pre-test to post-test?
4. What effect did the teacher candidates' strategies have on students, as perceived by the mentor teacher?
5. Is there evidence suggesting that teacher candidates' improvement plans effected change at the school district level?

1. WHAT DID TEACHER CANDIDATES LEARN ABOUT THEIR STUDENTS BASED ON THE SPS OUTCOMES?

Upon reviewing results of SPS, teacher candidates appear to have become more aware of the particular learning requirements of individual students. This awareness motivated the teacher candidates to implement instructional and behavioral practices to facilitate student learning and enhance the quality of the learning environment. The following analysis captures what teachers learned:

RELATIONSHIPS WITH STUDENTS IMPACT STUDENT'S ACADEMIC PERFORMANCE

Teacher candidates, in general, agreed that meaningful relationships affected a student's disposition toward academics. To develop a meaningful relationship, one TC, committed to sharing the breakfast period with students who were underperforming academically. This TC perceived that this relationship building exercise improved the student's confidence over time, and translated to enhanced performance on standardized tests improved from failing, to passing.

RELATIONSHIPS WITH STUDENTS IMPACT STUDENT'S DISPOSITIONS TOWARD ACADEMIC ENDEAVORS

Teacher candidates learned that when students were afforded an open and safe platform for communication, their learning experience was enhanced. Attesting to this experience, one TC revealed that a "student began using a communication board to communicate feelings within the classroom", this practice enhanced the student's engagement and participation in academic activities. Another TC reported that as a result of creating relationships with students, one student overcame inhibitions and began participating and understanding classroom dynamics.

Teacher candidates also reported that students responded favorably to their relationship-building efforts. In once particular case, with a student who was identified as having a history of classroom behavioral problems, the TC reported that efforts to improve their relationship lead to the student the student developing trust and respect for the TC. Specifically, this TC articulated "He respects my authority, which is something my mentor teacher is still surprised by".

2. WHAT STRATEGIES DID THE TEACHER CANDIDATES IMPLEMENT AND COMMIT TO IN THEIR CLASSROOMS AFTER EXAMINING THE SPS PRE-TEST RESULTS?

Teacher candidates used SPS scores to decide on instructional and behavioral strategies that reflected the perceptions and needs of students in their classes. Strategies utilized by the teacher candidates are grouped by SPS element.

STUDENT LEARNING

Student learning refers to a teacher's integration and use of pedagogical content knowledge to enhance student learning (CEI, 2014). Following, are a representative sample of various strategies utilized by TCs to promote and support student learning:

- Circulating during the lesson to make sure the students are following along. When the students are off task redirecting them to stay on track.
- Having conversations with students about their academics and setting future learning goals
- Making plans with students who aren't getting their work done so that they can be set up for success and learn how to be responsible for their learning.

STUDENT CENTERED ENVIRONMENT

In the student centered environment, teachers are responsive to each student's background, their strengths and their areas of interest (CEI, 2014). Teacher candidates were intentional about their efforts to endorse student centered environments by utilizing the following strategies:

- Refer to students likes and dislikes
- Positive reinforcement
- Named her student of the month and present a poster using English
- Modeling activities for students showing them the finished product
- Including student interests in lessons (e.g., soccer, cheerleading, girl scouts)
- Ensure that all students feel like the course content is relevant to their lives.

- Ensure that students walk away knowing they are cared about and known at school.

CLASSROOM COMMUNITY


The element of Classroom Community focuses on the manners by which a teacher promotes a learning community where student differences are valued (CEI, 2014). Analysis of the teacher candidates' reflective assignments identified the following strategies to be instrumental to enhancing classroom community:

- Group roles for group work to limit arguments
- Taught how to use words nicely and work on compromising
- Seat disruptive students next to quiet students
- Moved seats around to encourage student to interact with non ESL students
- Build relationship by grouping students by roles
- Checking in with the students at the door each morning
- Say good morning ask them how they are and if they aren't themselves, stop by their desk during announcements and check in with them
- Praising the students when they have really good days
- Allow students to be comfortable coming to me for help when they don't understand, rather than feeling scared about getting in trouble for being wrong.

CLASSROOM MANAGEMENT

Classroom management refers to the approaches utilized by teachers to foster a respectful and orderly learning environment (CEI, 2014). Following are the most salient strategies utilized by teacher candidates to foster

- Rewards and incentives, such as fidgets, tokens, preferential seating, others.
- Pulling Students over and talking about their behavior
- Pulling Students over and talking about their progress with them one-on-one

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- Having conversations with students about their behavior and Did SPS scores change from pretest to posttest?
 - Providing constant monitoring (one-on-one attention) during independent work
 - Pulling the students aside and talking with them one on one about how their behavior is improving and what they think the reasons for those improvements may be.

3. DID SPS SCORES CHANGE FROM PRE-TEST TO POST-TEST?

NON-FOCUS GROUP STUDENTS

There were 3490 students in the non-focus group sample. Results from SPS analysis suggest that scores for the non-focus group students showed improvement in most elements of student perceptions *Distance Elementary School* students and for *Middle School* students. However, for *Elementary School* and for *High School* students, SPS scores declined over time. Tables 4-7 summarize the SPS changes.

Table 4. Elementary School

	Pre	Post	Change
SL	80.36	80.54	↔
SCE	69.17	67.00	↓
CC	85.04	82.46	↓
CM	74.55	68.73	↓

Table 5. Distance elementary School

	Pre	Post	Change
SL	83.09	85.42	↑
SCE	72.76	75.93	↑
CC	84.17	85.54	↑
CM	75.17	76.50	↑

Table 6. Middle School

	Pre	Post	Change
SL	74.78	75.76	↔
SCE	73.53	76.44	↑
CC	63.75	67.28	↑
CM	67.56	71.06	↑

Table 7. High School

	Pre	Post	Change
SL	75.84	70.61	↓
SCE	86.03	83.42	↓
CC	67.87	66.67	↓
CM	84.04	79.42	↓

FOCUS GROUP STUDENTS

There were 169 students in the focus group sample. Results from SPS analysis suggest that scores for the focus group students showed improvement in most elements of student perceptions for Elementary School students and Distance Elementary School students. However, for Middle School students and for High School students, SPS scores declined over time. Tables 8-11 summarize the SPS changes.

Table 8. Elementary School

	Pre	Post	Change
SL	70.00	77.81	↑
SCE	63.12	69.88	↑
CC	72.30	80.62	↑
CM	60.05	69.28	↑

Table 9. Distance Elementary School

	Pre	Post	Change
SL	76.41	77.47	↔
SCE	60.60	67.62	↑
CC	73.01	78.76	↑
CM	64.58	68.53	↑

Table 10. Middle School

	Pre	Post	Change
SL	70.68	69.48	↓
SCE	67.05	46.84	↓
CC	62.18	45.14	↓
CM	68.97	50.77	↓

Table 11. High School

	Pre	Post	Change
SL	67.51	64.11	↓
SCE	85.08	77.14	↓
CC	62.83	61.54	↓
CM	64.66	56.58	↓

4. WHAT ASPECTS OF THE SPS DATA PROJECT WERE FOUND TO BE VALUABLE TO MENTOR TEACHERS?

This question was answered by examining qualitative data obtained through focus groups with mentor teachers who were responsible for supervising the participating teacher candidates. In particular, SPS afforded teachers with knowledge about their students, where to focus instructional and behavioral interventions, and

FOCUSED AND INTENTIONAL ABOUT INTERVENTIONS

Mentor teachers recognized that SPS provided teacher candidates with direction for where to focus their interventions. One mentor teacher commented that SPS had served as a “reality check” because “they thought they had a better relationship with the students than they actually did, and so it just made my teacher candidate more intentional about building those relationships”. Another mentor teacher, similarly, suggested that teacher candidates were able to “internalize” results from SPS and make concerted efforts to improve their practices.

According to mentor teachers, teacher candidates focused mostly on creating or improving their relationship with their students.

LASTING IMPACT

A few mentor teachers expressed that the value of implementing the SPS is that it might have lasting effects on teacher candidates. One mentor teacher commented that teacher candidates who participated in SPS data project would be able to reflect upon SPS scores in their current and future teaching practices. It appears that the effects of administering the SPS would have a greater impact on teacher candidates whose student’s scores showed improvement over time. One mentor teacher commented that teacher candidates would be better prepared in the future to address specific needs of students by administering the SPS. Specifically, TC’s could use SPS scores to reflect upon their instruction with the reassurance that “their relationships were better. Thinking that their management was better”.

5. IS THERE EVIDENCE THAT TEACHER CANDIDATES' IMPROVEMENT PLANS EFFECTED CHANGE AT THE SCHOOL DISTRICT LEVEL?

Mentor teachers perceived that the teacher candidates who committed to developing and implementing improvement plans in their classes had an indirect effect on their school district partners. These perceptions were based, primarily on the belief that teacher candidates were better prepared, were held to higher standards, and were more effective in their teaching practices.

Analysis of qualitative data obtained from focus groups held with the mentor teachers attest to the indirect effects of mentor teachers on the school district partners. One mentor teacher commented "Teacher candidates come in prepared and they're held accountable and they're so focused and intentional in everything that it's not like it used to be". Another mentor teacher expressed the belief that teacher candidates' were able to make informed decisions about their teaching based on the SPS data they were provided. This mentor teacher expressed "I think indirectly, because... If they're using the data to help, you know, kind of bridge that gap of where they thought they were, versus where the students (are), you know, the student perception, um, they're better teachers.

Yet, another mentor teacher perceived that a teacher candidate whom she mentored, was motivated by the SPS results to make behavioral changes that improved her teaching practices. The mentor teacher noted "I think she used the components of it (SPS) and she made changes with her teaching. And it prompted her to change, because she's kind of quiet, shy, to push her out of her comfort zone and, you know, establish relationships".

While there are other variables that contribute to the quality of the teacher candidates that were not accounted for during the SPS data project, it can be asserted that the SPS had an enhancing effect on teaching practices of teacher candidates as perceived by mentor teachers, and that these in turn, had a beneficial effect on the school district partner.


CONCLUSION

The overarching findings of the K-12 Student Perception Project lend strong support for the use of the SPS as a motivator for teacher candidate instructional and behavioral improvement. Specifically, through this project we found compelling evidence that SPS serves as a guide for teacher candidates to evaluate and reflect upon their instructional and behavioral practices and to develop, implement, and commit to improvement plans in pro of student learning, student centered environments, classroom community, and management.

Students: Results from the SPS warrant further attention particularly in light of the equivocal findings. For example, for students in the focus-group, the pre-post test results shows growth over time for distance elementary level students and middle school level students. However, for non-focus-group students, there is evidence of growth over time only for elementary students regardless of the mode of delivery.

Finding that student perceptions about the learning environment can be improved by a teacher's intentional classroom behaviors and interventions is promising. However we must focus our attention on elucidating why it is that a group of students, particularly for those that received focused attention, perceptions of the learning environment deteriorated over time. In this quest, our first step is to reconsider the factor structure, validity and reliability of the SPS. Second, we must carefully examine how closely the TCs improvement align with student needs. Lastly, we will consider a manner by which to assess the degree of intention or commitment to the improvement plan. This may be critical, as regardless of how valid and reliable and instrument is, or how well an improvement plan aligns with student needs, if teachers are not intentional about changing, the effects of these efforts on students may be minimal.

Collecting student perceptions is valuable in the sense that it provides a first-person perspective of teaching practices and the learning environment. As has been indicated by the CEI (2014), students are uniquely positioned to judge teaching effectiveness as they spend the most amount of time with teachers.



Teacher Candidates: We learned that the SPS is a powerful tool that is useful for guiding teacher candidates' instructional improvement plans. The improvement plans contained clear evidence of the TC using data (from the SPS) to inform their instructional and behavioral practices. Teacher candidates indicated, in their reflective assignments, that they were intentional about developing meaningful relationships with students, through purposeful interactions and communication. The close and personal interaction with students allowed TCs to become acquainted with student individual needs and to provide a nurturing environment to meet the student's needs.

Mentor Teachers: The voice of the mentor teacher was important to corroborate how TCs implemented their improvement plans in the classroom and to ascertain whether these had an effect on students. Our findings suggest that, indeed MTs observed TCs being intentional about their interactions with their students. Mentor teachers also confirmed that the SPS results provided TCs with an extra layer of knowledge about their students that they had not been afforded to them previously. In many cases, MTs recognized that TCs were oblivious of how student's perceived them.

Mentor teachers are uniquely positioned to observe TCs and make assessments about their behavioral and instructional practice. These assessments are significantly enhanced when they include observations of how TCs, not only respond to the class as a whole, but to the particular need of each student.

The findings of the K-12 Student Perception Project are encouraging. Specifically, we learned that the SPS validates the voice of the student and provides teachers with valuable and actionable feedback. When TCs implement change based on SPS student perceptions can change over time. Teacher candidates can use SPS to tailor their approach to teaching and to setting the tone of the learning climate. Overall, the SPS legitimizes student voice and offers valuable data by which a teacher or a teacher candidate can enhance their teaching effectiveness.

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