



2018-2019 Growth Through Connections Program Evaluation

Imaginarium

Denver Public Schools

2018-2019 Growth Through Connections Program Evaluation

In the United States, racial disproportionality divides Black and Latino students from their white classmates in achievement, graduation rates, and college attendance, among other educational outcomes (Mrocakowski & Sanchez, 2015; Ladson-Billings, 2005). These school outcomes contribute to socioeconomic inequities across racial lines because “education is one of the strongest predictors of lifetime wealth, and lack of access to quality education is one of the most frequently cited constraints on upward mobility” (Owens, 2017, p. 11). While recognizing the need for long-term solutions, such as recruiting and retaining more teachers and school leaders of color, schools have a responsibility to find shorter term solutions to address these disproportionalities (Bailey, 2016).

Schools that solicit feedback from students demonstrate cultural responsiveness by giving power to those voices and making changes that reflect input from all members of the school community (Emdin, 2016). By soliciting feedback from students, educators are communicating that they value what the students have to say and acknowledging that they are the experts in their own relationships with the social field being discussed. This technique is intended to increase student engagement by providing students voice and choice in making school more comfortable and relevant to them. Students will likely be more engaged in their school career if they see relevance and value in what they’re learning.

The Current Study

Denver Public Schools’ Growth Through Connections program (GTC) is a teacher education program focused on equipping teachers with more culturally responsive teaching practices for classrooms with variability in student race and ethnicity. Two groups of teachers participated in GTC for the 2018-2019 academic year. One group began programming in mid

September 2018, and a second group began programming in mid November 2018. For both groups, GTC included:

- Professional development sessions grounded in:
 - Christopher Emdin’s book ‘For White Folks Who Teach in the Hood... and the Rest of y’all Too: Reality Pedagogy and Urban Education’
 - White fragility and race
 - Stereotype threat
 - Microaggressions
- Learning labs in which teachers observed classrooms implementing Emdin’s work
- Plan do study act (PDSA) cycles to document Emdin practices implemented in individual classrooms
- Individualized coaching sessions.

See Table 1 for participation rates in each programming component for each teacher group.

Besides the programming timeline, one other difference between the two teacher groups was that group 2 had additional learnings grounded in the Intercultural Development Inventory (IDI) as part of the Intercultural Development Continuum (see <https://idiinventory.com/publications/the-intercultural-development-continuum-idx/>) and intercultural competence. Teachers were able to choose whether or not to complete the IDI in order to obtain a personalized Intercultural Development Inventory to guide their intercultural competence growth as related to their classroom teaching practices. At the end of the program, all teachers in group 2 completed the IDI as a post-test measure.

In evaluating the GTC program, three research questions were addressed:

- How did GTC educators implement their learning and new knowledge into their teaching?
- How did educators' self-efficacy in cultivating and maintaining meaningful relationships with students change through their participation in the GTC program?
- How did student engagement in the classroom change across the school year following educators' participation in the GTC program?

Method

Participants

Teachers. A total of 47 teachers (42 females, 5 males) participated in the GTC program. Mean teacher age was 35.74 years ($SD = 9.06$ years, range = 24.00-57.00 years). Thirty-seven (78.7%) were White; and 10 (21.3%) were Hispanic, African American, or multiple races. Nearly one third of teachers ($n = 17$, 36.2%) were within their first 6 months in their current teaching positions, 15 (31.9%) had been in their current teaching positions between 1-2 years, 8 (17%) had been in their current teaching positions for over 4 years, and 7 (14.9%) had been in their current teaching positions between 2-4 years.

All teachers were invited to participate in voluntary interviews toward the end of the program; 10 teachers who completed both pre- and post-program assessments plus two additional teachers that did not complete both assessments participated in these interviews. Mean teacher age was 36.08 years ($SD = 9.47$ years, range = 24-52 years), and teachers were White and Hispanic. Nearly half ($n = 5$, 41.7%) had been in their current teaching positions between 1-2 years; and the remaining teachers were within the first 6 months of or had been in their current teaching positions between 2-4 years or over 4 years.

Students. Three hundred eleven students (145 females, 166 males) participated in the fall and spring iterations of the student survey as part of the GTC program evaluation. Mean student age was 13.37 years ($SD = 2.79$ years, range = 7.80-19.04) years and were currently in first grade through high school (elementary school $n = 111$, 35.7%; middle and high school $n = 200$, 64.3%). Approximately half of students ($n = 164$, 52.7%) were Hispanic, 66 (21.2%) were White, 48 (15.4%) were African American, 18 (5.8%) were Asian or Pacific Islander, and the remaining 15 (4.8%) were Native American or Alaskan/Hawaiian Natives or multiple races. A majority ($n = 217$, 69.8%) of students qualified for free or reduced lunch, 112 (36.0%) were identified as English language learners, 31 (10.0%) were identified as gifted/talented, and 23 (7.4%) participated in special education programming.

All teachers were invited to have students in classes in which they implemented GTC techniques participate in voluntary focus groups toward the end of the school year. A total of 11 student focus groups were conducted with focus group size ranging from 3-10 students. Forty-nine students total (25 males, 24 females) participated ranging from grades 1-12. Thirty students (61.2%) were identified as Hispanic; and the remaining 18 (36.8%) were White, Indian/Alaskan Native, Black/African American, Asian, and mixed races.

Measures

Measures included both quantitative (i.e., survey) and qualitative (i.e., interview and focus group) data with overlapping constructs in order to triangulate data collection and analysis. Data triangulation adds to the validity of findings because multiple forms of evidence are used to draw conclusions rather than a single data point (Creswell & Miller, 2000).

Quantitative data.

Teacher survey. The Culturally Responsive Teaching Self-Efficacy Scale (CRTSE; Siwatu, 2007a) is a 40-item assessment measuring teachers' confidence in their ability to engage in specific culturally responsive teaching practices (see Table 2). The scale was constructed using Siwatu's (2007b) Culturally Responsive Teaching Competencies and Bandura's (1977) self-efficacy construct. Teachers indicate a degree of confidence in each item along a 0 (no confidence at all) to 100 (completely confident) continuum; so high scores on the CRTSE indicate a greater sense of efficacy for engaging in specific instructional and non-instructional tasks associated with culturally responsive teaching. Participants' responses to each of the 40 items are summed to generate a total score. The CRTSE could be used to provide program administrators and teacher educators with a tool to assess the effectiveness of a teacher education program (Siwatu, 2007a).

Student survey. The Student Engagement Instrument (SEI; Betts, Appleton, Reschly, Christenson, & Huebner, 2010) is a 33-item assessment measuring five types of student engagement: The Teacher-Student Relationships, Peer Support for Learning, and Family Support for Learning subscales assess affective engagement; and the Control and Relevance of School Work and Future Aspirations and Goals subscales assess cognitive engagement. Students rate each subscale item on a 4-point scale ranging from 1 (strongly agree) to 4 (strongly disagree). The SEI has strong validity (Appleton, Christenson, Kim, & Reschly, 2006) and also holds similar factor structure, equal score reliability, and similar latent factor relationships across across gender in middle and high school students (Betts et al., 2010).

For the purpose of the current study, only the Teacher-Student Relationships, Control and Relevance of School Work, and Future Aspirations and Goals subscales were administered to total 23 items. Because the student sample for the current study included elementary school aged

students in addition to middle and high school students, item language was adapted for use with those students (see Appendix A). Further, Denver Public Schools doesn't administer surveys with students aged kindergarten through second grade; only students in the third grade and older are invited to complete district-wide surveys. Thus, to include kindergarten through second grade students' responses in the current study, researchers administered the SEI to these students individually using the props in Appendix B. Researchers first read each item to the student, then held up a piece of paper with the 'thumbs up' and 'thumbs down' visuals and asked students, "Would you say 'yes' or 'no?'" while pointing to each corresponding hand as they read it. Once they confirmed that initial response, researchers flipped the page to reveal the thermometer visuals and asked students to indicate the extent of their 'yes' or 'no' response. For instance, if a student responded 'yes' to an SEI item, the researcher would say, "OK. A little bit yes? Or a lot yes?" while again pointing to each corresponding thermometer and this time using voice inflection (e.g., raising voice for 'a little bit' and elongating pronunciation of 'a lot'). The SEI was also translated into Spanish to accommodate student needs upon request.

Qualitative data. A standardized open-ended interview approach was used in developing both teacher interview and student focus group items (see Turner, 2010).

Teacher interviews. Four categories of teacher interview items were developed to reflect GTC program goals as well as additional information requested by the program developer and facilitator to obtain useful information for future iterations of the program (see Appendix C). The first section, *Educator Learning/Transfer of Knowledge and Related Student Outcomes* questions teachers' perceptions on their changes in their own teaching practices, changes in their students' engagement, and the degree to which they were able to successfully implement GTC strategies (see Appendix D for descriptions of reality pedagogy teaching practices from Emdin's work).

Questions included in *Changes in Educator Self-Efficacy* ask teachers about their abilities to cultivate relationships with their students and students' families. The third section, *Support for GTC Participation*, includes questions regarding school administrators' participation in GTC and desired support for future GTC program implementation as well as questions regarding perceived and further desired support from GTC staff. The final section, *GTC Program Feedback*, asks teachers to rank all program components as well as provide additional program feedback.

Student focus groups. Student focus groups included three categories to reflect research questions (see Appendix E). *Student Engagement in the Classroom* includes questions intended to learn how teachers are actively engaging students in classroom activities and also seeking student feedback on an individual basis. Questions related to *Teacher-Student Relationships* attempt to learn whether or not teachers ask students' opinions of school work and talk about students' lives outside of school. Finally, *Future Aspirations* asks students of their plans following graduation as well as what their current teachers can do to help them to prepare for implementing those plans.

Procedure

Researchers provided teachers a link to the CRTSE in Qualtrics, and teachers completed it on their own computers during professional development sessions at the beginning and end of the program. Researchers were available to teachers during that time to answer any questions about accessing the survey or about any individual items. Teachers were also provided links to the SEI in Qualtrics and asked to administer the survey to students in classrooms in which they were implementing GTC program teachings. Both groups of teachers were asked to administer the survey to their students within the first three weeks following their first professional development session. For kindergarten through second grade classrooms, researchers

administered the SEI to students individually and recorded the child's responses on the regular online assessment that older students completed themselves. To accommodate state-wide testing windows in the spring, all teachers were provided a link to the post-program SEI and asked to administer it with their students during approximately the last two months of the academic year.

Teacher interviews and student focus groups were all conducted across approximately a 6-week window at the end of the academic year. To enhance qualitative data validity, teachers and students were informed that no demographic or identifying information would be shared on an individual basis and that they should feel safe in giving their honest opinions about their experiences with the GTC program (Shenton, 2004). Participants were also informed that they could discontinue the interview at any time. At least two researchers were present for each teacher interview and student focus group, one research primarily leading the interview or focus group conversation, and the other researcher primarily writing down participant responses for later analysis. All interviews and focus groups were also audio recorded on I-Phones using the My Memos application for later transcription reference and coding. Both researchers listened to recordings within the week following each interview and focus group to ensure transcription accuracy.

Qualitative Data Analyses

An emergent coding approach was used for analyzing interview and focus group transcriptions. Emergent coding consists of researchers establishing some preliminary categories followed by several revisions of the data where codes and themes are further identified and refined (Stemler, 2001). Then, codes were analyzed to identify themes in the interviews and focus groups. Creswell (2013) defines themes as "broad units of information that consists of several codes aggregated to form a common idea" (p. 186).

Results

Descriptive Analyses

Table 2 includes item-level descriptive data for the CRTSE, and Table 3 includes descriptive data for the SEI for all students and for students in each group.

Research Questions

How did GTC educators implement their learning and new knowledge into their teaching? Findings from both teacher interviews and student focus groups illustrated how teachers implemented practices learned through GTC in their classrooms across the academic year. Ten of 12 teachers interviewed indicated that they were able to successfully implement practices they learned from their GTC program participation. The majority ($n = 7$) stated that cogens were the primary GTC strategy they implemented with their students. One teacher noted how cogens “helped kids have fun with learning again,” and found that the “ideas the students came up with were super easy for me to implement.” Another teacher noted how the experience of implementing cogens with students made her feel as though the students were developing the curriculum with her. The two remaining teachers noted that they were partially successful in implementing GTC practices due to scheduling conflicts with students (e.g., students did not want to give up their lunches to participate in cogens).

During focus groups, students were asked about what strategies their teachers implemented and how they felt about them. Students reported that their teachers’ use of the cogens ($n = 8$) and cosmopolitanism ($n = 5$) reality pedagogy teaching practices as well as teachers’ learning about students’ interests ($n = 5$) were the most impactful strategies their teachers implemented during the school year. Students went on to elaborate how these strategies had a positive impact on them throughout the year. One student remarked how the teacher “gives

all the students an opportunity to share and say ‘yes’ or ‘no’ [about the things they like and don’t like about the class].”

How did educators’ self-efficacy in cultivating and maintaining meaningful relationships with students change through their participation in the GTC program?

Quantitative analyses revealed no statistically significant difference between teachers in group 1 versus group 2 for the CRTSE; so data for both groups of teachers were analyzed together. There were significant differences in teachers’ CRTSE scores from pre-program administration ($M = 64.26, SD = 13.05$) to post-program administration ($M = 81.52, SD = 9.15$), $t = -10.08, p < .001$, indicating that teachers’ sense of self-efficacy to teach with greater cultural responsiveness increased from the beginning to the end of GTC participation across the academic year.

There was a statistically significant difference between students whose teachers were in group 1 versus group 2 for the Teacher-Student Relationships SEI subscale; so these data were analyzed separately for each group. Students of teachers in group 1 showed greater positive change in their perceptions of teacher-student relationships across the academic year than students of teachers in group 2, but this difference did not reach statistical significance ($p < .10$). Additional correlational analyses across all students also revealed a strong correlation between the SEI Teacher-Student Relationships and Control and Relevance of School Work subscales ($r = .70, p < .001$), indicating that increased student perceptions of positive relationships with their teachers were related to students’ perceptions of having greater control of and finding greater relevance in their school work.

Qualitative findings from both teacher interviews and student focus groups illustrated how teachers’ GTC program participation influenced their relationships with students. All 12 teachers reported feeling more confident in their abilities to cultivate and to maintain meaningful

relationships with each of their students. Teachers highlighted several aspects of the GTC program that helped them to improve their relationship building skills, including the professional development sessions ($n = 7$); and the Emdin book study and plan, do, study, act (PDSA) activities ($n = 6$). Teachers also noted specific ways in which their participation in GTC changed their teaching practices, including asking more students for feedback on academic material ($n = 5$) and giving students more time to address their social-emotional needs, personalizing their classrooms to meet students' needs and preferences, and getting to know more about students' lives outside of school ($n = 8$). For example, one teacher described how she used to focus solely on academics but now emphasizes students' personal well being through a morning chat (thus giving students more time to address their social-emotional needs). Another teacher explained how she now asks students to personalize the classroom by having them design the space and asking them for feedback on lessons and changing units accordingly. Teachers also noted how they are now more intentional about how they build relationships with students. For example, a teacher noted changing her words and being "more careful about using vocabulary that kids can relate to."

Students also reported having stronger relationships with their teachers after teachers engaged in the GTC program, and specifically when teachers took the time to learn more about students' interests ($n = 9$), and asked for students' feedback and engaged them in cogens, provided more time in class for students to focus on social-emotional processing and their personal needs, and allowed students time for non-academic activities (e.g., class parties, icebreakers to start the day) in class ($n = 10$). For example, one student described, "Out of all my teachers, she is the only one that really cares what we are doing outside of school. She really tries to get to know you and will check up on things that are happening at home." One middle school

student explained the impact of cogens on his relationship with his teacher: “At the start of the year, we didn’t really communicate; but ever since we started doing those groups at lunch and actually started talking, we’ve just gotten closer.”

How did student engagement in the classroom change across the school year following educators’ participation in the GTC program? Quantitative analyses revealed no statistically significant difference between students whose teachers were in group 1 versus group 2 for the Control and Relevance of School Work and the Future Aspirations and Goals SEI subscales; so data for both groups of students were analyzed together. Overall, students reported stronger control and relevance of school work over the course of the academic year ($M = 2.0$, $SD = .49$, $p < .05$). Results revealed no statistically significant effect for the Future Aspirations and Goals SEI subscale.

Qualitative findings from both student focus groups and teacher interviews supported increased student engagement as teachers implemented practices learned through GTC in their classrooms across the academic year. Students reported engaging in their class work when their teachers implemented several of Emdin’s reality pedagogy teaching practices (see Appendix D), namely cogens, cosmopolitanism, and co-teaching. Also related to Emdin’s theories, students also reported engaging in class work when teachers took the time to learn about students’ interests, taught topics related to students’ personal experiences, and allowed more time for social-emotional processing during class. One student explained how his high school trajectory changed specifically with the experiences he had with his teacher: “I am going to graduate a year early; this is because of the respect that I get here. I wasn’t going to graduate until 2020.”

Ten of 12 the teachers interviewed noted positive changes in their students’ academic engagement as a result of using GTC strategies. One teacher noted, “Students are now willing to

come in and get started with their work projects right away... they know what to expect [in the classroom].” Illustrating improvements in social classroom behaviors beyond teachers’ direct impact with students, one teacher noted, “Some kids are now better about asking for help, especially the kids that I didn’t naturally form a relationship with.”

Discussion

Overall, findings indicate that the GTC program is equipping teachers with more culturally responsive teaching practices for their classrooms. Findings indicated that teachers who participated in the GTC program had greater confidence in their abilities to engage in specific culturally responsive teaching practices across an academic year. Students reported that they had stronger and more positive relationships with teachers at the end of the academic year. Further, as students’ relationships with teachers grew stronger, students’ engagement in their school work also increased, as evidenced through both teacher interviews and student focus groups.

Qualitative findings pinpoint specific program components that teachers found most beneficial in engaging students in classroom activities and in building relationships with students. Teachers noted that the program elements that helped them accomplish this most were professional development sessions and the Emdin book study. Through these, they learned to seek more student feedback and make changes accordingly. In turn, educators were better able to support students through adapting the classroom environment and through taking the time to learn more about individual students’ lives outside of the classroom. Furthermore, students noted specific practices that their teachers implemented that had the greatest impact on their academic engagement and relationships with teachers, namely cogens, cosmopolitanism, and co-teaching

reality pedagogy teaching practices as well as teachers' generally learning more about students' interests and lives outside of school.

Research Limitations

Two notable limitations to the research should be noted. First, unanticipated interruptions during the 2018-2019 academic year (i.e., a district-wide teacher strike and district-wide closures due to severe winter weather) impeded GTC professional development timelines and students' regular school attendance. Thus, both teacher participation in GTC and students' exposure to GTC teaching practices was unexpectedly put on hold toward the end of the academic year. Second, because the IDI was initially introduced to teacher group 2 as a voluntary exercise at the beginning of group 2 GTC participation and then implemented as a mandatory exercise at the end of the academic year, there's no way to accurately assess the effect of IDI inclusion in GTC programming between teacher groups, and, hence, to determine how IDI completion impacted teaching practices.

Program Recommendations and Future Directions

Several recommendations from research findings and participants as well can inform future GTC program improvements. First, Siwatu (2007a) notes that both global and item-specific CRTSE mean scores can be studied to inform teacher training. Global scores can be included in inferential statistical analyses (e.g., correlational analyses between teachers' backgrounds (e.g., experiences with diverse learners, teaching experience) and CRTSE scores). Findings from these analyses may prove useful in answering critical questions about teachers' sense of efficacy. Additionally, item-specific means can help to identify specific competencies that need to be better emphasized during teacher training and revising or designing efficacy building interventions to expose teachers to specific aspects of culturally responsive teaching

(see Siwatu 2007a for more specific information). Thus, GTC program developers and facilitators could use broader findings as well as CRTSE item-level data from Table 2 to further develop future content of the GTC program.

During teacher interviews, several questions were also asked to gather critical input on the GTC program from its participants. Teachers were asked what specific components of the GTC program staff could improve to better them to gain and to apply knowledge of building relationships with their students in classrooms. Half of all teachers ($n = 6$) asked for the GTC program to provide more concrete and relevant examples of how to apply the programs strategies in their individual classrooms. For example, many of the learning lab opportunities only provided implementation examples at the elementary school level. One teacher noted that learning labs were helpful but that she would have liked learning lab content to more specifically reflect high school aged students. Also, 4 teachers specifically noted wanting more opportunities to collaborate with colleagues within the learning sessions. One teacher noted: “[We] didn’t have much collaboration time during the meetings to ask ‘What did you try?’”

In addition to GTC programming content changes, teachers were also asked what additional supports they would need from GTC staff in order to maximize future GTC participation. A majority of teachers noted wanting more individualized feedback that would apply directly to their individual situations. One teacher noted how she “had a lot of individual issues that did not apply to other schools.” Another teacher asked for videos illustrating how to use GTC strategies with DPS students. In addition to support at the programming level, teachers also noted a desire for support at the school level in the form of greater school leader participation and engagement in the GTC program. GTC program developers and facilitators could include additional programming components specific to school leaders as well as

encourage school leaders to actively participate in programming activities throughout the academic year.

Finally, future and more intricate research can more carefully evaluate GTC program findings, including the inclusion of a comparison group. Looking at differences between GTC participants and a comparison group of both teachers and students can determine whether or not changes noted across the academic year are potentially due to teachers' GTC participation rather than just a function of both teachers' and students' growth across the academic year.

Conclusion

While these findings are promising, additional research is needed to determine specific programming components that most greatly impact teacher practice, and, eventually, student outcomes. Further, to better the likelihood that the GTC program will have a stronger and longer term impact on teaching practices and student outcomes, more teachers should participate in the GTC program, previous teacher participants should continue their studies focused on culturally responsive classroom practices, and students should learn from teachers implementing GTC practices consistently throughout their school careers.

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Table 1

Teacher Participation in GTC Program Components

	Group 1			Group 2		
	<i>n</i>	<i>M</i> (<i>SD</i>)	Range	<i>n</i>	<i>M</i> (<i>SD</i>)	Range
Professional development sessions	10	-	-	7	-	-
Learning labs	2	-	-	1	-	-
PDSA cycles	-	4.44	4-5	-	4.18	2-9
Individualized coaching sessions	3	-	-	0	-	-

Table 2

Item Level CRTSE Descriptive Data

	Pre		Post	
	<i>M</i> (SD)	Range	<i>M</i> (SD)	Range
Adapt instruction to meet the needs of my students	70.32 (16.05)	30-100	82.47 (9.90)	60-100
Obtain information about my student's academic strengths	76.32 (16.40)	30-100	88.40 (9.36)	66-100
Determine whether my students like to work alone or in a group	79.40 (16.57)	30-100	88.87 (10.02)	56-100
Determine whether my students feel comfortable competing with other students	65.96 (21.23)	16-100	80.26 (13.72)	50-100
Identify ways that the school (e.g., values, norms, and practices) is different from my student's home culture	57.30 (22.01)	0-100	79.68 (12.77)	50-100
Implement strategies to minimize the effects of the mismatch between my students' home culture and the school culture	46.62 (22.72)	0-91	77.77 (12.29)	50-100
Assess student learning using various types of assessments	71.40 (17.55)	20-100	86.45 (12.30)	40-100
Obtain information about my students' home life	60.17 (24.02)	10-100	80.87 (14.72)	30-100
Build a sense of trust in my students	77.87 (14.92)	30-99	89.34 (9.01)	61-100
Establish positive home-school relations	66.40 (23.49)	10-100	81.15 (13.19)	48-100
Use a variety of teaching methods	72.15 (18.33)	25-100	87.64 (10.26)	60-100
Develop a community of learners when my class consists of students from diverse backgrounds	66.21 (20.41)	0-94	86.87 (10.62)	50-100
Use my student's cultural background to help make learning meaningful	58.47 (20.84)	0-94	83.40 (12.23)	50-100

Use my students' prior knowledge to help them make sense of new information	65.23 (18.55)	8-90	83.28 (8.83)	65-100
Identify ways how students communicate at home may differ from the school norms	55.85 (20.57)	10-95	78.45 (13.16)	40-100
Obtain information about my students' cultural background	58.53 (21.91)	10-100	82.40 (13.67)	50-100
Teach students about their cultures' contributions to science	35.96 (29.53)	0-85	60.79 (27.79)	1-100
Greet English Language Learners with a phrase in their native language	52.96 (31.96)	0-100	65.74 (30.82)	1-100
Design a classroom environment using displays that reflects a variety of cultures	57.89 (27.20)	7-100	76.85 (20.92)	20-100
Develop a personal relationship with my students	80.26 (13.33)	30-100	92.57 (8.53)	68-100
Obtain information about my students' academic weaknesses	75.98 (17.13)	17-100	88.66 (10.70)	50-100
Praise English Language Learners for their accomplishments using a phrase in their native language	46.98 (31.54)	1-100	64.45 (32.20)	0-100
Identify ways that standardized tests may be biased towards linguistically diverse students	68.64 (28.92)	4-100	84.00 (18.64)	25-100
Communicate with parents regarding their child's educational progress	76.66 (17.18)	25-100	84.06 (12.31)	50-100
Structure parent-teacher conferences so that the meeting is not intimidating for parents	74.30 (21.29)	5-100	85.51 (13.73)	50-100
Help students to develop positive relationships with their classmates	69.91 (16.71)	20-100	84.00 (13.17)	50-100
Revise instructional material to include a better representation of cultural groups	57.70 (23.38)	5-100	77.28 (15.57)	30-100
Critically examine the curriculum to determine whether it reinforces negative cultural stereotypes	62.36 (22.41)	5-100	80.83 (18.45)	10-100
Design a lesson that shows how other	31.32 (27.23)	0-82	57.26 (26.58)	1-100

cultural groups have made us of mathematics				
Model classroom tasks to enhance English Language Learners understanding	67.96 (23.22)	15-100	84.13 (18.83)	50-100
Communicate with the parents of English Language Learners regarding their child's achievement	66.09 (24.58)	5-100	76.83 (17.58)	28-100
Help students feel like important members of the classroom	74.02 (18.36)	14-100	88.15 (9.94)	60-100
Identify ways that standardized tests may be biased towards culturally diverse students	67.72 (25.77)	3-100	84.04 (15.54)	40-100
Use a learning preference inventory to gather data about how my students like to learn	57.60 (26.80)	0-100	77.96 (20.60)	10-100
Use examples that are familiar to students from diverse cultural backgrounds	58.04 (20.74)	1-100	79.62 (15.28)	44-100
Explain new concepts using examples that are taken from my students everyday lives	61.66 (19.29)	20-100	83.30 (12.98)	45-100
Obtain information regarding my students' academic interests	68.06 (18.90)	25-97	86.81 (9.56)	65-100
Use the interests of my students to make learning meaningful for them	64.49 (20.41)	25-97	83.98 (12.19)	55-100
Implement cooperative learning activities for those students who like to work in groups	76.64 (20.90)	20-100	89.32 (11.15)	50-100
Design instruction that matches my students developmental needs	69.04 (17.57)	30-96	84.30 (12.99)	45-100

Table 3
SEI Subscale Descriptive Data

	Pre	Post
	<i>M</i> (SD)	<i>M</i> (SD)
All students		
Teacher-student relationships subscale	2.00 (.50)	2.03 (.53)
Control and relevance of school work subscale	2.04 (.52)	2.08 (.51)
Future goals and aspirations subscale	1.66 (.52)	1.63 (.53)
Group 1		
Teacher-student relationships subscale	1.94 (.50)	2.03 (.53)
Control and relevance of school work subscale	1.91 (.53)	1.99 (.51)
Future goals and aspirations subscale	1.65 (.55)	1.66 (.54)
Group 2		
Teacher-student relationships subscale	2.04 (.50)	2.01 (.48)
Control and relevance of school work subscale	2.21 (.50)	2.14 (.50)
Future goals and aspirations subscale	1.68 (.50)	1.62 (.52)

Appendix A

Adapted SEI Items for Elementary School Aged Students

	Original SEI Item	Adapted SEI Item
Teacher-Student Relationships subscale		
1	Overall, adults at my school treat students fairly.	Grown ups at my school treat all kids fairly.
2	Adults at my school listen to the students.	Grown ups at my school listen to all kids when they have something to say.
3	At my school, teachers care about students.	At my school, teachers care about all kids.
4	My teachers are there for me when I need them.	My teachers help me when I need them.
5	The school rules are fair.	The school rules are fair.
6	Overall, my teachers are open and honest with me.	My teachers tell me the truth.
7	I enjoy talking to the teachers here.	I like to talk to the teachers here.
8	I feel safe at school.	I feel safe at school.
9	Most teachers at my school are interested in me as a person, not just as a student.	Most teachers at my school ask me about my life.
Control & Relevance of School Work subscale		
10	The tests in my classes do a good job of measuring what I'm able to do.	Activities at school show what I can do.
11	Most of what is important to know you learn in school.	Most of what you need to know you learn in school.

12	The grades in my classes do a good job of measuring what I'm able to do.	The grades in school show how much I know.
13	What I'm learning in my classes will be important in my future.	What I'm learning in school will help me when I am a grown up.
14	After finishing my schoolwork, I check it over to see if it's correct.	After finishing my work at school, I check it to see if I'm right.
15	When I do schoolwork, I check to see whether I understand what I'm doing.	When I do work at school, I check to make sure I know what I'm doing.
16	Learning is fun because I get better at something.	Learning is fun because it makes me good at things.
17	When I do well in school, it's because I work hard.	When I do well in school, it's because I try hard.
18	I feel like I have a say about what happens to me at school.	I get to tell teachers what I like and what I don't like about what happens to me at school.
Future Goals & Aspirations subscale		
19	I plan to continue my education following high school.	I plan to go to college or another type of school when I grow up.
20	Going to school after high school is important.	Going to college or another type of school will be important for me when I grow up.
21	School is important for achieving my future goals.	School is important to help me to do what I want to do when I grow up.
22	My education will create many future opportunities for me.	Learning in school will help me to be whatever I want when I grow up.
23	I am hopeful about my future.	I am excited to be a grown up.

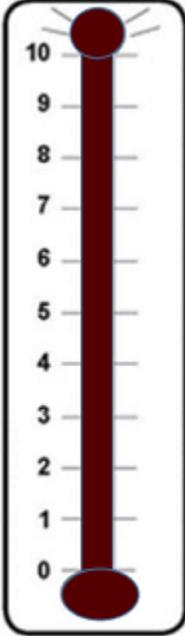
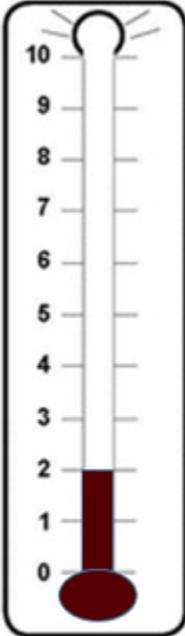
Appendix B

SEI Response Prompts for K-2 Students



Yes

No



A little bit

A lot

Appendix C

Teacher Interview Questions

Educator Learning/Transfer of Knowledge and Related Student Outcomes (*Look at PDSAs to determine specific GTC strategies of focus for teacher*)

- In what ways has your teaching practice changed as a result of your participation in GTC?
- Were you able to successfully implement the strategies (list teacher's strategies of focus)?
 - *If teacher responds 'no:'*
 - What issues did you encounter in implementing the strategy ?
 - *If teacher responds 'yes:'*
 - Did you feel that the strategy was useful in your classroom?
 - What changes did you make in your teaching practice to implement the strategy?
 - What specific changes did you note in your students?
- What changes have you noticed in your students' engagement in school work as a result of using GTC strategies?

Changes in Educator Self-Efficacy

- After participating in GTC, do you feel more confident in your abilities to cultivate and to maintain meaningful relationships with each student and family
 - *If teacher responds "yes: "*
 - What specific strategies of the GTC program do you feel helped you grow the most in this area?
 - *If teacher responds 'no: '*
 - Why do you feel the program didn't help you?
- What specific parts of the GTC program can staff improve to better help you to gain and to apply knowledge of building relationships with the students in your classroom?

Support for GTC Participation

- School leader
 - In what ways was your school leader involved in the GTC program?
 - *If school leader participate in the culturally responsive leadership institute?*
 - What shifts did you notice in your leader as a result of their participation in the culturally responsive leadership institute?
 - What additional support would you need from your school leader in the future in order to fully implement your GTC learning in your classroom?
- GTC program staff
 - How supported did you feel by GTC staff throughout the program?

- What additional support would a teacher need from GTC staff in the future in order to maximize GTC participation?v

GTC Program Feedback

- Rank the value of each of the following from most valuable to least valuable:
 - Coaching
 - PD Sessions
 - Learning labs
 - PDSAs
 - *For group 2 only:* IDI work

Why did you rank _____ the highest? Why did you rank _____ the lowest?

- What has worked well and what hasn't worked well in the program?
- Do you have any additional feedback or suggestions for GTC staff about the program?
- Do you have any feedback specific to the research team?

Appendix D

Emdin's Reality Pedagogy Teaching Practice Descriptions

Co-teaching: Assign students the task of writing a lesson plan and putting it into practice.

Personalizing classroom aesthetics: Allow students to personalize the classroom with posters, artwork, lighting, seating, and scents that they like.

Cosmopolitanism: Assign students various responsibilities and roles in the classroom to create a culture of student investment in the classroom.

Visiting Students' communities: Educators visit places in the community that students value; may determine which places to visit by polling students about the best restaurants, clothing stores, and supermarkets.

Cogens (cogenerative dialogues): The teacher meets with a small group of students outside of class and invites their input and critiques of the way things are going in the classroom—what's working, what makes them roll their eyes or shut down, and what would help them to get more out of their classroom time.

Competition: Classroom activities in which students work in groups to express their knowledge of a topic through such nontraditional means as art, speeches, dance, or music.

Call-and-response: Reciting sayings that support collectively overcoming challenges, and using phrases that support being resilient in the face of both personal and class-shared obstacles, “for example, a class hip-hop lyric like ‘Can I proceed?’ followed by the response ‘Yes indeed’ can positively transform classrooms” (Emdin, 2016, p. 174).

Code switching: Alternating or mixed use of two or more languages, especially within the same discourse, which Emdin describes as a complex skill in which one must “read the codes or rules of engagement in a particular social field, identify which ones have value, adopt them, enact them, and then through this process form powerful connections to new people” (Emdin, 2016, p. 175).

Discourse wall: Creating a classroom chart that includes words used in both informal and formal settings (e.g., scientific definition, academic definition, slang, Spanish, etc.), teaching students how to navigate between them.

Using pictures of students in lesson: By using pictures of students in lessons, the divides between the school world and their real lives are bridged.

Student-created handshakes: The handshake is something that the class constructs together and the practice becomes a ritual that the entire class enacts, building solidarity.

Classroom name: Allowing students to name the classroom (e.g., Physic Phenoms, Mathematical Magicians) “reinforce(s) students’ connections to their classroom and each other and helps them forge an identity around the content being taught” (Emdin, 2016, p. 128).

Classroom Twitter: A paper-based form of the digital platform that can be used in classrooms to engage students, allow them to move around the class, listen attentively, engage with their peers, and learn content during lectures by the teacher.

Classroom Instagram: A paper-based form of the digital platform that can be used in classrooms to engage students, allow them to move around the class, listen attentively, engage with their peers, and learn content during lectures by the teacher.

Appendix E

Student Focus Group Questions

Student Engagement in the Classroom

- Do you have roles/jobs in your classroom? What do you do in your roles? Do you like your roles? Why or why not?
- Has [teacher name] asked you to share what you think about the kinds of things you learn in class? About the way he/she teaches?
- Do you feel like [teacher name] teaches things in class that are related to your personal experiences?

Teacher-Student Relationships

- Do you feel like your teacher asks you questions and tries to understand things you do and don't like about school? Tell us about it.
- Do you feel like your teacher asks you questions and tries to understand things you do when you're not at school? Tell us about it.
- Do you feel like you have a stronger relationship with your teacher now than you did at the beginning of the year? Why/why not?

Future Aspirations

- Elementary students: What would you like to do once you grow up and graduate from high school?
- Middle and high school students: What do you plan to do after you graduate from high school?
- What can your school or [teacher name] do to help you to be ready to do that?