

Teacher Perceptions of CCGPS

Spring 2013

Findings from *Teacher Survey on CCGPS Implementation* Spring 2013
Administration

Main Findings



Teacher Perceptions of CCGPS

Findings from *Teacher Survey on CCGPS Implementation* Spring 2013 Administration

Thomaesa Brundage

Niah Shearer

Michael Tully

Governor's Office of Student Achievement

2013

The Governor's Office of Student Achievement (GOSA) produced this report as a part of Georgia's statewide evaluation of Race to the Top. GOSA strives to increase student achievement and school completion across Georgia through meaningful, transparent, and objective analysis and communication of statewide data. In addition, GOSA provides policy support to the Governor and, ultimately, to the citizens of Georgia through:

- An education scoreboard that forthrightly indicates the effectiveness of Georgia's education institutions, from Pre-K through college;
- Research initiatives on education programs in Georgia and corresponding findings to inform policy, budget, and legislative efforts;
- Thorough analysis and straightforward communication of education data to stakeholders;
- Audits of academic programs to ensure that education institutions are fiscally responsible with state funds and faithful to performance accountability requirements; and
- Collaborative work with the Alliance of Education Agency Heads (AEAH) to improve education statewide.

For more information on GOSA's statewide evaluation of Race to the Top implementation in Georgia, please visit gosa.georgia.gov/statewide-evaluation.

Executive Summary

In July 2012, Georgia adopted the *Common Core State Standards*, a set of common performance standards in mathematics and English Language Arts in Kindergarten through twelfth grade. The *Common Core State Standards* aim to support college and career readiness by ensuring that all students in the country are well-prepared for the future.

Georgia Department of Education (GaDOE) began preparing educators for the transition to Common Core Georgia Performance Standards (CCGPS), Georgia's version of *Common Core State Standards*, in spring 2011. During school year 2011-2012, GaDOE curriculum staff engaged in a variety of efforts aimed at preparing educators for the transition to CCGPS. These efforts included presenting at over 85 conferences and meetings, providing training through webinars and Georgia Public Broadcasting (GPB) live-streamed videos, partnering with RESAs to offer face-to-face training, and developing sample unit frameworks and other instructional support materials. GaDOE continues to support educators through newly revised unit frameworks, grade level/course overviews, and updated webinars. Links to all of the aforementioned resources can be found at <http://www.georgiastandards.org/Common-Core>.

Teachers fully transitioned to the new standards during school year 2012-2013. GOSA partnered with Georgia Professional Standards Commission (GaPSC) to administer the *Teacher Survey on CCGPS Implementation (Teacher Survey)* to a random sample of teachers in April 2013. The purpose of this survey was to learn about teachers' first year of implementing the standards.

Purpose and methodology

The purpose of this report is to discuss the main findings from the *Teacher Survey* and identify opportunities for further research. This report is the first in a series as GOSA and GaPSC will administer the *Teacher Survey* again in fall 2013 and spring 2014. By administering the survey three times, GOSA and GaPSC intend to collect trend data over the first two years of full CCGPS implementation. Findings from these surveys are intended to inform state and local decision-making regarding ongoing implementation of CCGPS. In particular, these findings should help education leaders better understand teachers' perception of the accessibility and utility of CCGPS-related support. Also, these findings should suggest if teachers are making use of the support in their classroom.

GOSA and GaPSC administered the *Teacher Survey on CCGPS Implementation* on April 30, 2013 to a random sample of 2,919 teachers across the state. GaPSC employed a stratified random sampling design to select the sample of teachers. GaPSC split the accessible population into subgroups, or strata, based on subjects taught and GaPSC-assigned personnel categories (e.g., certificate level). Then, GaPSC proportionally selected teachers randomly from each subgroup. GaPSC focused the sample design on identifying mathematics teachers of kindergarten through ninth grade and English Language Arts (ELA) teachers of kindergarten through twelfth grade. GaPSC selected these teachers because these were the subjects and grades covered by CCGPS during school year 2012-2013.

1,095 teachers completed the survey. After GOSA removed invalid cases, 987 responses remained, giving a response rate of 33.8%.

Theory of Change

Using guidance from Achieve and U.S. Education Delivery Institute, GOSA based the evaluation of the CCGPS implementation on the following theory of change.¹

- If educators at all levels of experience have sufficient access to teaching strategies through professional learning opportunities, instructional materials, and other resources that are aligned with their individual needs; and
- If educators find those teaching strategies, instructional materials, and other resources to be useful;
- Then educators will implement those teaching strategies, instructional materials, and other resources into their schools and classrooms; and
- Then achievement for the students served by these educators will improve.

Overview of major findings

The goal of GOSA's analysis was to determine if teachers' responses supported the theory of change. Responses to the *Teacher Survey* revealed the following main findings:

Access to CCGPS-aligned professional development and resources:

- Teachers in this survey had professional development and resources aligned to CCGPS, which supports the first step in the logic model.
- Responses related to the use of CCGPS-aligned resources were more positive than responses related to professional development aligned to CCGPS.

Utility or usefulness of CCGPS-aligned professional development and resources:

- Teachers in this survey found utility in the CCGPS-aligned professional development and resources they used, which supports the second step in the logic model.
- Respondents strongly believed the topics for the CCGPS-aligned professional development they received were relevant, and the CCGPS-aligned resources they used helped them implement CCGPS with fidelity.
- Respondents most often accessed CCGPS-aligned resources from GaDOE or district websites, and, in general, found access convenient.

¹ Implementing Common Core State Standards and Assessments: A Workbook for State and District Leaders (Achieve and US Education Delivery Institute, 2012).

- Respondents who taught mathematics and respondents who taught in districts labeled “suburb” continue to express a less positive perception of CCGPS-aligned support.

Taking advantage of CCGPS-aligned professional development and resources:

- Teachers in this survey demonstrated a high level of engagement in CCGPS-aligned professional development. A vast majority of respondents applied what they learned in professional development in their classrooms. However, the percentage of respondents who believed professional development contributed to their ability to implement CCGPS with fidelity was lower than the percent who applied what they learned from professional development.
- Understanding CCGPS shifts in mathematics makes a bigger difference on how respondents perceived professional development than understanding ELA shifts.
- In general, respondents “rarely” or “sometimes” used CCGPS-aligned resources. Upon further investigation, a clear pattern exists showing respondents who believed CCGPS-aligned resources contributed to their ability to implement CCGPS with fidelity used resources more than those respondents who did not believe resources helped them with their implementation.

Teacher and student practice change:²

- Respondents used effective practices, often closely related to *Common Core State Standards*. The CCGPS-related practice most used by respondents was, “asking students more questions and encouraging them to develop answers independently.”
- Students engaged in tasks associated with CCGPS more during school year 2012-2013 than in previous academic years.

Based on the findings from this survey, GOSA recommends that state and local education leaders further investigate CCGPS implementation. In particular,

- Investigate the quality of support made available to mathematics teachers and teachers in districts labeled “suburb.”
- Review the ease of access of state and district websites.
- Review the quality of professional development and instructional resources made available to educators.
- Use teacher effectiveness and student achievement data to substantiate the findings from this study.

GOSA will administer the *Teacher Survey* in fall 2013 and again in spring 2014.

² The final step in the theory of change focuses on student achievement. This step is not covered by this study because it is too early to assess the impact CCGPS on student achievement. Instead, this study examines teacher and student practice change that is associated with CCGPS.

Acknowledgements

This report was the result of many months of hard work. GOSA would like to thank everyone that contributed to the development and administration of the *Teacher Survey*, as well as the writing and editing of the final report.

We would like to thank Comfort Afolabi and the GaPSC for providing invaluable support during the survey development and administration phases. Comfort led the sampling process, which ensured the protection of teachers' private e-mail addresses. In addition, Comfort provided sound guidance and support during the data analysis phase.

We would also like to thank Pamela Smith and Sandi Woodall, as well as the entire GaDOE curriculum team. Pam and Sandi shared insights and provided helpful feedback throughout the survey development process. Additional thanks go out to all the teachers, and GaDOE, RESA, USG, and GOSA staff who provided much-needed feedback during the survey review and piloting stages.

Table of Contents

Executive Summary.....	1
Acknowledgements.....	4
List of Tables and Figures.....	6
Introduction	1
Methodology.....	3
Section I: Access to CCGPS-aligned professional development and resources	6
Main Findings.....	6
Section II: Utility of CCGPS-aligned professional development and resources	13
Main Findings.....	13
Section III: Engagement in CCGPS-aligned professional development and resources	22
Main Findings.....	22
Section IV: Teacher and student practice change.....	36
Main Findings.....	36
Conclusion.....	43

List of Tables and Figures

Table 1: Teachers represented by accessible population, sample, and survey respondents.....	4
Table 2: (Q3) How much of your professional development activities, if any, have been focused on CCGPS implementation?	7
Figure 1: Mean value of CCGPS-aligned professional development by teacher characteristics	7
Table 3: Differences among perception of CCGPS-aligned professional development by teacher characteristics	8
Table 4: (Q9) Overall, the CCGPS resources I used over the last two school years have been aligned to CCGPS.....	10
Figure 2: Mean value of CCGPS-aligned resources by teacher characteristics.....	11
Table 5: (Q4) Overall, the topics for which I received CCGPS-focused professional development/training over the last two school years were relevant.....	14
Table 6: (Q5) Overall, the CCGPS-focused professional development/training I received over the last two school years contributed to my ability to implement CCGPS with fidelity.....	14
Figure 3: Mean values for relevance of professional development topics by prominent teacher characteristics	15
Figure 4: Mean value for CCGPS-focused professional development's contribution to CCGPS implementation by teacher characteristics	15
Table 7: Breakdown of access and convenience to instructional resources, focusing on sources most used to access resources, and convenience of sources used to access resources.....	16
Figure 5: Difference in responses regarding convenience of access to resources based on use of CCGPS-aligned resources	18
Table 8: Differences in perceptions of convenience of access to CCGPS-aligned resources.....	19
Table9: (Q10) Overall, the CCGPS resources I received over the last two years contributed to my ability to implement CCGPS with fidelity.....	20
Figure 6: Mean values for CCGPS resources contribution to CCGPS implementation by teacher characteristics	20
Table 10: Differences in perceptions of CCGPS-aligned resources' contribution to fidelity of implementation	21
Table 11: (Q6) Overall, I applied what I learned from the CCGPS-focused professional development/training I received over the last two school years in my classroom.....	23

Figure 7: Mean values for application of professional development by teacher characteristics.....	23
Table 12: Differences in perceptions of application of professional development in the classroom	24
Table13: Comparisons of responses regarding application of professional development and professional development's contribution to fidelity of implementation.....	25
Table14: Differences in perceptions of professional development for ELA teachers (includes any respondent that teaches ELA).....	27
Table15: Differences in perceptions of relevance of professional development for mathematics teachers (includes any respondent that teaches mathematics)	28
Table16: (Q8) How often are you using the CCGPS-resources that you accessed over the last two school years in your classroom?	30
Table17: Mean values for frequency of use of CCGPS resources by teacher characteristics.....	31
Figure 8: Difference in responses regarding frequency of use of resources based on resources' contribution to fidelity of implementation.....	34
Table18: (Q11) What practices are you implementing in your CCGPS classroom? Check all that apply. .	37
Table19: Differences in implementation of CCGPS-related practices	38
Table20: Differences in implementation of CCGPS-related teacher practices.....	38
Table21: Differences in student engagement in CCGPS-related tasks in ELA	41
Table22: Differences in student engagement in CCGPS-related tasks in mathematics	41

Introduction

In July 2012, Georgia adopted the *Common Core State Standards*, a set of common performance standards in mathematics and English Language Arts in Kindergarten through twelfth grade. To date, every state and territory, with the exclusion of Alaska, Minnesota, Nebraska, Puerto Rico, Texas, and Virginia adopted the standards.³ The *Common Core State Standards* aim to support college and career readiness by ensuring “students, no matter where they live, are well prepared with the skills and knowledge necessary to collaborate and compete with their peers in the United States and abroad.”⁴

Georgia Department of Education (GaDOE) began preparing educators for the transition to Common Core Georgia Performance Standards (CCGPS), Georgia’s version of *Common Core State Standards* in spring 2011. During school year 2011-2012, GaDOE curriculum staff presented at over 85 conferences and meetings to inform educators about CCGPS. Also, in September 2011, GaDOE, in concert with Georgia Public Broadcasting (GPB), publicized the upcoming transition to CCGPS via a statewide orientation video. In January 2012, GaDOE started to provide training through webinars and GPB live-streamed videos. During summer 2012, GaDOE worked with RESAs to offer face-to-face training on a first come, first served basis. GaDOE also developed sample unit frameworks and other instructional support materials during the pre-implementation phase of the transition. GaDOE continues to support educators through newly revised unit frameworks, grade level/course overviews, and updated webinars. Links to all the aforementioned resources can be found at <http://www.georgiastandards.org/Common-Core>.

The Governor’s Office of Student Achievement (GOSA) performed a comprehensive investigation of the instructional support that GaDOE provided educators in November 2012.⁵ In this analysis, GOSA surveyed curriculum leaders at the state, regional, and district levels to examine their perception of GaDOE’s support and implementation of CCGPS. GOSA also asked respondents their opinion of their educators’ level of understanding of CCGPS. This study indicated that educators needed additional support to be more comfortable with and confident about the transition to CCGPS. Refer to http://gosa.georgia.gov/statewide-evaluation-goal-3#Eval_Reports for the executive summary of this report.

Based on the findings from GOSA’s first study of CCGPS, GOSA decided to survey teachers to learn about their experience implementing CCGPS. Teachers fully transitioned to the new standards during school year 2012-2013. GOSA partnered with Georgia Professional Standards Commission (GaPSC) to administer the *Teacher Survey on CCGPS Implementation (Teacher Survey)* to a random sample of

³ "In the States," [Common Core State Standards Initiative](http://www.corestandards.org/in-the-states), 10 Sept. 2013 <<http://www.corestandards.org/in-the-states>>.

⁴ "Frequently Asked Questions," [Common Core State Standards Initiative](http://www.corestandards.org/resources/frequently-asked-questions), 2012, 16 May 2013 <<http://www.corestandards.org/resources/frequently-asked-questions>>.

⁵ Shearer Niah, [Roll-out and Early Implementation of CCGPS: Analysis of the CCGPS Supports Inventory Survey](#), Rep. (Atlanta: Governor’s Office of Student Achievement, 2013).

teachers in April 2013. The purpose of the survey was to learn about their first year of implementing the standards.

The goal of the *Teacher Survey* is to provide state and local education leaders and stakeholders with perceptual data from teachers regarding CCGPS implementation. GOSA believes formative feedback from those on the front line of this statewide education reform will strengthen implementation.

Using guidance from Achieve and U.S. Education Delivery Institute, GOSA based the evaluation of the CCGPS implementation on the following theory of change.⁶

- If educators at all levels of experience have sufficient access to teaching strategies through professional learning opportunities, instructional materials, and other resources that are aligned with their individual needs; and
- If educators find those teaching strategies, instructional materials, and other resources to be useful;
- Then educators will implement those teaching strategies, instructional materials, and other resources into their schools and classrooms; and
- Then achievement for the students served by these educators will improve.

Perceptual data from teachers who responded to the *Teacher Survey* supported each step in the theory of change. Based on findings from the survey, respondents:

- Had professional development and resources aligned to CCGPS;
- Found utility in the CCGPS-aligned professional development and resources they used;
- Demonstrated engagement in CCGPS-aligned professional and resources; and
- Used strong practices, often closely related to *Common Core State Standards*, and their students engaged in tasks associated with CCGPS more during school year 2012-2013 than in previous academic years.

The final step in the theory of change focuses on student achievement. This step is not covered by this study because it is too early to assess the impact CCGPS on student achievement.

The purpose of this report is to discuss the main findings from the *Teacher Survey* and identify opportunities for further research. This report is the first in a series as GOSA and GaPSC will administer the *Teacher Survey* again in fall 2013 and spring 2014. By administering the survey three times, GOSA and GaPSC intend to collect trend data over the first two years of full CCGPS implementation. Findings from these surveys are intended to inform state and local decision-making regarding ongoing implementation of CCGPS. In particular, these findings should help education leaders better understand how teachers feel regarding the accessibility and utility of CCGPS-related support, and if teachers are making use of the support in their classroom.

⁶ [Implementing Common Core State Standards and Assessments: A Workbook for State and District Leaders](#) (Achieve and US Education Delivery Institute, 2012).

Methodology

GOSA and GaPSC administered the *Teacher Survey on CCGPS Implementation* through Survey Monkey on April 30, 2013 to a random sample of 2,919 teachers across the state. Since GOSA and GaPSC needed to administer the survey electronically, the organizations could only derive a random sample from teachers who shared their e-mail addresses with GaPSC. GaPSC collects teacher e-mail addresses through registration in the myPSC database. Therefore, the accessible population for the survey was teachers who registered in the database. Teachers register in the myPSC database to view or print their GaPSC certificate, update personal information on file with GaPSC and read correspondence from the agency.⁷ Approximately 75% of all teachers in the state are registered in the myPSC database. During school year 2012-2013, the myPSC database included 50,996 mathematics and English Language Arts (ELA) teachers.

From this population of 50,996 teachers, GaPSC employed a stratified random sampling design to select the sample of teachers. Stratified sampling first separates the target population into “mutually exclusive, homogeneous segments (strata). Then a simple random sample is selected from each segment (stratum).⁸ GaPSC split the accessible population into subgroups, or strata, based on subjects taught and GaPSC-assigned personnel categories (e. g., certificate level). Then, GaPSC used SPSS to proportionally select teachers randomly from each subgroup. GaPSC focused the sample design on identifying mathematics teachers of kindergarten through ninth grade and English Language Arts (ELA) teachers of kindergarten through twelfth grade. GaPSC selected these teachers because these were the subjects and grades covered by CCGPS during school year 2012-2013.

Although GOSA and GaPSC sent the survey to all 3,000 teachers, only 2,919 successfully received the message. Eighty-one teachers selected for the sample did not receive the survey due to challenges with e-mail addresses and blocked access to Survey Monkey. 1,095 teachers completed the survey.

Following the conclusion of the survey administration period, GOSA performed manual data cleaning. First, GOSA removed duplicate cases (ten cases) from the original 1,095 respondents indicated by Survey Monkey. In these instances, GOSA retained the most recent case and excluded the earlier case. Second, because this analysis focused on comparing responses between and within groups, GOSA excluded cases without a verifiable subject-area or district (four cases). Third, GOSA removed cases where the respondent did not provide answers to the survey after the second survey question (94 cases). In the end, GOSA excluded 108 cases from the analysis, resulting in a final number of 987 valid cases.

GaPSC’s use of a stratified random sampling design ensured that the sample of teachers surveyed would be representative of the accessible population. GOSA then ensured the respondents were

⁷ "Homepage," *MyPSC*, 04 Oct. 2013 <<https://mypsc.gapsc.org/>>.

⁸ Johnnie Daniel, "Chapter 5. Choosing the Type of Probability Sampling," *Sampling essentials: Practical guidelines for making sampling choices* (Los Angeles: Sage Publications, 2012) 131.

representative by reviewing responses and targeting follow-up to under-represented subgroups. These efforts resulted in a response rate of 33.8% for the first administration of the *Teacher Survey*. Not only is the response rate considered average for online survey administration, but as shown in Table 1 below, the respondents are reflective of the accessible and sample populations.⁹

Table 1: Teachers represented by accessible population, sample, and survey respondents

GaPSC-assigned personnel categories ¹⁰	Accessible Population		Sample		Respondents		Difference in Proportions
	Number	Percent	Number	Percent	Number	Percent	
K-5 mathematics	1,156	11%	68	11%	28	14%	-3
Middle grades mathematics	3,836	37%	226	37%	74	36%	1
High school mathematics	3,739	36%	220	36%	76	37%	-1
SPED/other mathematics	1,549	15%	91	15%	28	14%	1
TOTAL MATHEMATICS	10,280	100%	605	100%	206	100%	
K-5 ELA	2,497	20%	147	20%	35	15%	5
Middle grades ELA	3,525	29%	207	29%	67	28%	1
High school ELA	3,184	26%	187	26%	68	29%	-3
SPED/other ELA	3,148	25%	185	25%	66	28%	-3
TOTAL ELA	12,354	100%	727	100%	236	100%	
K-8 elementary	24,736	87%	1456	87%	499	92%	-5
SPED/other elementary	3,596	13%	212	13%	46	8%	5
TOTAL ELEMENTARY	28,332	100%	1668	100%	545	100%	
TOTAL MATHEMATICS	10,280	20%	605	20%	206	21%	-1
TOTAL ELA	12,354	24%	727	24%	236	24%	0
TOTAL ELEMENTARY	28,332	56%	1668	56%	545	55%	1
TOTAL	50,966	100%	3000	100%	987	100%	

As shown in Table 1, the difference in the proportion of teachers represented in the survey is within five percentage points of the proportions in the accessible population and sample.

The Teacher Survey on CCGPS Implementation is based on suggested implementation practices from Achieve and the U.S. Education Delivery Institute (EDI).¹¹ In addition, GOSA and GaPSC used valid and

⁹ McNulty, Darren. (2008). The adequacy of response rates to online and paper surveys: what can be done? *Assessment & Evaluation in Higher Education*, 33(2), 301 – 314.

¹⁰ GaPSC-assigned personnel categories are only used for sampling purposes. Throughout the report, GOSA provides results based on subjects taught (math, ELA, or both math and ELA). These groupings are based on how teachers responded to Question 1: What subject(s) do you teach?

reliable tools, as well as evidence- and research-based practices, to develop the survey.^{12 13 14} GaDOE curriculum and Race to the Top (RT3) staff, as well as a small group of teachers, vetted the survey questions. GOSA and GaPSC piloted the instrument with a group of teachers.

Data are presented throughout the report in charts, tables and direct quotes. For ease of discussion purposes, GOSA rounded the percentages throughout the report to the nearest whole number. Additionally, GOSA presented question texts and/or scales in an abbreviated manner when data results are presented in charts or tables. All results from the survey are shown, along with the full text for questions and open-ended responses, in Appendix A: All Results.

The next section discusses the results and findings from the survey.

¹¹ Implementing Common Core State Standards and Assessments: A Workbook for State and District Leaders, Publication (Achieve and US Education Delivery Institute, 2012).

¹² "Survey item bank," Feedback Loops for Common Core State Standards Implementation | U.S. Education Delivery Institute, 5 June 2012, U.S. Education Delivery Institute, 10 Mar. 2013 <<http://www.deliveryinstitute.org/publications/feedback-loops-common-core-state-standards-implementation>>.

¹³ Cathy J. Lassiter, "Teaching Strategies for Reading for Information in the English Language Arts Common Core," Navigating the English language arts common core state standards, by Angela B. Peery (Englewood, CO: Lead + Learn P, 2011) 145-59.

¹⁴ Cathy J. Lassiter, "Strategies for Addressing Rigor in Mathematics Common Core," Navigating the mathematics common core state standards, by Jan Christinson (Englewood, CO: Lead + Learn P, 2012) 77-90.

Section I: Access to CCGPS-aligned professional development and resources



Main Findings

- Teachers in this survey had professional development and resources aligned to CCGPS, which supports the first step in the logic model.
- Responses related to the use of CCGPS-aligned resources were more positive than responses related to professional development aligned to CCGPS.
- Data suggest that mathematics-only and suburb teachers did not have as much CCGPS-aligned professional development as other teachers.

Results

The *Teacher Survey* asked respondents to estimate the amount of professional development focused on CCGPS implementation they received and whether they used CCGPS-aligned resources. In the survey, GOSA and GaPSC used words to label the scales in the survey questions and added number labels during the data analysis stage. The theory of change for which GOSA’s evaluation of CCGPS implementation is based upon states that teachers will have sufficient professional development opportunities and instructional resources. Therefore, the survey asked respondents to rate their professional development on a scale that ranged from 0, where none of the professional development focused on CCGPS, to 4, where all the professional development focused on CCGPS. Also, the survey asked respondents to state whether they used instructional resources on a scale that ranged from 1, where they strongly disagreed, to 4, where they strongly agreed.

Findings related to professional development

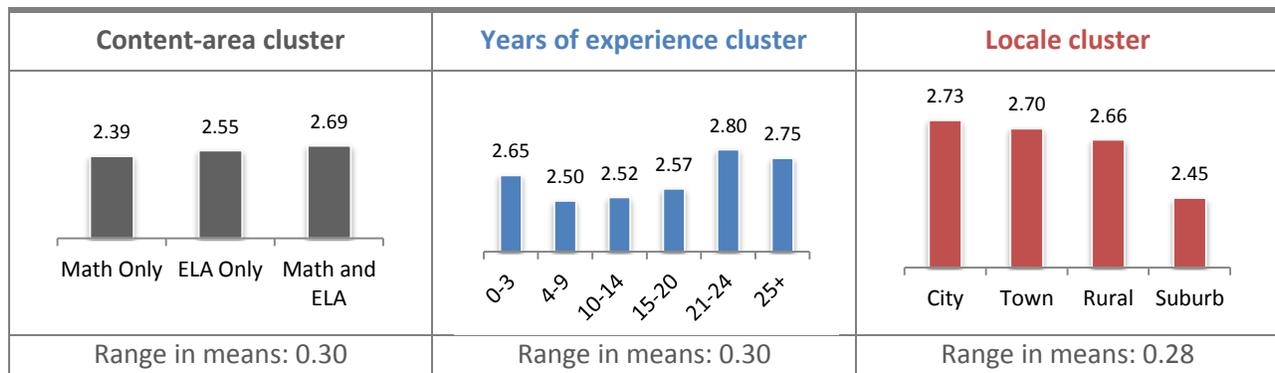
In general, respondents indicated that much of the professional development they received over the last two school years (2011-2012 and 2012-2013) focused on CCGPS implementation. As shown in Table 2, on average, respondents indicated that more than “some,” but not a “substantial” amount of their training focused on CCGPS implementation. Approximately 60% of the respondents said that a “substantial” amount or “all” of their training focused on CCGPS implementation.

Table 2: (Q3) How much of your professional development activities, if any, have been focused on CCGPS implementation?

N	Mean ¹⁵	None (0)	Very little (1)	Some (2)	Substantial (3)	All (4)
985	2.59	1% (10)	10% (99)	29% (285)	49% (480)	11% (111)

A mean of three would indicate that on average, a “substantial” amount of the respondents’ professional development focused on CCGPS. Considering the undertaking of transitioning to new performance standards, GOSA set the optimal value at “substantial” or three. Since the mean for all respondents was below the optimal value of three, GOSA investigated further to determine if respondents differed based on prominent demographic characteristics. Figure 1 displays the average response for teachers by content-area, years of experience, and locale.

Figure 1: Mean value of CCGPS-aligned professional development by teacher characteristics



As demonstrated by the range in means for each cluster, average responses by teacher characteristic were not widely spread. In general, the spread of average responses was a little more than a quarter of a point on the five-point Likert scale, were zero equals “none” and four equals “all.” Like the overall mean, none of the means for specific teacher characteristics met or exceeded the optimal value of three. Therefore, GOSA concluded that teachers, regardless of subject taught, years of experience or district locale, had more than “some,” but not a “substantial,” amount of training focused on CCGPS implementation.

GOSA compared the means within each teacher characteristic cluster to determine if the average amount of professional development differed based on specific teacher characteristics. GOSA used an analysis of variance, or ANOVA, to compare the means within each cluster because each cluster had more than one teacher characteristic, or independent variable. This test showed that statistically significant differences existed within each cluster; however, ANOVA tests do not specify which

¹⁵ The median value was 3.00.

independent variables differ from each other. Therefore, GOSA used a post-hoc multiple comparison test to identify which characteristics differed from the others. Table 3 displays the results from this test.

Table 3: Differences among perception of CCGPS-aligned professional development by teacher characteristics

	Characteristic Mean	Significance
Content-area subgroups		
Mathematics Only	2.39	Mathematics and ELA:.000** ELA Only:.149
ELA Only	2.55	Mathematics and ELA:.094 Mathematics Only:.149
Mathematics and ELA	2.69	ELA Only:.094 Mathematics Only:.000**
Years of experience subgroups		
0-3 Years	2.65	4-9 Years:.714 10-14 Years:.825 15-20 Years:.978 21-24 Years:.902 25+ Years:.959
4-9 Years	2.50	0-3 Years:.714 10-14 Years: 1.000 15-20 Years:.938 21-24 Years:.088 25+ Years:.049*
10-14 Years	2.52	0-3 Years:.825 4-9 Years: 1.000 15-20 Years:.985 21-24 Years:.145 25+ Years:.104
15-20 Years	2.57	0-3 Years:.978 4-9 Years:.938 10-14 Years:.985 21-24 Years:.366 25+ Years:.352
21-24 Years	2.80	0-3 Years:.902 4-9 Years:.088 10-14 Years:.145 15-20 Years:.366 25+ Years:.999

Table 3: continued

	Characteristic Mean	Significance
25+ Years	2.75	0-3 Years:.959
		4-9 Years:.049*
		10-14 Years:.104
		15-20 Years:.352
		21-24 Years:.999
Locale subgroups		
City	2.73	Rural:.810
		Suburb:.002**
		Town:.996
Rural	2.66	City:.810
		Suburb:.007**
		Town:.972
Suburb	2.45	City:.002**
		Rural:.007**
		Town:.074
Town	2.70	City:.996
		Rural:.972
		Suburb:.074

Tukey's multiple comparison test (also called Tukey's honestly significant difference (HSD) test), p-value:** p<.01, *p<.05

As shown in Table 3,

- Each cluster included at least one group that differed significantly from the other groups. These statistically significant differences mean that we can reject the null hypothesis. The null hypothesis states that all the groups within each cluster had professional development focused on CCGPS in the same amount. Instead, this data suggest that:

“I am teaching accelerated 8th grade math for the 4th year. ...This year, I feel that we were given a new curriculum with no help from the state or the county. Just figuring out what the standards meant was an issue. Trying to put together cohesive units with a reasonable sequence was very difficult.”

- Respondents who taught only mathematics and those who taught both mathematics and ELA differed. Mathematics and ELA teachers indicated that they had more professional development focused on CCGPS than teachers who taught only mathematics.

- Respondents with four through nine years of teaching experience differed from those with more than 25 years of experience. The more veteran respondents indicated that they had more professional development focused on CCGPS than their counterparts with four through nine years of experience.

- Respondents teaching in school districts labeled “suburb” differed from those teaching in districts labeled “city” and “rural.” Teachers in “city” and “rural” districts indicated that they had more CCGPS-focused professional development.

GOSA used data from the National Center for Education Statistics (NCES) to assign a locale type to each school district represented in this survey. The locale designation for every school district represented in the survey is provided in Appendix B: Locale Designation.¹⁶

Findings related to instructional resources

Respondents also stated whether they used resources aligned to CCGPS over the last two school years. An overwhelming majority of respondents indicated that they had access to CCGPS-aligned resources. As shown in the Table 4, approximately 90% of teachers in this survey agreed or strongly agreed that they used resources aligned to CCGPS over the last two years.

Table 4: (Q9) Overall, the CCGPS resources I used over the last two school years have been aligned to CCGPS.

N	Mean ¹⁷	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
906	3.14	1% (13)	8% (74)	65% (589)	25% (230)

The scale used for question nine ranged from strongly disagree, or one, to strongly agree, or four. This four-point scale did not include a neutral option, thus “forcing” respondents to indicate a level of agreement or disagreement. Using the logic model as the foundation for this study, respondents should have CCGPS-aligned resources. Therefore, a mean response of “agree” would demonstrate that not only did respondents have CCGPS-aligned resources, but they also used resources. The overall mean of 3.14 exceeded the optimal value of three, thus supporting the logic model.

Although nearly all respondents agreed or strongly agreed that they used CCGPS-aligned resources, many respondents provided open-ended comments, which pointed to various challenges regarding their use of resources. At least one-third of the challenges mentioned by respondents focused on resources.¹⁸ Respondents frequently referenced a lack of adequate resources and time required to develop and/or find appropriate resources. The major challenges as referenced by respondents are included in Appendix D: Major Challenges.

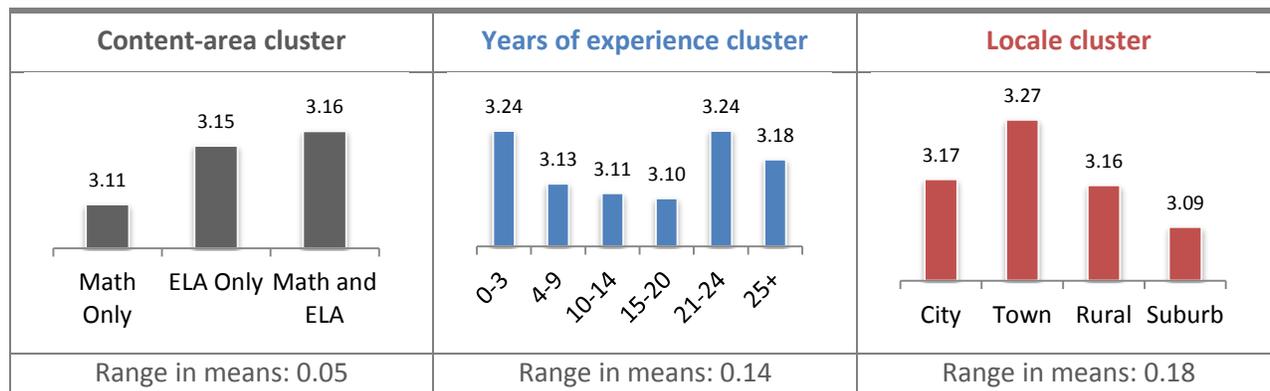
“I found Learn Zillion, used Smart exchange, used Go Math examples for references of content, and DOE frameworks for ideas and references. I also made my own tests, smart notebook files, participated in guided math fluency and a word problem of the day everyday this school year.”

¹⁶ Teachers from Gwinnett County Public Schools, Cobb County School District, and DeKalb County Schools comprised 60% of all responses in the “suburb” category.

¹⁷ Median value was 3.00.

GOSA looked at average responses broken down by subgroups to determine where additional support might be needed. Figure 2 displays the average response for teachers by content-area, years of experience, and locale.

Figure 2: Mean value of CCGPS-aligned resources by teacher characteristics



“My biggest challenge has been the inadequate resources provided to all teachers to teach the Common Core Standards. Besides being provided the standards, electronically, math teachers were not given any other resources provided by our county to teach the actual standards. As a result, we have had to constantly search for materials to use with our students to teach the required concepts.”

Teacher characteristic means were not widespread. The differences between the highest and lowest mean in each cluster were smaller for question nine than question three. This shows that responses varied even less in regard to the use of CCGPS-aligned resources, as compared to participation in CCGPS-focused professional development.

While statistically significant differences did not exist¹⁹ across clusters, means for each characteristic exceeded the optimal value of three. Therefore, GOSA concluded that on average teachers, regardless of subject, experience, or locale, used CCGPS-aligned resources over the last two years. Teachers in the survey who taught only mathematics and those teaching in districts labeled “suburb” had the lowest means. Like with professional development participation, the lower level of agreement in regard to use of CCGPS-aligned resources suggest that mathematics and “suburban” teachers had lower degree of engagement with CCGPS-aligned support.

¹⁸ 610 respondents provided a response to Q19: Please share the biggest challenge that you have had with implementing CCGPS this school year. Of those 610 responses, approximately 33% focused exclusively on a resource-related challenge. About 9% of the challenges fell into multiple categories, which often included a resource-related challenge combined with other challenges. Therefore, more than 33% of the challenges focused on resources.

¹⁹ For ease of discussion purposes, the test and p-values are presented in Appendix E: SPSS Outputs. Refer to pages 49-51 for information on Q9.

These data provide strong evidence that teachers used resources aligned to CCGPS. However, further investigation is needed to determine if the quantity and quality of resources met teachers' needs. As previously stated, many of the open-ended comments suggested that access to and availability of appropriate resources was a major challenge. Refer to Appendix D for a full list of the respondents' major challenges.

The next linkage in the logic model focuses on the utility of professional development and resources. Section II discusses respondents' perception of the utility of their CCGPS-aligned professional development and resources.

Section II: Utility of CCGPS-aligned professional development and resources



Main Findings

- Teachers in this survey found utility in the CCGPS-aligned professional development and resources they used, which supports the second step in the logic model.
- Respondents strongly believed the topics for the CCGPS-aligned professional development they received were relevant, and the CCGPS-aligned resources they used helped them implement CCGPS with fidelity.
- Respondents most often accessed CCGPS-aligned resources from GaDOE or district websites, and, in general, found access convenient.
- Respondents who taught mathematics and respondents who taught in districts labeled “suburb” continue to express a less positive perception of CCGPS-aligned support.

Results

GOSA used four survey questions to assess the utility respondents found in the CCGPS-aligned professional development and resources used over the last two academic years. Through these questions, GOSA aimed to learn about respondents’ perception of the relevance of professional development and how professional development contributed to their ability to implement CCGPS with fidelity. GOSA also sought to learn about respondents’ perception of how CCGPS-aligned resources contributed to their ability to implement CCGPS with fidelity. In addition, the survey collected feedback on how teachers accessed resources and whether access was convenient.

Findings related to professional development

Starting with perceptions of professional development, the vast majority of respondents agreed or strongly agreed that professional development topics were relevant. However, a smaller majority felt the CCGPS professional development they received contributed to their ability to implement CCGPS with fidelity. Tables 5 and 6 show how teachers in the survey responded to the two survey questions about the utility of CCGPS-professional development.

Table 5: (Q4) Overall, the topics for which I received CCGPS-focused professional development/training over the last two school years were relevant.

N	Mean²⁰	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
984	2.98	2% (16)	17% (164)	64% (632)	18% (172)

Table 6: (Q5) Overall, the CCGPS-focused professional development/training I received over the last two school years contributed to my ability to implement CCGPS with fidelity.

N	Mean²¹	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
983	2.79	4% (41)	25% (242)	59% (582)	12% (118)

As shown in Table 5, about 82% of the teachers in this survey agreed or strongly agreed that the topics for which they had CCGPS-focused professional development on were relevant. However, the percent that agreed or strongly agreed their CCGPS-focused professional development helped them implement the new standards with fidelity dropped by about ten percentage points.

The logic model for this study requires that teachers not only have CCGPS-aligned support, but also find the support useful. Therefore, the optimal mean response for questions four and five is three, or “agree.” While the mean values for both questions fell slightly below the optimal value, the vast majority of respondents agreed or strongly agreed with the statements. This finding suggests that most respondents found utility in their CCGPS-focused professional development.

Next, GOSA looked for differences among subgroups to identify groups of respondents who might have experiences that differ from the rest of the respondents. Figures 3 and 4 show the differences in subgroup means for each cluster.

²⁰ Median value was 3.00.

²¹ Median value was 3.00.

Figure 3: Mean values for relevance of professional development topics by prominent teacher characteristics

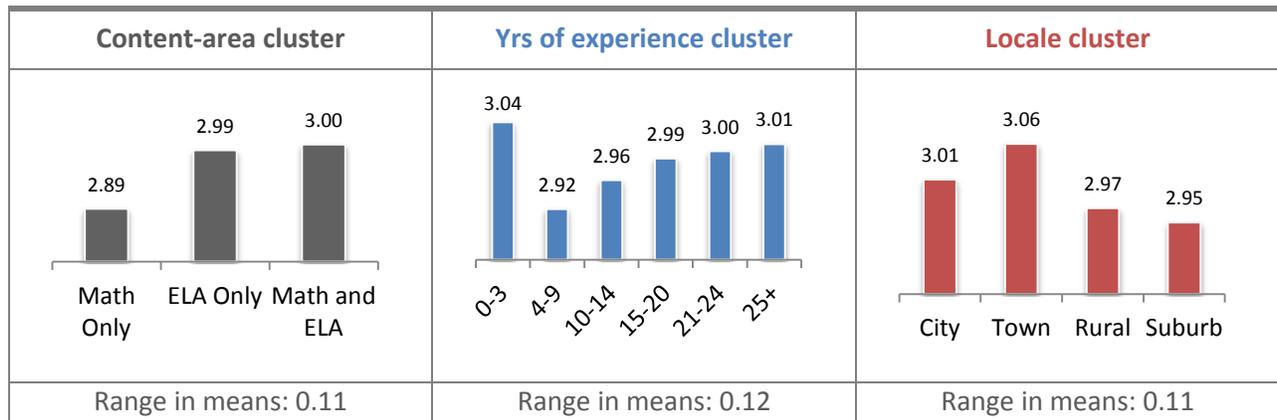
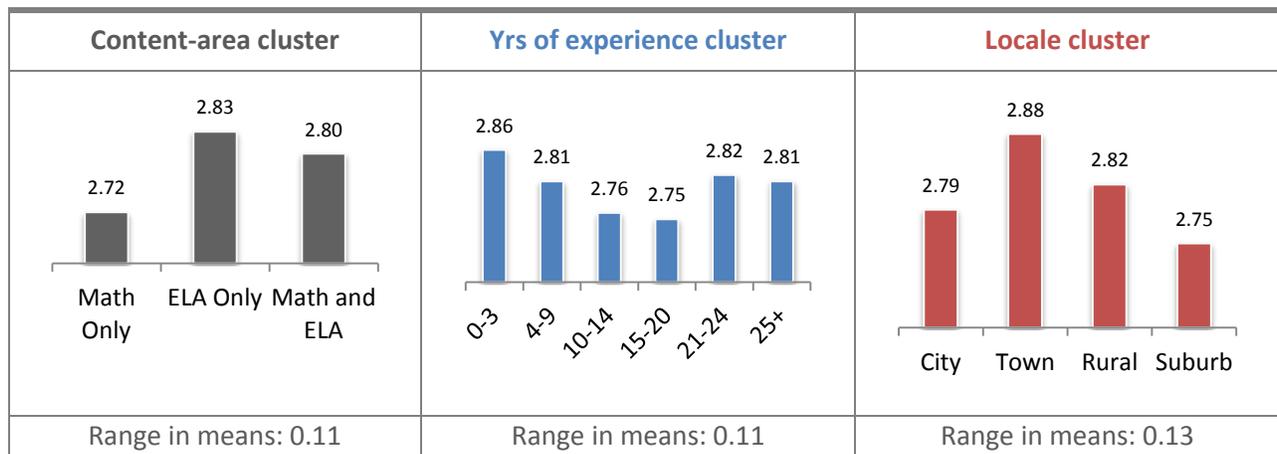


Figure 4: Mean value for CCGPS-focused professional development's contribution to CCGPS implementation by teacher characteristics



Teacher characteristic means were nearly identical across clusters for both questions. Thus, the range in responses to statements related to relevance of survey topics and professional development's contribution to implementation was very small. The differences between individual means within each cluster were not statistically significant.²²

Although the average responses based on teacher characteristics did not differ, a pattern is becoming apparent among teachers in the survey who taught only mathematics and those that work in districts considered suburban. As with the questions in Section I, respondents in the “mathematics only” and “suburb” subgroups continue to have the lowest average response, meaning, these teachers had a greater proportion of “disagree” or “strongly disagree” responses to the questions examined thus far.

²² For ease of discussion purposes, the test and p-values are presented in Appendix E: SPSS Outputs. Refer to pages 8-11 for information regarding Q4 and pages 16-19 for information regarding Q5.

Throughout the survey, respondents who taught only mathematics and respondents in “suburban” districts had generally the same teacher characteristics as other respondents. However, the group that included respondents who only taught mathematics had a higher proportion of newer teachers.²³ Further investigation is needed to determine why some teachers of only mathematics and teachers in “suburban” districts felt less positive about their CCGPS supports than other teachers.

Findings related to instructional resources

GOSA based the perception of utility in CCGPS-aligned resources on how teachers surveyed responded to questions about contribution to implementation and access to CCGPS-aligned resources. Starting with access to resources, GOSA found that respondents most often accessed resources from GaDOE or district websites. Table 7 shows how respondents accessed CCGPS resources and how they felt about the convenience of access.

“The biggest success has been when my coworkers and I have been given time to collaborate and develop our own understanding of the CCGPS. By taking time to research and create lesson plans we were given the opportunity to really understand the meaning behind what we were asking our students to do.”

Table 7: Breakdown of access and convenience to instructional resources, focusing on sources most used to access resources, and convenience of sources used to access resources.

	Most used source for accessing each resource	Respondents who agreed or strongly agreed that the most used source for each resource was convenient	Source of resource with highest percentage of “agree” or “strongly agree” responses for convenience of access to each resource
Curriculum exemplars	District or GaDOE website 53% (421)	78% (318)	Online data sharing tool (e.g., Dropbox, Wiki, etc.) 80% (53)
Teaching guides, curriculum maps, unit frameworks	District or GaDOE website 69% (611)	82% (478)	At my school or shared by a colleague 87% (157)

²³ The percentages of respondents with 1-9 years of teaching experience by content-area are as follows: Math Only: 42.6%; ELA Only: 30%; and Math and ELA: 31.2%.

Table 7 continued

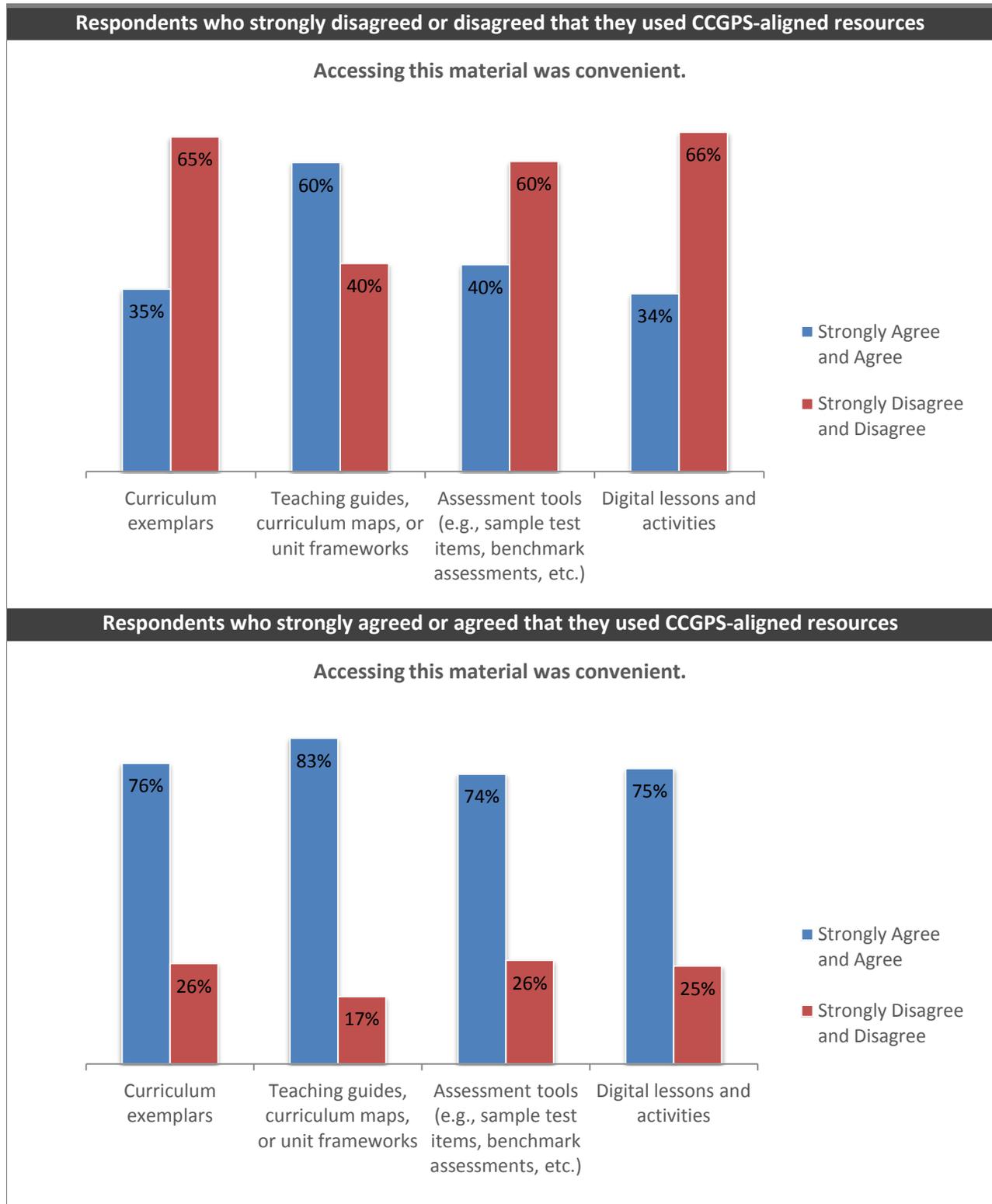
	Most used source for accessing each resource	Respondents who agreed or strongly agreed that the most used source for each resource was convenient	Source of resource with highest percentage of “agree” or “strongly agree” responses for convenience of access to each resource
Assessment tools	District or GaDOE website 39% (317)	78% (224)	Online data sharing tool (e.g., Dropbox, Wiki, etc.) 81% (56)
	At my school or shared by a colleague 39% (317)	78% (234)	
Digital lessons and activities	Google or other internet search engine 42% (301)	69% (200)	At my school or shared by a colleague 81% (111)

Overall, respondents most often accessed curriculum exemplars, teaching guides, curriculum maps, and unit frameworks from GaDOE or district websites. They also commonly accessed assessment tools from GaDOE or district websites, as well as at their school or through a colleague. The resources respondents most often searched for on the internet were digital lessons and activities.

While 69-82% of respondents found it convenient to access resources from the most used sources, about 10% of the comments related to major challenges focused on availability of resources. Respondents discussed difficulties with accessing and finding resources.

GOSA examined how teachers in the survey responded to the statement about the convenience of accessing each material by breaking the respondents into two groups based on their use of CCGPS-aligned resources. The purpose of this test was to determine if a pattern existed among use of CCGPS-aligned resources and convenience of access to resources. The purpose of this test was not to establish a causal relationship, but to determine if a pattern existed. The results of this analysis are displayed in Figure 5.

Figure 5: Difference in responses regarding convenience of access to resources based on use of CCGPS-aligned resources



“The DOE frameworks activities are really helping the students to dive deeper into real-world problems solving. We have enjoyed using the frameworks in class.”

Figure 5 provides a visual representation of the existence of a pattern between convenience of access and use of resources. Respondents who agreed or strongly agreed that they used resources aligned to CCGPS had much higher rates of agreement on the access of each material being convenient. The reverse holds true for respondents who disagreed or strongly disagreed that they used resources. As shown in Table 8, the differences in how the two groups responded were statistically significant.

Table 8: Differences in perceptions of convenience of access to CCGPS-aligned resources

Average response for convenience of access (4 point scale - Strongly Disagree = 1 and Strongly Agree =4)				
	Curriculum exemplars	Teaching guides, curriculum maps, unit frameworks	Assessment tools	Digital lessons and activities
Group 1 Respondents who strongly agreed or agreed that they used resources	Mean: 2.86 (723)	Mean: 3.01 (773)	Mean: 2.81 (733)	Mean: 2.84 (657)
Group 2 Respondents who strongly disagreed or disagreed that they used resources	Mean: 2.13 (68)	Mean: 2.52 (77)	Mean: 2.21 (70)	Mean: 2.11 (64)
Significance	.000**	.000**	.000**	.000**

ANOVA, p-value: **p<.01, *p<.05²⁴

State and local education leaders should further investigate this pattern to ensure barriers to accessing resources do not prohibit teachers from taking advantage of potentially useful tools.

The last survey question GOSA used to gauge utility of CCGPS-aligned resources focused on the contribution CCGPS-aligned resources had on implementation. Table 9 displays the results to this question.

²⁴ In all cases where an ANOVA was used to compare means, GOSA selected this test because the variables are categorical, and therefore, the ANOVA is the appropriate test to compare the means.

Table 9: (Q10) Overall, the CCGPS resources I received over the last two years contributed to my ability to implement CCGPS with fidelity.

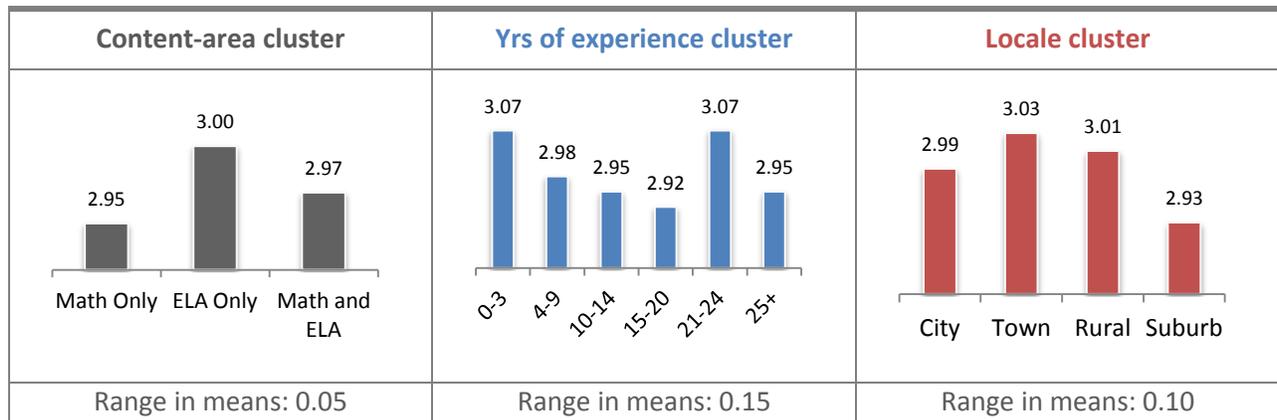
N	Mean ²⁵	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
908	2.97	2% (22)	17% (150)	62% (566)	19% (170)

A little more than 80% of the respondents agreed or strongly agreed that CCGPS-aligned resources contributed to their ability to implement CCGPS with fidelity. The average response fell slightly below the optimal value of three.

“I like the way that the ELA curriculum maps and frameworks are set up. It helps give a clear direction as to what we should be teaching.”

Given the high level of agreement that resources contributed to respondents’ ability to implement CCGPS with fidelity, GOSA examined the mean responses by subgroups to determine if any groups of teachers deviated from the overall mean of 2.97. In line with previous findings, respondents who taught only mathematics and respondents teaching in suburban districts had the lowest means. Figure 6 displays the results from this analysis.

Figure 6: Mean values for CCGPS resources contribution to CCGPS implementation by teacher characteristics



As depicted above, means were very close within each cluster of teacher characteristics. The range across clusters was approximately one-tenth of a point on the four-point Likert scale. The narrow dispersion of responses and lack of statistically significant differences shows that regardless of content-

²⁵ Median value was 3.00.

area, years of experience, or locale, teachers surveyed agreed CCGPS-aligned resources contributed to their ability to implement CCGPS with fidelity.²⁶

“I wish I had more assessments that were created by the state to help me assess the students instead of teachers having to make their own benchmarks.”

GOSA examined how teachers responded to the statement about fidelity of implementation based on whether they used CCGPS-aligned resources. As shown in Table 10, respondents who used CCGPS-aligned resources also had a high level of agreement about the resources’ contribution to their ability to implement CCGPS with fidelity. This pattern shows that in this survey, the perceived likelihood that resources contributed to a teacher’s ability to implement CCGPS with fidelity increased as the teacher’s use of CCGPS-aligned resources increased.

Table 10: Differences in perceptions of CCGPS-aligned resources' contribution to fidelity of implementation

	Strongly disagree	Disagree	Agree	Strongly agree	N	Mean
<u>Group 1</u> Respondents who strongly agreed or agreed that they used resources	1% (8)	11% (89)	68% (550)	21% (168)	815	3.08
<u>Group 2</u> Respondents who strongly disagreed or disagreed that they used resources	16% (14)	69% (59)	14% (12)	1% (1)	86	2.00
Significance					.000**	

ANOVA, p-value: **p<.01, *p<.05

Overall, respondents found utility in the CCGPS-aligned professional development and resources they encountered over the last two years. Respondents commented on CCGPS-aligned resources more than professional development. Difference in opinion of quality, availability, and utility of resources in open-ended comments suggest this is an area for further investigation.

The next link in the logic model to establish is how much respondents made use of CCGPS-aligned resources and skills and knowledge gained from CCGPS-aligned professional development. Section III explores respondents’ engagement with professional development and resources.

²⁶ For ease of discussion purposes, the test and p-values are presented in Appendix E: SPSS Outputs. Refer to pages 73-76 for information regarding the means test for Q10.

Section III: Engagement in CCGPS-aligned professional development and resources



Main Findings

- Teachers in this survey demonstrated a high level of engagement in CCGPS-aligned professional development. A vast majority of respondents applied what they learned in professional development in their classrooms. However, the percentage of respondents who believed professional development contributed to their ability to implement CCGPS with fidelity was lower than the percent who applied what they learned from professional development.
- Understanding CCGPS shifts in mathematics makes a bigger difference on how respondents perceived professional development than understanding ELA shifts.
- In general, respondents “rarely” or “sometimes” used CCGPS-aligned resources. Upon further investigation, a clear pattern exists showing respondents who believed CCGPS-aligned resources contributed to their ability to implement CCGPS with fidelity used resources more than those respondents who did not believe resources helped them with their implementation.

Results

GOSA determined that teachers surveyed took advantage of available supports after examining their perception of application of skills or knowledge gained from professional development and, frequency of use of CCGPS resources.

Findings related to professional development

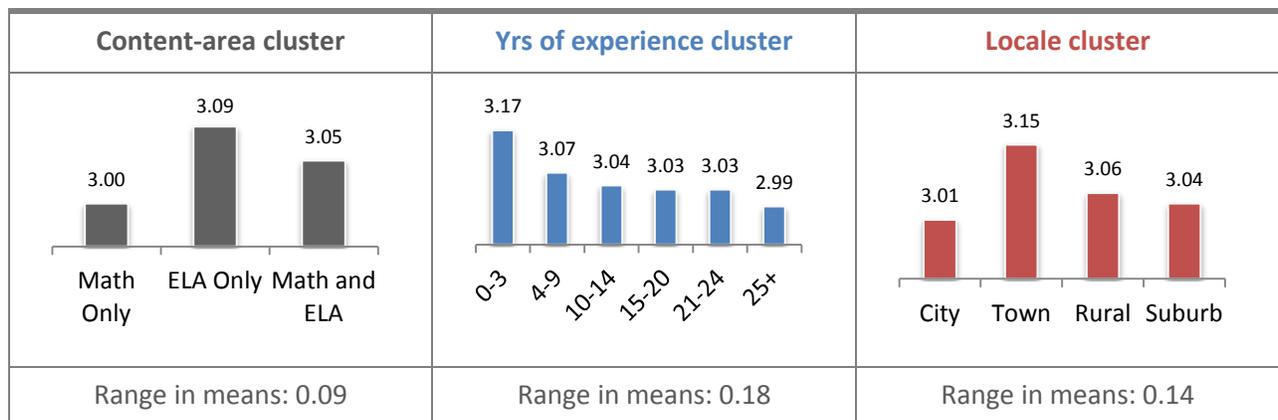
Over 85% of the teachers in this survey agreed or strongly agreed that they applied what they learned from professional development in their classrooms. The mean response of 3.05 exceeded the optimal value of three, or “agree.” The results are presented in Table 11.

Table 11: (Q6) Overall, I applied what I learned from the CCGPS-focused professional development/training I received over the last two school years in my classroom.

N	Mean ²⁷	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
958	3.05	2% (20)	12% (118)	64% (614)	22% (206)

Respondents did not differ significantly based on subjects taught, years of experience, or locale. Figure 7 illustrates the narrow spread of teacher characteristic means.²⁸

Figure 7: Mean values for application of professional development by teacher characteristics



Like with the other survey questions, average responses across clusters varied very little. The cluster with the most variability was years of experience. This could be attributed to teachers with zero to three years of teaching experience being an outlier. In addition, teachers with more than 25 years of experience were the only subgroup that did not meet or exceed the optimal value of three, or “agree.” However, the “suburb” characteristic no longer had the lowest mean value among locale cluster. The differences in means within each cluster were not statistically significant.

Given that differences in responses did not exist among teachers based on teacher characteristics, GOSA explored trends among other factors. Over 80% of respondents said the topics for which they had professional development were relevant. Examining

“I am seeing the importance of presenting materials in a manner that forces students to become more independent thinkers. Students need more hands on activities and problem solving practice. The CCGPS is designed to provide this for the students.”

²⁷ Median value was 3.00.

²⁸ For ease of discussion purposes, the test and p-values are presented in Appendix E: SPSS Outputs. Refer to pages 24-27 for information regarding the means test for Q6.

application of professional development based on perceived relevance of professional development topics showed that a pattern exists between these two factors. Table 12 presents these findings.

Table 12: Differences in perceptions of application of professional development in the classroom

	Strongly disagree	Disagree	Agree	Strongly agree	N	Mean
<u>Group 1</u> High agreement on PD relevance	0% (2)	5% (38)	70% (548)	25% (200)	790	3.20
<u>Group 2</u> Low agreement on PD relevance	11% (18)	48% (80)	38% (64)	4% (6)	168	2.35
Significance					.000**	

ANOVA, p-value: **p<.01, *p<.05

As shown in Table 12, when analyzing responses to question six (application of professional development) based on how respondents answered question four (relevance of professional development topics) it is clear that these two groups of respondents differ. Respondents who perceived professional development topics as being relevant had a higher level of agreement regarding the application of professional development. Therefore, in this survey, a pattern existed between application of skills and knowledge gained from professional development and perceived relevance of professional development topics. This finding is in line with the basis of this evaluation. The logic model hypothesizes that if teachers find professional development useful, they will implement what they learned in their classrooms.

The logic model hypothesizes that if teachers have high-quality professional development, and they use the skills and knowledge gained from this professional development, then both the teachers and students will benefit from the training. Teachers will experience improved instruction and practice. Students will experience improved learning and achievement. Therefore, GOSA examined the pattern between the application of professional development and professional development’s contribution to CCGPS implementation.

As shown in Table 13, respondents agreed that they applied what they learned from professional development more than they agreed that professional development aided them in implementing CCGPS with fidelity.

Table 13: Comparisons of responses regarding application of professional development and professional development's contribution to fidelity of implementation

Application of professional development			Contribution to fidelity of implementation		
N	Mean	Agree & Strongly agree	N	Mean	Agree & Strongly agree
958	3.05	86% (820)	983	2.79	71% (700)

The percentage of agree and strongly agree responses dropped by almost 15 percentage points. To better understand this finding, GOSA sought to determine if patterns existed among respondents' perception of the quality of professional development.

The survey did not ask respondents to rate the quality or their satisfaction with professional development. However, the survey asked respondents to demonstrate their understanding of CCGPS. Since the purpose of CCGPS-aligned professional development is to help educators better understand the new standards, examining perceptions of professional development based on whether respondents understood CCGPS provided a preliminary analysis of the effectiveness of professional development.

The transition to *Common Core State Standards* requires teachers to make three central shifts in their instruction of mathematics and ELA.²⁹ The survey asked respondents to identify these shifts. Respondents could select as many options as they thought were appropriate from a list of five possible shifts. Refer to the full data set included in Appendix A: All Results for the responses to the two survey questions on CCGPS shifts.

GaDOE communicated these shifts in all their professional development efforts starting from fall 2011 and continuing through their unit-by-unit webinars in spring 2013. Teachers were expected to watch these online professional development sessions. However, GaDOE could not mandate participation as teachers are employees of local education agencies (LEAs).

Since GaDOE offered professional development to all teachers, and expected teachers to participate, then it is possible that respondents learned about the shifts from GaDOE's professional development. GOSA did not conduct statistical tests to establish correlations or causality. Further investigation is necessary to fully determine the quality of professional development and its effect on teachers' understanding of CCGPS.

In this study, GOSA examined the differences in perceptions of professional development based on understanding of CCGPS to determine if respondents differed significantly. Significant differences would

“I began this school year with NO training on CCGPS. I had no idea what I needed to do. I had to download everything and start from scratch...we had no training on this until the middle of the year.”

²⁹ "Understanding the CCSS: The Shifts in Practice," [Achievethecore.org](http://www.achievethecore.org), 2012, Student Achievement Partners, 13 July 2013 <<http://www.achievethecore.org/ela-literacy-common-core/shifts-practice/>>.

suggest that teachers who “understood” CCGPS had a different experience than other teachers, and would provide opportunities for deeper analysis.

GOSA grouped participants based on the number of central shifts they selected in their response to question 11. GOSA considered respondents who only selected the three central shifts in their respective content-area as those that “understood” CCGPS. Respondents who only included one central shift in their response to question 11 were considered those who “did not understand” CCGPS as well. Tables 14 and 15 compare the two groups’ perceptions of professional development relevance, application of professional development and contribution to fidelity of implementation.

Tables 14 and 15 do **not** include responses from all respondents. Only respondents who selected only the three central shifts or only one central shift (and possibly other non-central shifts) are represented in the tables 14 and 15.

Table 14: Differences in perceptions of professional development for ELA teachers (includes any respondent that teaches ELA)

Differences in perceptions of relevance of professional development topics						
	Strongly disagree	Disagree	Agree	Strongly agree	N	Mean
<u>Group 1</u> Understands CCGPS	0% (0)	15% (8)	58% (32)	27% (15)	55	3.13
<u>Group 2</u> Does not understand CCGPS	3% (2)	22% (12)	62% (39)	16% (10)	63	2.90
Significance					.073	
Differences in perceptions of professional development’s contribution to fidelity of implementation						
	Strongly disagree	Disagree	Agree	Strongly agree	N	Mean
<u>Group 1</u> Understands CCGPS	4% (2)	24% (13)	56% (31)	16% (9)	118	3.01
<u>Group 2</u> Does not understand CCGPS	10% (6)	29% (18)	49% (31)	13% (8)	55	2.85
Significance					.161	
Differences in application of professional development						
	Strongly disagree	Disagree	Agree	Strongly agree	N	Mean
<u>Group 1</u> Understands CCGPS	0% (0)	9% (5)	65% (35)	26% (14)	54	3.17
<u>Group 2</u> Does not understand CCGPS	7% (4)	20% (12)	59% (36)	15% (9)	61	2.82
Significance					.007**	

ANOVA, p-value: ** $p < .01$, * $p < .05$

Table 14 shows that respondents only differed in their application of professional development based on their “understanding” of CCGPS. Respondents who “understood” CCGPS, or selected only the three central shifts in ELA, said they applied what they learned from professional development more than respondents who did not “understand” CCGPS as well.

Table 15: Differences in perceptions of relevance of professional development for mathematics teachers (includes any respondent that teaches mathematics)

Differences in perceptions of relevance of professional development topics						
	Strongly disagree	Disagree	Agree	Strongly agree	N	Mean
<u>Group 1</u> Understands CCGPS	1% (2)	11% (20)	66% (121)	22% (41)	184	3.09
<u>Group 2</u> Does not understand CCGPS	6% (3)	20% (11)	61% (33)	13% (7)	54	2.81
Significance					.005**	
Differences in perceptions of professional development’s contribution to fidelity of implementation						
	Strongly disagree	Disagree	Agree	Strongly agree	N	Mean
<u>Group 1</u> Understands CCGPS	3% (5)	19% (35)	65% (120)	13% (24)	184	2.89
<u>Group 2</u> Does not understand CCGPS	11% (6)	35% (19)	49% (27)	6% (3)	55	2.49
Significance					.000**	
Differences in application of professional development						
	Strongly disagree	Disagree	Agree	Strongly agree	N	Mean
<u>Group 1</u> Understands CCGPS	2% (3)	10% (17)	64% (115)	25% (44)	179	3.12
<u>Group 2</u> Does not understand CCGPS	8% (4)	15% (8)	69% (36)	8% (4)	52	2.77
Significance					.001**	

ANOVA, p-value: ** $p < .01$, * $p < .05$

Table 15 shows that mathematics teachers differed significantly based on their “understanding” of CCGPS for all three professional development questions. While both groups of respondents tended to have a high level of agreement on the professional development questions; mathematics teachers who “understood” CCGPS had a higher level of agreement than those who did not “understand” CCGPS as well.

Still, the percentage of mathematics teachers who believed professional development contributed to their ability to implement CCGPS with fidelity decreased. For both groups of respondents, the level of agreement for application of professional development was higher than the level of agreement with professional development’s contribution to fidelity of implementation.

While mathematics teachers differed significantly based on their “understanding” of CCGPS, ELA teachers did not differ in their perceptions of professional development topics or professional development’s effect on implementation. Although ELA teachers who “understood” CCGPS had a higher level of agreement on these two questions, the differences were not statistically significant. This means that regardless of “understanding” CCGPS, respondents had the same perception of professional development topics and professional development’s contribution to implement CCGPS with fidelity.

Understanding CCGPS made a difference for both ELA and mathematics teachers when it came to their application of skills and knowledge gained in professional development. However, like the group as a whole, the level of agreement for application of professional development remained higher for mathematics and ELA teachers, regardless of their understanding of CCGPS, than the level of agreement with professional development’s contribution to fidelity of implementation.

Overall, these tests show that “understanding” CCGPS made a bigger difference for mathematics teachers than ELA teachers. While this study did not seek to explain why this is, state and local education leaders should determine if more analysis is needed. Future studies could examine:

- Communication of shifts and whether shifts were better communicated in mathematics than ELA, resulting in respondents who taught mathematics selecting the three central shifts more than respondents who taught ELA.
- Shifts in standards and whether differences in CCGPS for mathematics are more obvious, pronounced, or easier to identify than differences in CCGPS for ELA.
- Teacher qualities and whether mathematics and ELA teachers have different innate characteristics that affect their perceptions of professional development.

It is possible that other explanations exist. However, the purpose of this report is to explain the findings and suggest opportunities for future analysis. Further investigation is needed to better understand the difference in experiences for mathematics and ELA teachers.

These tests also show that regardless of understanding CCGPS, teachers applied strategies and knowledge gained from professional development but did not think that the strategies and knowledge helped them implement CCGPS at the same rate. Further investigation is needed to better understand why respondents applied what they learned but did not attribute professional development to their ability to implement CCGPS with fidelity at the same rate.

“The biggest challenge has been trying to infer what the standards mean. It took a lot of time outside of the regular classroom day to research and try to figure out what was intended to be taught. The vagueness of the standards is very frustrating.”

“I feel the biggest challenge with CCGPS is knowing how deep to go with the standards and how people interpret the standards very differently.”

In addition, open-ended comments suggested that understanding the meaning and requirements of the standards, particularly the necessary depth of rigor, was a major challenge for many respondents. This study only used one measure to assess understanding of CCGPS. While respondents selected the three correct shifts in the top three responses for questions 13 and 16, further investigation is needed to better assess how

well respondents understand CCGPS. Data related to teacher effectiveness and student achievement will be helpful in assessing how well teachers understand and implement the standards. State and local education leaders can use this kind of data when they become available.

Findings related to instructional resources

Next, GOSA examined the level of engagement with CCGPS-aligned resources. The survey asked respondents to indicate how frequently they used CCGPS-aligned resources. Table 16 shows how teachers surveyed responded to this question.

Table 16: (Q8) How often are you using the CCGPS-resources that you accessed over the last two school years in your classroom?

	N	Mean	Never (0)	Rarely (1)	Sometimes (2)	Very Often (3)	Always (4)
Curriculum exemplars	860	2.28	7% (61)	12% (106)	37% (321)	32% (271)	12% (101)
Teaching guides, curriculum maps, or unit frameworks	898	3.13	1% (8)	4% (33)	16% (139)	42% (375)	38% (343)
Assessment tools (e.g., sample test items, benchmark assessments, etc.)	877	2.63	4% (38)	7% (65)	30% (260)	38% (331)	21% (183)
Digital lessons and activities	835	2.35	9% (73)	11% (91)	31% (261)	35% (293)	14% (117)

Overall, the majority of respondents used CCGPS-aligned resources at least “sometimes.” Respondents used teaching guides, curriculum maps, and unit frameworks the most, with 80% of them using these resources “very often” or “always.” GOSA did not establish expectations for use of resources because educators should use resources as frequently as they deem necessary. However, it is important to note that when “sometimes” responses are omitted, the percentage of respondents who said they were using resources frequently dropped considerably. It is possible that the use of an odd-numbered scale with a middle value of “sometimes” inflated the data because this option is fairly broad and more neutral than the other, more extreme options. Neutral or mid-point options tend to lead to more

“social desirability bias, arising from respondents' desires to please the interviewer or appear helpful or not be seen to give what they perceive to be a socially unacceptable answer.”³⁰

GOSA then investigated the frequency of use by prominent teacher characteristics. Refer to the statistical results in Appendix E: SPSS Outputs for the means, standard deviations, and results of ANOVA and post hoc tests. Table 17 displays the means by teacher characteristic for each cluster.

Table 17: Mean values for frequency of use of CCGPS resources by teacher characteristics

		Curriculum exemplars	Teaching guides, curriculum maps, etc.	Assessment tools	Digital lessons and activities
Content-area cluster	Both	2.35	3.17	2.73	2.48
	ELA only	2.28	2.98	2.44	2.11
	Math only	2.11	3.16	2.57	2.24
Range in means		0.24	0.19	0.29	0.37
Years of teaching experience cluster	0 - 3 years	2.18	3.19	2.64	2.30
	4 - 9 years	2.07	3.14	2.55	2.29
	10 - 14 years	2.46	3.15	2.75	2.51
	15 - 20 years	2.26	3.05	2.57	2.32
	21 - 24 years	2.35	3.00	2.52	2.22
	25+ years	2.43	3.19	2.75	2.32
Range in means		0.39	0.14	0.23	0.29
Locale cluster	City	2.40	3.30	2.72	2.41
	Rural	2.25	3.16	2.57	2.31
	Suburb	2.21	2.99	2.62	2.33
	Town	2.58	3.30	2.76	2.43
Range in means		0.37	0.31	0.19	0.12

In general, teacher characteristic means were close to the overall mean for each resource. Although frequency of use by teacher characteristics remained in between “sometimes” and “very often,” the range in means shows a greater degree of variation than in other survey questions. Average responses varied the greatest for use of curriculum exemplars for teachers by years of experience and locale. Responses for teachers by content-area varied the most for use of digital lessons and activities.

³⁰ Ron Garland, "The Mid-Point on a Rating Scale: Is it Desirable?" *Marketing Bulletin* (1991): 70, 5 Nov. 2013 <http://marketing-bulletin.massey.ac.nz/v2/mb_v2_n3_garland.pdf>.

Respondents used curriculum exemplars least out of the four resources. Responses by subgroups of teachers showed that teachers used curriculum exemplars “sometimes.” Post hoc comparisons using Tukey’s multiple comparisons test revealed the following significant differences:³¹

- Respondents who taught both mathematics and ELA used curriculum exemplars more than respondents who taught only mathematics.
- Respondents with 10-14 years of experience and more than 25 years of experience used curriculum exemplars more than respondents with 4-9 years of experience.
- Respondents teaching in districts labeled “town” used curriculum exemplars more than respondents teaching in districts labeled “suburban.”

Respondents used teaching guides, curriculum maps, or unit frameworks more than other types of resources. On average, respondents used these resources “very often.” Post hoc comparisons using Tukey’s multiple comparisons test revealed the following significant differences:

- Respondents who taught both mathematics and ELA used teaching guides, curriculum maps, or unit frameworks more than respondents who taught only ELA.
- Respondents who taught in districts labeled “city,” “rural,” and “town” used teaching guides, curriculum maps, or unit frameworks more than respondents who taught in districts labeled “suburb.”

“Once I made it through Unit 1, and I figured out what I was doing, I have really enjoyed teaching with CCGPS. The students and I have enjoyed working with the ELA units.”

Assessment tools were the second most used resource among all respondents. Responses indicated that teachers in this survey used assessment tools more than “sometimes,” but not quite “very often.” Only one pair of subgroups differed significantly. Again, post hoc test revealed that teachers who taught both mathematics and ELA used assessment tools significantly more than teachers who only taught ELA.

Qualitative data from respondents helped to explain the similarities in use of assessment tools. Many of the respondents’ biggest challenges in implementing CCGPS had to do with assessment. Respondents explained that a lack of quality assessment items and clear information regarding future state assessments created great difficulty in implementation. It is possible that the lack of difference among responses by teacher characteristic stemmed from respondents not believing that they had quality assessment items to use.

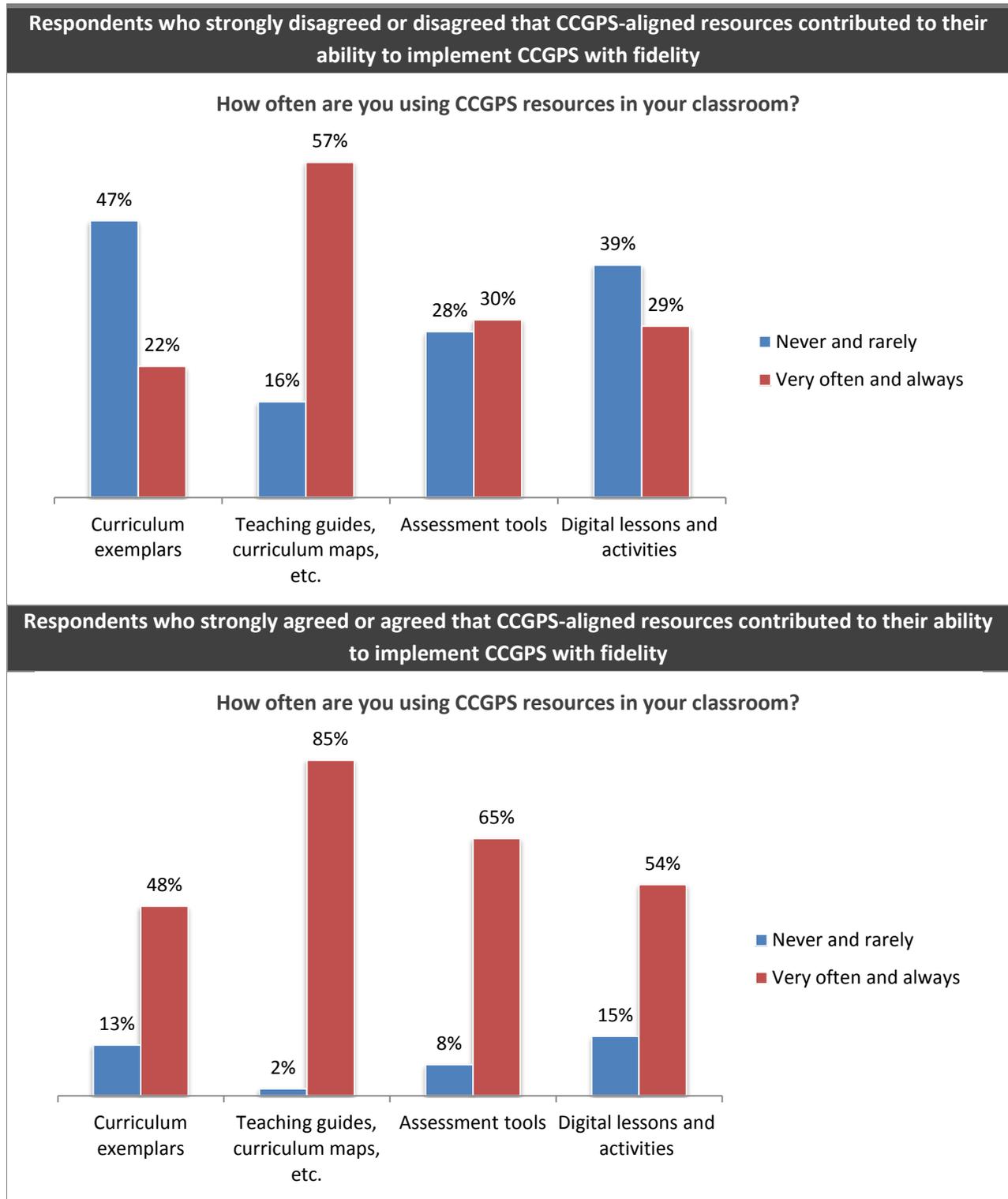
³¹ For ease of discussion purposes, the test and p-values are presented in Appendix E: SPSS Outputs. Refer to pages 39-64 for information regarding the means test for question 8.

Usage of digital lessons and activities by prominent demographic characteristic also resembled the overall group mean. Most of the individual means showed that respondents by demographic characteristic used these resources in between “sometimes” and “very often.” Post hoc tests revealed that respondents who taught both mathematics and ELA, and those who taught only mathematics, used digital lessons and tools more than respondents who taught only ELA.

These tests showed that in this survey, teachers who taught ELA and teachers with 21-24 years of teaching experience tended to use resources less than other teachers. Also, teachers in “suburban” districts used curriculum exemplars and teaching guides less than other teachers, while “rural” teachers used assessment tools and digital lessons less. State and local education leaders should investigate the quality of materials made available to these teachers to ensure poor quality or lack of access to resources did not limit usage.

Next, GOSA wanted to determine if patterns existed among frequency of use of CCGPS-aligned resources and perception that these resources aided in CCGPS implementation. The logic model establishes that if teachers have resources that they find valuable, then they will use them, and eventually the use of these valued resources will impact their practice and students’ learning. Therefore, GOSA compared responses regarding frequency of use based on resources’ contribution to fidelity of implementation. By comparing respondents based on their level of agreement that CCGPS-aligned resources aided them in implementing the new standards, GOSA found that those who were more agreeable also used resources more frequently. To conduct this assessment, GOSA omitted the “sometimes” response option to focus only on respondents who used resources more frequently (“very often” or “always”) and respondents who used resources less frequently (“never” or “rarely”). Figure 8 compares the frequency of use for CCGPS-aligned resources for the two groups of respondents.

Figure 8: Difference in responses regarding frequency of use of resources based on resources' contribution to fidelity of implementation



By omitting the “sometimes” responses, the difference in frequency of use for each resource is more pronounced. Across resources, respondents who believed CCGPS-resources contributed to their ability to implement CCGPS with fidelity used resources significantly more frequently than others. A one-way ANOVA revealed significant differences between the groups.³²

This finding shows that teachers in this survey did not frequently use resources that they did not find helpful. It also demonstrates the need for resources that teachers will find helps them implement CCGPS with fidelity.

“Common Core leaves less room for guesswork and requires students to know and understand the content better. I like that! I love the open ended feedback from students and the discussions that arise from this teaching strategy.”

Based on the data presented so far, GOSA can conclude that teachers in this survey had access to professional development and resources aligned to CCGPS and, they found utility in these supports. In addition, there is evidence to support that these teachers used what they learned from professional development and the resources they accessed in their classroom. The final step in the logic model proposes that positive outcomes will be seen if the first three steps are met. The next and final section discusses teacher and student practice change.

³² Curriculum exemplars: $F(1, 853) = 87.573, p=.000$. Teaching guides: $F(1, 854) = 76.890, p=.000$. Assessment tools: $F(1, 869) = 86.613, p=.000$. Digital lessons: $F(1, 829) = 63.800, p=.000$. Refer to Appendix E: SPSS Outputs for full results.

Section IV: Teacher and student practice change



Main Findings

- Respondents used strong practices, often closely related to *Common Core State Standards*. The CCGPS-related practice most used by respondents was, “asking students more questions and encouraging them to develop answers independently.”
- Students engaged in tasks associated with CCGPS more during school year 2012-2013 than in previous academic years.

Results

Findings related to teacher practice change

Achieve, U.S. Education Delivery Institute (EDI) and Education First collaborated on an item bank of survey questions states could use to assess their transition to the *Common Core State Standards*. GOSA adapted several of the questions in this item bank for the *Teacher Survey*. In the item bank, Achieve, U.S. EDI, and Education First included a question which provided six practices, with three of them being closely related to *Common Core State Standards* implementation. The collaborators consider all the practices to be strong; however, the three highlighted practices are more closely related to the new standards.³³ Table 18 shows how teachers surveyed responded to this question.

³³ "Survey item bank," *Feedback Loops for Common Core State Standards Implementation* | U.S. Education Delivery Institute, 5 June 2012, U.S. Education Delivery Institute, 10 Mar. 2013 <<http://www.deliveryinstitute.org/publications/feedback-loops-common-core-state-standards-implementation>>.

Table 18: (Q11) What practices are you implementing in your CCGPS classroom? Check all that apply.

	Percent	Frequency
Practice 1: Incorporating new curricular materials and instructional strategies in my teaching.	82%	807
Practice 2: Asking students more questions and encouraging them to develop answers independently.	83%	817
Practice 3: Structuring opportunities for students to develop and solve their own problems.	70%	692
Practice 4: Increasing my use of out-of-state teaching resources.	35%	343
Practice 5: Diversifying the ways I assess student learning and providing feedback.	67%	662
Practice 6: Increasing my collaboration with colleagues within my school and in other schools.	75%	735

The majority of respondents indicated that they implemented most of the practices listed in question 11. The only practice that less than 50% of the respondents said they implemented was increasing their use of out-of-state resources. Although respondents said they are implementing strong practices, the top three selected practices included only one of the practices closely related to *Common Core* implementation. State and local education leaders should determine if additional training and/or support is needed to help ensure teachers are implementing proper practices.

The logic model implies that if teachers have CCGPS-related supports that they find helpful, then they will use these supports and eventually, their practice will improve. The logic model concludes with the belief that strong teacher practice will contribute to improved outcomes for students. Therefore, GOSA examined the pattern between perception of professional development and implementation of CCGPS-related practices. GOSA grouped respondents based on their responses to the professional development questions to examine how the two groups differed on implementation of CCGPS-related teacher practices. Tables 19 and 20 display the results of these comparisons.

“I believe that I have been my biggest challenge. When you've been teaching a certain way for so long, it takes a lot of practice to do things that were routine a different way.”

Table 19: Differences in implementation of CCGPS-related practices

	Implemented Practice 1	Implemented Practice 2	Implemented Practice 3	Implemented Practice 4	Implemented Practice 5	Implemented Practice 6
<u>Group 1</u> Applied PD	85% (722)	86% (731)	73% (617)	35% (296)	70% (593)	76% (649)
<u>Group 2</u> Did not apply PD	62% (85)	62% (86)	54% (75)	34% (47)	50% (69)	62% (86)
Significance	.000**	.000**	.000**	.854	.000**	.000**

ANOVA, p-value: ** $p < .01$, * $p < .05$

Table 20: Differences in implementation of CCGPS-related teacher practices

	Implemented Practice 1	Implemented Practice 2	Implemented Practice 3	Implemented Practice 4	Implemented Practice 5	Implemented Practice 6
<u>Group 1</u> PD contributed to fidelity of implementation	86% (604)	88% (613)	74% (521)	35% (244)	73% (514)	79% (552)
<u>Group 2</u> PD did not contribute to fidelity of implementation	71% (202)	72% (203)	60% (169)	35% (98)	52% (147)	64% (181)
Significance	.000**	.000**	.000**	.946	.000**	.000**

ANOVA, p-value: ** $p < .01$, * $p < .05$

As previously mentioned, GOSA did not conduct statistical tests to establish correlations or causality. Therefore, further investigation is needed to determine if relationships exist between teacher practice change and professional development. However, a one-way analysis of variance revealed significant differences between the groups. In this study, GOSA found that teachers who had a more positive perception of professional development were more apt to implement *Common Core* related practices than other teachers. With the exception of one practice, respondents differed significantly in their implementation of every practice.

Although the group of respondents who had a higher level of agreement to the professional development statements selected the three CCGPS-practices at a higher rate than the other group, it is important to note the top three selected practices remained practices 1, 2 and 6. Practice 2 was the only CCGPS-related practice in the top three. Further investigation is needed to determine if teachers need additional support or guidance related to structuring opportunities for students to develop and solve their own problems and diversifying the ways they assess student learning and give feedback.

“One of the biggest things that I have done this year is ask the questions ‘Why?’ all the time. I have had them draw, solve, and explain word problems to help them better understand the concept.”

As evidenced by the data, teachers that benefitted from professional development also implemented practices aligned to CCGPS more than those who did not benefit as much. Ultimately, the purpose of CCGPS is to improve education in Georgia and lead to positive student outcomes. However, the standards by themselves cannot effect change. According to the Fordham Institute, “standards describe the destination that schools and students are supposed to reach, but by themselves have little power to effect change. Much else needs to happen to successfully journey toward the destination.”³⁴ In order to truly achieve the goals of Common Core - higher levels of learning and achievement for all students there must “close alignment of the *written, taught, tested, and attained curriculum*.”³⁵

Findings related to student practice change

Although it is too early to assess the standards’ impact on student learning, this survey produced evidence that showed students are starting to think and learn differently, which is necessary to meet the rigor of CCGPS. The *Teacher Survey* asked respondents to state how frequently their students behaved in ways aligned to CCGPS. The change in how frequently students exhibit behaviors aligned with CCGPS is an interim measure of student outcomes. If students are learning in a way that is aligned with CCGPS, then it is more likely that they will be prepared for the summative assessments based upon these standards.

Some of the requirements of the *Common Core State Standards* for K-12 ELA and literacy are:

- Expand the quality and volume of what “students read in order for students to become proficient at higher levels of thinking and comprehension.”³⁶
- Reading content “should include, but not be limited to, classic and contemporary literature, myths and poems, dramas, stories from diverse cultures, U.S. founding documents, and American literature.”³⁷

³⁴ Maryann D. Wiggs, "Gaining a Deeper Understanding of the Common Core State Standards: The Big Picture," [Navigating implementation of the common core state standards](#), by Douglas B. Reeves (Englewood, CO: Lead + Learn P, 2011) 25.

³⁵ (Wiggs 25)

³⁶ (Wiggs, 31)

- A “deliberate shift toward a focus on nonfiction writing as evidenced by the emphasis on arguments and informational /explanatory text types.”³⁸
- Students must be able to “conduct research that results in both short and more substantial formal writing projects.”³⁹

Some of the requirements of the Common Core State Standards for mathematics are:

- “In grades K-5, students gain a solid foundation in whole numbers, addition, subtraction, multiplication, division, fractions, and decimals.”⁴⁰
- “In grades 6-8, students continue to build upon the strong foundation formed in grades K-5 through hands-on learning in geometry, algebra, probability, and statistics.”⁴¹
- High school students are expected to master the conceptual categories of “modeling,” “number and quantity,” “algebra,” “functions,” “geometry,” and “statistics and probability.”⁴²
 - Students “to practice applying mathematical ways of thinking to real-world issues and challenges” at the high school level.⁴³

“My students really enjoyed the literature we read. I had students who didn’t like to read aloud. Now they love it and it has increased their ability to read with fluency and recognize words.”

Findings from the *Teacher Survey* suggest that students engaged in tasks associated with CCGPS more after the state transitioned to the new standards during school year 2012-2013. Across the board, the number of respondents who said their students “never” or “a few times a year” engaged in various mathematics and ELA learning tasks related to CCGPS decreased. The number of respondents who said their students engaged in these tasks “daily” increased. These differences were statistically significant.⁴⁴ Tables 21 and 22 display the comparisons.

³⁷ (Wiggs, 33)

³⁸ (Wiggs, 38)

³⁹ (Wiggs, 38)

⁴⁰ (Wiggs, 49)

⁴¹ (Wiggs, 50)

⁴² (Wiggs, 51)

⁴³ (Wiggs, 53)

⁴⁴ GOSA used a paired samples t-test to determine differences in frequency of student engagement in CCGPS-aligned tasks. Paired samples t-test are used to measure differences in a set of paired observations. This was the appropriate test because GOSA wanted to measure differences in student engagement before the implementation of CCGPS and after the implementation of CCGPS.

Table 21: Differences in student engagement in CCGPS-related tasks in ELA

	BEFORE transitioning to CCGPS	AFTER transitioning to CCGPS	Mean Difference	Significance
Monitoring reading by slowing down, rereading sentences, and using context clues to determine meaning	3.42	3.65	-.230	.000**
Comparing and contrasting, analyzing, synthesizing, evaluating, judging, and defending ideas they encounter in informational reading	2.80	3.36	-.558	.000**
Writing quality first drafts under time constraints	2.16	2.56	-.395	.000**
Acquiring knowledge of vocabulary by encountering words in context more than once	3.20	3.50	-.297	.000**
Reading increasingly complex texts with increasing independence	2.82	3.28	-.458	.000**
Drawing evidence from texts to support written responses	2.49	3.15	-.658	.000**

Paired Samples T-Test, p-value: **p<.01, *p<.05

Table 22: Differences in student engagement in CCGPS-related tasks in mathematics

	BEFORE transitioning to CCGPS	AFTER transitioning to CCGPS	Mean Difference	Significance
Problem-solving that goes beyond story or word problems	2.40	3.13	-.729	.000**
Effectively struggling with problems to deepen their understanding	2.53	3.24	-.711	.000**
Using various approaches and drawing on knowledge to justify ideas when solving problems	2.87	3.46	-.594	.000**
Using real data and current events to create problems and solutions	2.04	2.64	-.599	.000**
Using tables, graphs, words, symbols and pictures to determine which representations of data are best in certain circumstances	2.49	2.89	-.401	.000**
Offering speculations and assumptions regarding open-ended questions	2.34	3.06	-.722	.000**

Paired Samples T-Test, p-value: **p<.01, *p<.05

While this data showed students represented by teachers in this survey engaged in CCGPS-related tasks more after the state transitioned to CCGPS, it is important to note the design of these questions. GOSA used a “retrospective pretest-posttest” survey design for questions 14 and 17. This design allows researchers to collect information through one survey administration. However, this design is also subject to several weaknesses. For example, some respondents might try to provide responses that they think are aligned with what the researcher wants to know. This is called “a good subject effect.”⁴⁵ Also, respondents are more prone to “threats to validity such as memory recall, history, and regression to the mean.”⁴⁶

“I had a class that was ready for the change in how we do mathematics. They liked the challenge of going beyond the computation and understanding why it makes sense.”

However, open-ended comments also indicated that students engaged in practices associated with CCGPS more during school year 2012-2013 than previous years. Several respondents listed positive accomplishments with students as their biggest success over the school year. Teachers described improvements in their students’ critical and independent thinking abilities, as well as achievement gains. A few respondents shared that their students enjoyed CCGPS and that the new standards led to the creating of more enjoyable learning environments for some students. Refer to Appendix C: Major Successes for a full list of the major successes referenced by respondents.

Still, numerous respondents shared challenges related to student ability as well. Many respondents explained that their students were not prepared for the rigor of CCGPS. A few respondents discussed challenges with their special education and English Language Learner (ELL) students in particular.

⁴⁵ Theodore Lamb, “The Retrospective Pretest: An Imperfect but Useful Tool,” The Evaluation Exchange Summer 2005 XI (2005): Harvard Family Research Project, 10 Sept. 2013 <<http://www.hfrp.org/evaluation/the-evaluation-exchange/issue-archive/evaluation-methodology/the-retrospective-pretest-an-imperfect-but-useful-tool>>.

⁴⁶ Ibid.

Conclusion

Findings from the first administration of the *Teacher Survey on CCGPS Implementation* showed that respondents had resources and professional development to help them implement CCGPS. Overall, these supports aided teachers in their implementation of the new standards. In turn, teachers and students changed practice. Teachers engaged in practices associated with CCGPS, like asking students more questions and encouraging them to develop answers independently. Teachers reported that students worked independently, questioned, and thought critically more during school year 2012-2013 than in previous school years.

“Students are exploring different ways to come up with the correct answer. Confidence is soaring!”

Open-ended comments contextualized survey statements. A large number of respondents provided positive feedback about their implementation. As shown in C, respondents most often shared major successes related to changes in their students’ ability, improved teacher practice, and an overall approval of CCGPS. Still, challenges remain. According to the challenges discussed in Appendix D, access and availability of resources made CCGPS implementation difficult for many respondents. Also, respondents expressed a need for more information and guidance related to implementing the standards. While some respondents applauded the new standards for pushing teachers and students to increase expectations and work with heightened rigor, other respondents felt the new standards were too challenging for students who often entered their classes behind grade level.

Based on the findings from this survey, GOSA recommends state and local education leaders further investigate CCGPS implementation. In particular,

- **Investigate the quality of support being made available to mathematics teachers and teachers in districts labeled “suburb.”** The mathematics and “suburban” teachers in this survey tended to display a lower level of satisfaction with the supports being made available to them. A review of other measures, like student achievement data, could help pinpoint specific grade-levels or districts in need of additional support.
- **Review the ease of access of state and district websites.** While respondents generally found access to resources on GaDOE and district websites convenient, there were alternative methods that some respondents found more convenient. Also, many respondents commented on a general frustration related to finding appropriate resources. Since this study found that teachers who struggled with accessing resources also used resources less than other teachers, state and local education leaders should consider exploring options to improve access to high-quality resources for teachers.

- **Review the quality of professional development and resources being made available to educators.** Several of the findings demonstrate a pattern among teachers' practices and their perception of the support they receive. Respondents who implemented practices aligned with CCGPS frequently used resources and attributed CCGPS supports to their ability to implement CCGPS with fidelity were also the respondents with more positive perceptions of CCGPS supports.
- **Use teacher effectiveness and student achievement data to substantiate the findings from this study.** The first administration of the Teacher Survey suggested that teacher and student practice aligned with CCGPS. In the future, data from Teacher Keys Effectiveness System (TKES) and state assessments can help to further demonstrate how teachers and students are adapting to CCGPS. State and education leaders should ensure systems are in place to review this data in conjunction with qualitative measures, like surveys and focus groups, once the data are available.

GOSA will administer the *Teacher Survey* in fall 2013 and again in spring 2014.