

# Culturally Responsive Instruction Observation Protocol (CRIOP) Professional Development: Year 3

**Program Evaluation**

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## TABLE OF CONTENTS

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<b>Executive Summary .....</b>	<b>vi</b>
<b>Professional Development Components .....</b>	<b>vi</b>
<b>Effects of the Professional Development .....</b>	<b>vi</b>
<b>Conclusions .....</b>	<b>vii</b>
<b>Introduction and Background .....</b>	<b>1</b>
<b>Overview of Evaluation.....</b>	<b>1</b>
<b>Background and Description of CRIOP Model .....</b>	<b>1</b>
<b>Components of Planned Professional Development Model.....</b>	<b>2</b>
Summer Training.....	2
School-based Mentoring .....	3
<b>Descriptions of Schools and Teachers .....</b>	<b>3</b>
Participating Schools .....	3
Teacher Participants.....	4
<b>Evaluation of Professional Development Implementation .....</b>	<b>5</b>
<b>Implementation Evaluation Measures, Data Collection, and Analysis .....</b>	<b>5</b>
Summer Training.....	5
School-based Mentoring .....	5
<b>Implementation of the Professional Development Model.....</b>	<b>5</b>
Summer Training.....	5
School-based Mentoring .....	6
<b>Evaluation of Classroom Implementation .....</b>	<b>6</b>
<b>Classroom Implementation Measures, Data Collection, and Analysis.....</b>	<b>6</b>
CRIOP.....	6
Observers, Training and Inter-rater Reliability .....	6
Teacher Interviews .....	7
<b>Classroom Implementation Results.....</b>	<b>8</b>
Change in Classroom Practices.....	8
Teachers' Perceptions of CRI.....	9
Teachers' Perceptions About Successes with Using CRI.....	9
Teachers' Perceptions About Challenges with Using CRI .....	12
Teachers' Perceptions of CRIOP Professional Development .....	15
<b>Evaluation of Outcomes for Teachers, Students and Teacher Educators .....</b>	<b>16</b>
<b>Outcome Measures, Data Collection, and Analyses.....</b>	<b>17</b>
Teacher Surveys .....	17
Measures of Academic Progress (MAP) .....	17
<b>Outcome Results .....</b>	<b>18</b>

## CRIOP PROFESSIONAL DEVELOPMENT: PROGRAM EVALUATION

Teacher Efficacy .....	18
Effect of Professional Development on Teachers' CRIOP Scores .....	18
Effect of Professional Development on Teachers' CRTSE Scores .....	19
Student Achievement .....	19
Student Achievement and Teacher Professional Development.....	20
<b>Student Performance .....</b>	<b>21</b>
<b>MAP Performance .....</b>	<b>21</b>
MAP Reading Performance .....	21
MAP Mathematics Performance .....	21
Comparison by Gains by Gender, Ethnicity, and ELL .....	21
MAP Reading .....	21
MAP Mathematics.....	21
English Language Learners' (ELL) MAP Reading Scores .....	22
English Language Learners' (ELL) MAP Mathematics Scores.....	22
<b>Culturally Responsive Instruction and Student Achievement .....</b>	<b>23</b>
High vs. Low Implementation of Culturally Responsive Instruction .....	23
<b>Standardized Learning Gains.....</b>	<b>24</b>
Reading Performance .....	24
Math Performance .....	25
<b>Discussions and Conclusions.....</b>	<b>25</b>
<b>References .....</b>	<b>28</b>

## LIST OF TABLES

---

	<b>PAGE</b>
Table 1 School Demographic Data.....	4
Table 2 Education Level .....	4
Table 3 Years' Experience at School Site .....	5
Table 4 Teachers' Interview Responses Coded by CRIOP Pillar .....	14
Table 5 CRIOP Scores .....	18
Table 6 CRSTE Survey Scores .....	19
Table 7 Number of Students at School Sites.....	19
Table 8 Students by Grade .....	20
Table 9 Student Characteristics by Ethnicity .....	20
Table 10 EL Students by Grade.....	20
Table 11 Number of Students Taking MAP Tests by Administration.....	21
Table 12 EL's MAP Reading Scores .....	22
Table 13 EL's MAP Mathematics Scores.....	23
Table 14 Standardized Learning Gains Reading High and Low Implementation Means .....	25
Table 15 Standardized Learning Gains Math High and Low Implementation Means .....	25

## **Executive Summary**

This evaluation examines the professional development activities of the Center for Culturally Responsive Pedagogy funded through a National Professional Development Program Grant from the U.S. Department of Education Office of English Language Acquisition. This report focuses on the third year of a five-year project. Professional development that focused on the Culturally Responsive Instruction Observation Protocol (CRIOP) was provided for 25 educators (22 teachers, two administrators and one library media specialist) in four elementary schools in central Kentucky. The year-long professional development included school- and project-wide training sessions along with school- and classroom-based coaching. Effects of the evaluation were investigated through pre- and post-teacher surveys, classroom observations using the CRIOP, teacher interviews, and student assessments. The specific components of the professional development and its effects are presented below.

### **Professional Development Components**

- Each teacher participated in summer professional learning experiences focused on implementing culturally responsive practices. Focal topics at individual schools included family collaboration, instructional practices for academic language development, creating welcoming schools, and using inquiry in the classroom. During the year, a full-day workshop was provided on vocabulary development. Additional grade-level professional development meetings were held prior to the start of school.
- School- and classroom-based coaching was provided for teachers in implementing the CRIOP elements. Coaching focused on curriculum development, instructional planning, and implementation of culturally responsive teaching practices.

### **Effects of the Professional Development**

- Student achievement in reading and math for students in participating teachers' classrooms, as measured by MAP assessments, improved significantly from fall to spring of the school year. Reading and mathematics scores for English Learners (ELs) increased significantly, with the majority of these students gaining more than one year's growth. In mathematics, overall mean scores indicated greater than expected growth for ELs at all grade levels.
- Pre- and post-classroom observations using the CRIOP as an evaluative tool to measure teachers' culturally responsive practices indicated that teachers' implementation of culturally responsive instruction was significantly higher as a result of participation in the professional development.

- Teachers' self-efficacy for implementing culturally responsive instruction increased significantly, as demonstrated by participants' survey responses on the Culturally Responsive Teaching Survey (Siwatu, 2007).
- Teachers' interview responses revealed major themes related to successes such as building relationships with students, incorporating vocabulary instruction, improving student learning and understanding cultural differences.
- Teachers reported constraints due to the required curriculum, limitations of time, and language barriers in communicating with parents.

### **Conclusions**

As was the case during the first two years of this professional development project, project staff achieved high implementation of the professional development model during the third year. Classroom observations and interviews indicated teachers' learning and implementation of new practices improved as a result of the model. Increases in implementation from pre-, mid-, and post-observations show growth in development over time and illustrate the power of school-based coaching and mentoring for supporting teachers as they try new approaches in their work with students. Despite challenges that serve as barriers to implementation, teachers perceived positive outcomes for students related to their implementation of the practices they learned through the professional development model. The project's strengthened focus on vocabulary instruction paid off in that teachers reported successes with vocabulary development. Outcome results are again positive in the third year of the project. Although it is impossible to attribute student progress to the project alone in the absence of a comparison group, the data serve as supportive documentation of participating teachers' efforts to meet the needs of their ELs across the year they participated in the project, and the data provide validation of the project staff's strategies to support those teachers.

## **Introduction and Background**

### **Overview of Evaluation**

This evaluation focuses on the professional development activities of The Center for Culturally Responsive Pedagogy funded through a National Professional Development Program Grant from the U.S. Department of Education Office of English Language Acquisition. This five-year project provides school-based professional development in the Culturally Responsive Instruction Observation Protocol (CRIOP). Since the project's onset in 2011-2012, 80 K-5 educators have participated in the professional development. During the third year of the project's implementation, 25 K-5 educators from four elementary schools in central Kentucky participated in the project. This evaluation report focuses on the project's third year.

The project's evaluation examined implementation and effects of the program on teachers and students. To investigate the effects of the professional development model, evaluators examined outcomes related to teachers' self-efficacy for implementing culturally responsive instruction (CRI), change in implementation of the CRIOP model over time, and change in students' performances in reading and math. Data were disaggregated for English Learners (ELs) and for other student groups. The evaluation answered the following questions:

- What was the level of implementation of the professional development model in terms of teacher participation in professional development and provision of school-based coaching?
- What was the impact of the professional development model on teachers' efficacy for culturally responsive instruction?
- What were changes in teachers' implementation of the CRIOP model over their year of participation?
- What were teachers' perceptions of their successes and challenges in implementing the CRIOP model?
- What were changes in students' achievement in reading and math during the year their teachers participated in the professional development model? For ELs? For other groups of students?
- What was the relationship between teachers' implementation of the CRIOP model and student achievement in reading and math?

### **Background and Description of CRIOP Model**

The CRIOP is an instructional framework and measurement tool designed to assess and support instruction in six components of culturally responsive instruction: classroom



relationships, family collaboration, assessment, instruction/pedagogy, discourse, and socio-political consciousness.

The CRIOP instrument consists of the six holistic areas of culturally responsive instruction listed above and 24-23 specific indicators of culturally responsive practices, with examples and non-examples included for comparison and evaluation. Ratings are assigned for observed CRI practices on a 4-point scale: 1=not at all, 2=occasionally, 3=often, and 4=to a great extent. Classroom observations are the primary data sources for the instrument. A teacher interview component, consisting of a *Post-Observation Teacher Interview* and a *Family Collaboration Interview*, is an additional element of the protocol.

The CRIOP was developed as the result of a Collaborative Center for Literacy Development (CCLD) research initiative exploring literacy instructional practices in schools receiving state funding for a reading intervention program in elementary schools. Data collected over three years revealed that while reading instructional intervention resulted in improved student achievement overall, gaps in achievement remained between students from middle-class White backgrounds and students from culturally and economically diverse backgrounds. Researchers noted that culturally responsive instructional practices were observed infrequently in these classrooms.

The research team conducted a comprehensive review of published literature relating to CRI and categorized their findings into themes. The themes targeted by the team were identified as major components of culturally responsive instruction and incorporated as pillars of the CRIOP instrument. This work led to the publication of an over-arching edited text entitled *Literacy for All Students: An Instructional Framework for Closing the Gap* (Powell & Rightmyer, 2011), which provided conceptual and research support for the CRIOP components.

### **Components of Planned Professional Development Model**

This project intends to serve at least 25 in-service teachers per year (125 total) who serve ELs in their classrooms and who also teach math and science as part of the curriculum. The CRIOP professional development model includes summer training for teachers, school-based mentoring to encompass professional development sessions, site-based instructional coaching, and revision of teacher preparation course syllabi.

**Summer training.** Plans for the CRIOP professional development grant, as indicated in the grant proposal, included two summer training days for participating teachers led by the project director and the ESL consultant. The professional development sessions were designed to focus on developing relationships with families of ELs. Sessions focused on barriers, recommended instructional practices and ways to embed parent involvement and family

collaboration into the classroom curriculum. Other components discussed related to discourse, sociopolitical consciousness, and assessments; specifically what they are, how they might look in the classroom, and recommendations for engaging all classroom learners in them. In addition, plans included a July or August social event in local communities of participating schools and/or teacher visits to students' homes prior to the beginning of the school year.

**School-based mentoring.** During the fall semester, participating teachers were to take part in two days of professional development encompassing theories and application of second language acquisition and technology applications for ELs. The training sessions were to be led by the project director, school-based coach, a bilingual consultant, a technology consultant, and a representative from the Kentucky Department of Education. In addition, two professional development days focusing on implementing components of the CRIOP were to be held in the spring semester, with follow-up occurring with participating teacher teams in project schools.

Site-based coaching was planned for participating teachers throughout the school year. The project director and the school-based coaches were to provide classroom and instructional support for teachers. Coaching was intended to support curriculum development, instructional planning, and implementation of culturally responsive teaching practices. Videotaping of lessons, peer analysis, and critique related to implementation of elements of the CRIOP were part of the year-long intensive professional development training.

### **Description of Schools and Teachers**

**Participating schools.** In the third year of project implementation, participants who had not previously participated in the project were drawn from four elementary schools. Two of these schools had also participated in the first two years of the project. School A is one of three elementary schools in a county school district in a rural area. School B is in an independent elementary school district located in a town with a population of approximately 10,000 (US Census Bureau, 2013). Schools C and D were two of eight public elementary schools located in a small city with a population of approximately 32,000 (US Census Bureau, 2013). Each of the participating schools had attendance rates slightly above the state average. Percentages of students receiving free or reduced lunch were relatively high across all schools. Table 1 includes student enrollment, free/reduced lunch participation, spending per student, and attendance rates for each of the participating schools.

Table 1

*School Demographic Data*

School	Student Enrollment	Free/Reduced Lunch Status %	Spending Per Student	Attendance Rate %
School A	452	69	\$ 7,718	95.4
School B	364	81	\$10,851	95.6
School C	580	35	\$ 6,589	96.1
School D	672	30	\$ 6,949	96.5

*Note:* Data obtained from Kentucky School's Report Card (2014).

**Teacher participants.** Twenty-five teachers participated in the evaluation. Participants were predominantly female (females  $n = 21$ , 84%; males  $n = 4$ , 16%), were primarily White ( $n = 24$ , 85.2%; African American  $n = 3$ , 11.1%; Other  $n = 1$ , 3.7%), and were all native speakers of English ( $n = 25$ , 100%). Twenty teachers taught in self-contained elementary classrooms (preschool  $n=1$ , kindergarten  $n = 2$ , first grade  $n = 4$ , second grade  $n = 1$ , third grade  $n = 6$ , fourth grade  $n = 2$ , fifth grade  $n = 2$ ), two teachers taught Special Education, two were administrators and one was a Media Specialist. Teachers' education and experience levels are found in Tables 2 and 3.

Table 2

*Education Level*

Statistic	Degree				
	Bachelor's	Master's	Specialist	Doctorate	Total
Frequency	5	14	6	0	25
Percentage	20%	56%	24%	0%	100%

Table 3

*Years' Experience at School Site*

Statistic	Years					Total
	0-3	4-7	8-11	12-15	16+	
Frequency	13	3	3	4	2	25
Percentage	52%	12%	12%	16%	8%	100%

### Evaluation of Professional Development Implementation

#### Implementation Evaluation Measures, Data Collection, and Analysis

The evaluation of the CRIOP professional development implementation was conducted through data collected from summer training for teacher participants and school-based mentoring.

**Summer training.** The project director kept attendance records of educators who attended the training sessions, and those records were submitted to evaluators. The project director and school-based coaches documented the names of teacher participants who attended sessions, the number of hours per session, and the focus and topics of discussion from each summer session. In addition, an evaluator attended institute sessions conducted for all teacher participants and kept field notes of session topics, discussions, and participant activities.

**School-based mentoring.** The project director and school-based coaches maintained coaching logs of classroom coaching, planning meetings, classroom observations, and school-based professional development conducted with participating teachers.

#### Implementation of the Professional Development Model

**Summer training.** During the summer preceding the 2014-15 school year, participating teachers attended summer training sessions that focused on implementing culturally responsive instruction. The project director and school-based coaches planned these training sessions according to the perceived needs of participating teachers. At these sessions, elements of the CRIOP were presented and discussed. Focal topics at individual schools included family collaboration, instructional practices for academic language development, creating welcoming schools, and using inquiry in the classroom.

**School-based mentoring.** Across the 2014-2015 school year, on-site coaches provided classroom support, individual coaching, and mentoring to participating teachers. Classroom support included modeling instructional practices and classroom teaching, securing instructional resources, and providing regular feedback to teachers. One coach (the project director) spent approximately three days (21 hours) each week at School A. A second coach spent one day each week (7 hours) at School B. A third coach spent two days a week at School C (14 hours) and two days a week at School D (14 hours).

### **Evaluation of Classroom Implementation**

#### **Classroom Implementation Measures, Data Collection, and Analysis**

**CRIOP.** The CRIOP is a 6-item observational inventory used to measure culturally relevant classroom instruction. Prior reliability analyses have yielded Cronbach's alpha values of .88 and .94 (Malo-Juvera, Powell, & Cantrell, 2013), and .78 and .76 (Powell, Cantrell, Malo-Juvera & Correll, 2014). In this third year of the evaluation, the fall administration of the CRIOP (holistic) had a Cronbach's alpha of .61, while the spring administration of the CRIOP (holistic) had a Cronbach's alpha of .77.

Evaluators used the CRIOP to conduct three observations in the classrooms of participating teachers: In the spring of 2014, in the middle of the 2014-2015 school year, and in the spring of 2015. Spring 2014 observations took place in May 2014, prior to teachers' participation in any professional development. Mid-year observations took place in January and February; while spring 2015 observations were conducted in March and April, at least 2.5 months after teachers' mid-year observations. Classroom observations occurred during literacy or content-area instructional times and included whole-class and/or small-group instruction and student independent activities. Learning events, teacher-student interactions, cooperative groups, and peer conversations were included in the observations. Observations were conducted for at least 2.5 hours in each classroom, and researchers took field notes at five-minute intervals for the duration of each session.

**Observers, training, and inter-rater reliability.** Two trained field researchers conducted the CRIOP classroom observations. Field Researcher One is a former elementary classroom teacher, holds a masters' degree in literacy, is experienced in student teacher supervision, and is a full-time doctoral student. Field Researcher Two holds a masters' degree and is a full-time doctoral student in literacy.

In the spring of 2014, Field Researcher Two used the CRIOP instrument to evaluate a video of a classroom teacher conducting a reading lesson. She then assigned ratings for each CRIOP indicator and holistic area. Field Researcher One had independently viewed the classroom reading lesson video and had assigned ratings for each CRIOP indicator and pillar.

The two field researchers compared their CRIOP ratings, discussed each assigned score, and explained their reasoning for each rating. Subsequently, Field Researchers One and Two independently evaluated a video of a classroom teacher conducting a math lesson and used the CRIOP to assign ratings for each CRIOP indicator and holistic area. CRIOP ratings assigned by the two researchers were then compared. Agreement on the holistic rating for the 6 pillars was >.80.

**Teacher interviews.** Following each CRIOP classroom observation, field researchers conducted an audio-recorded interview with each participating classroom teacher. Using the CRIOP Post-Observation Teacher Interview Protocol and the CRIOP Family Collaboration Teacher Interview Protocol, researchers conducted semi-structured interviews. Researchers kept field notes during each interview. Questions asked during the CRIOP post-observation interview were:

- Was the lesson(s) that you taught today typical of your classroom instruction? If not, please describe how the lesson was different. Are there other lesson components that you usually include in your classroom that you didn't include in this lesson?
- What are your biggest successes with using Culturally Responsive Instruction with your students?
- What are your biggest challenges with using Culturally Responsive Instruction with your students?
- Is there anything else you'd like to add?

During the spring classroom observations, three additional questions were added to the post-observation interview protocol:

- What are your judgments about the quality/effectiveness of the professional development sessions? School-based coaching?
- What aspects of the professional development were most helpful to you, and why?
- What aspects of the professional development were least helpful to you, and why?

The CRIOP Family Collaboration Interview Protocol comprised the following questions:

- Please tell me about the conversations you have had with the parents/caregivers of your students. Where did these meetings occur? What did you learn from those conversations?
- Have you used this information to plan for instruction, either for individual students or for the whole class? If so, how have you used it? If not, please explain.

- What methods do you typically use to communicate with parents/caregivers? How often does this communication occur? Please describe all of the methods you use (notes home, phone calls, home visits, social events, parent workshops, etc.).
- If you have conducted home visits, what is the purpose for the visits? What information do you gather? How do you use that information?
- Do parents/caregivers participate in classroom activities and events? If yes, describe how they participate.
- What else can you tell me about how you work with the families of the students in your class?

Teachers' interview responses were analyzed during a two-phase process utilizing a priori and inductive coding. For the first phase of analysis, the fourth author read the interview data and assigned codes representing the six areas of CRI from the CRIOP. Teachers' responses to questions about teachers' definitions of CRI, their biggest successes with CRI, and their biggest challenges with CRI were analyzed. Each response was categorized according to the CRIOP element most descriptive of the response. Following the a priori analysis, interview data were then analyzed and coded inductively. Conceptual links between codes were merged and themes were created from the compiled code list. Inductive analysis of the interview data contextualized findings from the general understandings gained through utilizing the CRIOP holistic elements for coding of the data.

### **Classroom Implementation Results**

**Change in classroom practices.** Statistical analyses were conducted to determine if teachers' culturally relevant instruction as measured by the CRIOP significantly increased post intervention. Data were collected and analyzed for the 22 teacher participants in the program. Evaluators hypothesized that teachers who participated in the professional development would significantly increase their culturally relevant classroom instructional behaviors as measured by the CRIOP ( $p < .05$ ). A repeated measures ANOVA was conducted using CRIOP fall and spring observations.

A one way repeated measures ANOVA was conducted to determine if teachers' scores on CRIOP observations increased significantly between spring 2014 observations ( $\bar{x} = 14.10$ ,  $s = 1.30$ ), winter 2014 observations ( $\bar{x} = 16.38$ ,  $s = 2.31$ ) and spring 2015 observations ( $\bar{x} = 16.57$ ,  $s = 2.48$ ). Results show that teachers' culturally relevant instruction as measured by CRIOP was significantly different across the three observations, Wilks's  $\Lambda = .26$ ,  $F(2, 19) = 27.13$ ,  $p < .001$ , partial  $\eta^2 = .74$  (see Table 1).

Follow up pairwise comparisons indicated that CRIOP scores increased significantly from spring 2014 observations to the winter 2014 observations ( $p < .001$ ; partial  $\eta^2 = .72$ ), and increased significantly from spring 2014 observations to spring 2015 observations ( $p < .001$ ; partial  $\eta^2 = .63$ ); however, scores were not significantly different from winter 2014 observations to spring 2015 observations ( $p = .62$ ).

**Teachers' perceptions of CRI.** By analyzing interview data regarding teachers' perceptions about the implementation of culturally responsive instruction into their classrooms, evaluators were able to discern the CRIOP elements that teachers implemented most and least readily. Data from spring 2014 (prior to teacher professional development and coaching) and spring 2015 (after a year of professional development and coaching) interviews allowed evaluators to analyze changes in teachers' perceptions over time. Table 4 delineates teachers' interview responses coded by CRIOP pillars from pre- and post-CRIOP implementation interviews.

In both the pre- and post-interviews, teachers defined CRI predominantly through Instructional Practices, with some teachers incorporating Classroom Relationships into their definitions as well. Teachers most often identified their CRI successes through changes they had made in Classroom Relationships and Instructional Practices. In the pre-interview, teachers spoke most readily about successes with Classroom Relationships; whereas, in the post-interview, teachers spoke in a more balanced way about successes with both Classroom Relationships and Instructional Practices. In the post-interview teachers also included successes with Family Collaboration, Discourse and even Sociopolitical Consciousness. In regards to CRI challenges, in the pre-interview, most teachers responded that their biggest areas for continued growth arose from Instructional Practices, although Classroom Relationships and Family Collaboration were noted challenges as well. Interestingly, teachers were more likely to share difficulties across CRI elements in the post-interview. Instructional Practices and Family Collaboration were the two most mentioned challenges; however, Discourse and Classroom Relationships were addressed as well, although rarely. Overall, Assessment Practices, Sociopolitical Consciousness, and Discourse were mentioned infrequently, if at all, in response to questions about definitions of CRI and successes or challenges with CRI.

**Teachers' perceptions about successes with using CRI.** During the CRIOP post-observation and family collaboration interviews, participating teachers expressed their perceptions of their own effectiveness in implementing CRI with their students. Teachers also reflected on their biggest successes with culturally responsive practices. A number of themes emerged as teachers' responses were analyzed, compared, and coded. Teachers' interview responses revealed major themes related to successes such as building relationships with



students, incorporating vocabulary instruction, improving student learning and understanding cultural differences.

***Building relationships with students.*** Many teachers noted the successful impact that getting to know their students on an individual level had made on their students' learning. These teachers perceived that because they had intentionally invested personal time in each student, their students participated more in class and asked more questions when they were confused. One teacher noted the physical difference she saw in her student "just by being able to open up the communication more between (them)." This teacher saw her new student from Mexico change from a shy, sad child at the beginning of the year to one who became excited to speak to all of the teachers in the hallway. Other teachers reflected on the ability to reach their students better by getting to know them as a "whole person." One fourth-grade teacher stated:

If I had to say the biggest thing that has been successful, it would be building the relationships with my students this year and building a climate where, I mean, they really care about one another and I hope that I can redo that again. I would contribute all of that to honing in on their personal lives and talking about home, bringing pictures from home, and writing books about home . . . It has made a world of difference in what they've learned. I mean, they want to learn. They are excited about learning . . . They love to share and I've never had that before.

***Vocabulary instruction.*** A number of participating teachers across the grade levels reflected on the success of implementing purposeful vocabulary instruction into their curriculum<sup>1</sup>. Through teaching their children to look for context clues and to understand that some words in the English language have more than one meaning, for example, teachers in all grade levels saw benefits in their students' learning. A first grade teacher shared that she found that vocabulary instruction brought clarity to her students:

They have misconceptions about some things and so really focusing on pulling out those vocabulary words through the text that we read, through conversations that we have . . . talking about them has really cleared up some of those . . . Or even when we are in small groups, when I think that they might know a word that we read in a story, to be able to talk about it and really focus on the words that I think that they would know has really helped, too. Not only for my (EL) student but for all of them.

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<sup>1</sup> It is interesting to note vocabulary was a strong theme in this year's interview data that had not emerged in prior years. The professional development included an emphasis on vocabulary instruction this year, including a full-day workshop conducted by an external consultant who presented a systematic method for vocabulary development.

One fifth grade teacher noted, “I always knew that vocabulary was an issue for language learners, but now I understand that it is important to all learners and that I shouldn’t just assume that (all of my students) know what the vocabulary words mean.” A second grade teacher spoke specifically about the success of her vocabulary wall this year and how her students have come to use it daily as a resource for their writing and speaking:

I try to envision what I want it to be like. I stop and think about, “What do they already know?” and, “What are going to be words that are going to be new for them?” To touch on the words that they know and to really build on the words that they don’t know. This time I even added pictures. . . Anything that can be used as a resource and to refer back to is what that wall has become . . .

***Improved student learning.*** Throughout the interviews, teachers articulated that in incorporating culturally responsive instruction, they perceived improved learning amongst all of their students. Teachers made purposeful CRI changes in both the delivery of their lessons and also in what tasks they asked of their children in order to reach a broader range of their students. As a result, teachers had greater engagement and active participation from students in their classrooms and were able to have more genuine communication with parents. A teacher who works with students with learning and behavior disorders noted that through her culturally responsive delivery of lessons, student learning has improved in her classroom:

It helps them . . . I’m trying to word things differently if they ask me. If they are struggling or don’t understand, I try to find an easier way for them to relate to it, or a real world problem, or a real world situation that they can relate to that will help them. It helps to know, it helps to clear up any misunderstandings or fears they have or if they have questions.

A first-grade teacher noted as a result of her CRI instruction:

Just seeing a child from the beginning of the year until now, where you see the light bulb so to speak, turn on, and they truly understand a task or concept. There have been several in here where it’s been pretty neat to see that happen.

A kindergarten teacher shared the difference she has seen in student learning this year as a result of her willingness to allow her students to speak Spanish in the classroom:

They are able to understand some of the concepts that I teach in their own language. So they are able to help each other with different math concepts or reading concepts; they can explain to one another in Spanish, “This is what this means.” So they are understanding it . . . That to me is huge.

***Understanding cultural differences.*** Several teachers noted that by acknowledging and celebrating the cultural differences in their classroom that students felt more comfortable and were more actively engaged. Teachers felt success in showing their students that, “It doesn’t make it wrong just because it’s not the way that you do it in your home.” A first-grade teacher spoke to the difference having an understanding for cultural differences made on her ability to connect with parents this school year:

I think just the fact that I can see these families out in the community, and they know me and feel comfortable speaking to me like another family would that doesn’t have that language barrier . . . to me, that’s probably a true success story.

Another resource teacher spoke to the change she saw in a student after he spoke about what his family does to celebrate the Day of the Dead:

He’ll participate a lot more. He is normally very comfortable in here and in other like, in small group situations, he is very comfortable, especially down here. Now up in the classroom, it’s a totally different story. He is very quiet, doesn’t say a whole lot still, but in here I at least see a change in that he is able to . . . he feels comfortable enough to talk and answer. He works really hard for me.

**Teachers’ perceptions about challenges with using CRI.** During teacher interviews, participants were asked to describe their biggest challenges with implementing CRI. Coding of teachers’ responses revealed themes related to perceived challenges, including constraints due to implementing culturally responsive practices in the curriculum, limitations of time, and the language barrier in communicating with parents.

***Incorporating culturally responsive instruction in the classroom.*** Several teachers spoke about the challenge of having knowledge and enthusiasm to incorporate CRI into their classrooms, but being restrained by a variety of factors that inhibited them from fully integrating CRI to their satisfaction, namely lack of student diversity, patience, and time. For example, a 4<sup>th</sup> grade teacher noted that she struggles with not being able to implement CRI fast enough:

It’s a mind shift and it makes me want to reinvent the wheel of everything. At the beginning of the year, I felt very frustrated because I felt like these were strategies that I wanted to implement, but I wanted to not just bite off a little bit at a time. I wanted to do it all so that it all fit on that gamut of culturally responsive instruction and embedding literacy within all of my units would be an example. I learned pretty quickly that it is important that literacy is in every single subject . . . that you can’t make a reading class, a math class, a science class . . . It all has to kind of merge together . . . It was kind of frustrating because that’s a lot of time and effort recreating those units, but I believe in

it and it's just kinda pushed me out of that comfort zone . . . I want to do so much with it . . .

Another 3<sup>rd</sup> grade teacher spoke to her excitement of CRI and to her challenge in helping her colleagues incorporate CRI into their lessons as she had, noting:

We plan as a team, and . . . I am coming at every lesson with all this background knowledge from the grant and from, you know, prior experiences that they either do not have because they have not been participants in the grant, or they might be in the grant but they are applying it differently or taking different things away from it . . . We are just in different areas of growth.

**Limitations of time.** A thread articulated by many teachers was the challenge of limited time when incorporating CRI, which was due to a variety of factors. Some teachers felt pressure to adhere to curriculum that prepared their students to perform well on state testing in the spring, as one commented,

We are such an assessment-driven school . . . You have these things that you want to try, but you can't always give it as much time and as much effort as you want to . . . or you almost have to wait until the end of the school year after testing to do things that you want to do . . .

Other teachers, such as a kindergarten teacher, felt “rushed” to get in CRI at all because she only had 3 hours in a school day. Yet another 2<sup>nd</sup> grade teacher spoke to her lack of time in terms of the number of students in her classroom. Through incorporating CRI, she found herself thinking about the strengths and weaknesses of each of her 29 students in the classroom. Her challenge was in addressing those needs at a classroom or small group level, when she had ideas and plans for all 29 individuals in the classroom, “You have all of these great ideas and plans that you want to implement, but it's not necessarily always realistic to be able to do it when you have a class of 29 and you've got 28 other students.” Another teacher spoke to not having enough time on top of her daily, classroom instructional duties to educate parents on how to effectively work with their children:

I can explain and create that relationship (with parents), but sometimes lack of time and lack of resources (are challenges) . . . (I want to create) some type of Family Night where we have parents come in and we discuss ways that they can help their child at home.

**Language barrier in communicating with parents.** Another challenge addressed by several teachers was the difficulty in interacting with parents when another language was spoken. One teacher acknowledged the discomfort ELL parents must feel in speaking about an ELL student in her class whose parents were very concerned about his education:

I think that it is difficult for them to think about scheduling a conference and coming in because we are just not going to understand . . . They don't feel comfortable. They don't feel like they know what to ask or they don't understand what to say.

One kindergarten teacher spoke to an initial miscommunication a child's parents had about what the teacher had ineffectively communicated to them before a translator was able to be present. Though they acknowledged it was a necessity, other teachers found simply translating notes back and forth in Spanish to parents challenging.

Table 4

*Interview Responses Coded by CRIOP Pillar*

	Spring 2014 Participant Responses	Spring 2015 Participant Responses
<b>Definition of CRI</b>		
Classroom Relationships	10	6
Family Collaboration	0	0
Assessment Practices	0	0
Instructional Practices	16	17
Discourse/Instructional Conversations	0	0
Sociopolitical Consciousness	0	0
<b>Successes with CRI</b>		
Classroom Relationships	18	9
Family Collaboration	1	2
Assessment Practices	0	0
Instructional Practices	7	9
Discourse/Instructional Conversations	0	2
Sociopolitical Consciousness	0	1
<b>Challenges with CRI</b>		
Classroom Relationships	4	1
Family Collaboration	5	10
Assessment Practices	0	0
Instructional Practices	17	11
Discourse/Instructional Conversation	0	1
Sociopolitical Consciousness	0	0

*Note:* Data from one teacher for the Pre-CRIOP and three teachers for the Post-CRIOP teachers are not included due to the window of the interview and changes in vocational positions.

**Teachers' perceptions of the CRIOP professional development.** During the spring administration of the post-observation teacher interviews, participating teachers were asked two questions about their perceptions of the professional development:

- What are your judgments about the quality or effectiveness of the professional development sessions and of the school-based coaching?
- What aspects of the professional development were most helpful to you and why?
- What aspects of the professional development were the least helpful to you and why?

Participating teachers found the professional development sessions to be effective in a variety of ways. Teachers reflected that the sessions were informative and constructive for both novice and experienced teachers and “opened up a lot of doors” to instructional CRI opportunities.

One teacher shared how she appreciated the professional developments because topics were immediately applicable to her classroom, “I think that when the PD is something that you can physically take back to your room and implement and see its impact, I think that’s when it’s really most beneficial.” Another teacher commented on the impact of the WIDA assessment professional development. WIDA assesses comprehension and communication in English for English language learners in kindergarten through grade 12:

I feel like that one was probably the, for me personally, the most beneficial because I was able to come back and immediately use what I had learned and was able to look at a lot of students in the building, even students that are just in my collaboration groups, and realize why some of the things that they weren’t getting, why they weren’t getting them. That was probably the most beneficial.

Another teacher commented on how through professional development and coaching, she was able to see the big picture of her students, something that through her years of teaching she had been unable to do, “I think it has helped me grow. I already knew that I needed to know the whole child. . . But (CRI) lets you see the bigger picture of how if you include the whole family, not just the student, that you can reach them better.

Other teachers shared that professional development allowed an opportunity for participating teachers to collaborate and reflect. One teacher noted:

The chance to talk with other teachers and find out what was working, and what was not working, and what were good ideas, and how they incorporated things in their classroom. . . I feel like that was definitely something . . . a benefit of the program. I feel like it was really great to have time to sit and reflect and talk.

Teachers noted, too, the impact that the school-based coaches had on them professionally. One teacher shared her experience with the resources her coach brought to their planning meetings,

That's been super: The materials we've had and the discussions we've had and just the real experiences that she has been able to share with us. The last meeting we had, (the coach) brought a big book where she had gone to Africa. She had a lot of photos . . . Just seeing the difference there to what we see here and, you know, for our kids to be able to experience that. I felt like a kid sitting there looking through the book (laughing), just because it was something I hadn't seen.

Another teacher shared how the school-based coaches had impacted her, but also her students as well:

(The coach) has been my go-to-person this year as far as . . . with writing. She has been completely hands-on. She helped me . . . learn what it means to have authentic writing purposes. For example, everything that I talk to her about she will say, "Where are you headed with this in writing? What is your writing connection with this?" That's been a huge help. Or she will say, "Remember, do they have student dictionaries for this?" Or "Have you put up Word Walls for this?" or, "Have you tried passing these out in the community? Oh, let me do that for you." She has just been . . . my students are just . . . well, you were in there the other day when they said, "Oh, we have to tell (the coach) about this!" My students have just accepted her as part of my classroom, so it's been . . . for me, it has been a great experience. Everything about it has been.

One teacher shared how the school-based coaching has helped her connect to parents:

(The coaches) took our books and had someone translate them in Spanish--the readers that the kids were working on. They took the newsletter and translated it in Spanish so that parents could understand what we wanted and help, helped us work together as a team. And then they've just given countless hours of themselves to help the parents understand how to help their children. It's just been a really good thing.

Across the participants, teachers' shared that classroom modeling of lessons, instructional ideas, resources, and feedback provided by the CRIOP school-based coaches enhanced classroom instruction and teachers' CRI competence.

### **Evaluation of Outcomes for Teachers and Students**

Project objectives included increasing EL student achievement in participating schools and increasing teachers' sense of efficacy for implementing culturally responsive practices for

teachers who participate in the professional development model. The evaluation examined the progress towards meeting those objectives during the third year of the project.

### **Outcome Measures, Data Collection, and Analyses**

**Teacher surveys.** The Culturally Responsive Teaching Self-Efficacy Scale (CRTSE, Siwatu, 2007) includes 40 items developed to measure teachers' confidence in their abilities to utilize culturally responsive teaching practices. Teachers are asked to give a rating for each item with a response of 0 (no confidence at all) to 100 (completely confident) on a 100-point Likert-type scale. Samples of items from the instrument relate to teacher's confidence to "use students' cultural background to help make learning meaningful," "model classroom tasks to enhance English Language Learners' understanding," and "use examples that are familiar to students from diverse cultural backgrounds".

Teachers participating in the CRIOP professional development program completed the CRTSE at the beginning of the training and again at the end of the 2014-2015 school year. Reliability analyses were conducted for the CRTSE survey. The fall administration CRTSE survey had a Cronbach's alpha of .97, while the spring administration CRTSE survey had a Cronbach's alpha of .97.

**Measures of Academic Progress (MAP).** The Measures of Academic Progress (MAP) assessment, developed by the Northwest Evaluation Association (NWEA), is an adaptive computerized assessment aligned to state testing standards for reading and mathematics (2013). The test may be given to students during the fall, winter, and spring of the academic year and may be utilized to track student performance and progress. Student performance is reported through an RIT score, percentile, and a Lexile range.

Research conducted by NWEA reports that the test accurately predicted students' performance on the Kentucky Performance Rating for Academic Progress (K-PREP) state tests in reading and mathematics with 77-83% accuracy for students in grades 3- 8 (2013). However, evidence of the validity and reliability of the instrument is lacking for grades K – 2. MAP assessments were administered to students at all four participating schools during the 2014-2015 academic school year.

Achievement data for students enrolled in participating teachers' classrooms in these schools were collected for the fall and spring administrations of MAP tests.



## Outcome Results

**Teacher efficacy.** Results from participants' responses from two administrations, summer and spring, of the CRTSE (Siwatu, 2007) were analyzed. Teachers' self-efficacy for implementing CRI was measured by the CRTSE.

Statistical analyses were conducted to determine if intervention had any significant effect on teachers' scores on the CRTSE. Teacher efficacy for implementing CRI as measured by CRTSE increased for 22 of the 25 full-year teacher participants (88%). Repeated measures ANOVAs were utilized in order to provide effect sizes for any significant findings.

**Effect of professional development on teachers' CRIOP scores.** Evaluators hypothesized that teachers who were given intervention would significantly increase their culturally relevant classroom instructional behaviors as measured by the CRIOP ( $p < .05$ ). A repeated measures ANOVA was conducted using CRIOP spring 2014, winter 2015, and spring 2015 observations.

A one way repeated measures ANOVA was conducted to determine if teachers' scores on CRIOP observations increased significantly between spring 2014 observations ( $\bar{x} = 14.10$ ,  $s = 1.30$ ), winter 2015 observations ( $\bar{x} = 16.38$ ,  $s = 2.31$ ) and spring 2015 observations ( $\bar{x} = 16.57$ ,  $s = 2.48$ ). Results show that teachers' culturally relevant instruction as measured by CRIOP was significantly different across the three observations, Wilks's  $\Lambda = .26$ ,  $F(2, 19) = 27.13$ ,  $p < .001$ , partial  $\eta^2 = .74$  (see Table 5).

Follow up pairwise comparisons indicated that CRIOP scores increased significantly from spring 2014 observations to the winter 2015 observations ( $p < .001$ ; partial  $\eta^2 = .72$ ), and increased significantly from spring 2014 observations to spring 2015 observations ( $p < .001$ ; partial  $\eta^2 = .63$ ); however, scores were not significantly different from winter 2014 observations to spring 2015 observations ( $p = .62$ ).

Table 5

### *CRIOP Scores*

Survey	Spring 2014		Winter 2015		Spring 2015	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
CRIOP	14.10	1.30	16.38	2.31	16.57	2.48

**Effect of professional development on teachers' CRTSE scores.** Evaluators hypothesized that teachers who participated in the professional development would show significantly higher spring self-efficacy survey scores ( $p < .05$ ). A repeated measures ANOVA was conducted using summed fall CRTSE surveys as a pretest and summed spring CRTSE surveys as a posttest.

A one way repeated measures ANOVA was conducted to determine if teachers' summed scores on CRTSE surveys increased significantly from fall pretests ( $\bar{x} = 2551.19$ ,  $s = 483.01$ ) to spring posttests ( $\bar{x} = 3269.76$ ,  $s = 479.01$ ). Results show that CRTSE scores were significantly higher posttest, Wilks's  $\Lambda = .32$ ,  $F(1, 20) = 42.18$ ,  $p < .001$ , partial  $\eta^2 = .68$  (see Table 6).

Table 6

*CRTSE Survey Scores*

Survey	Fall		Spring		Change
	Mean	Standard Deviation	Mean	Standard Deviation	Mean
CRTSE	2551.19	483.01	3269.76	479.01	718.57*

\* is significant at  $p < .001$ .

**Student achievement.** Participants in this study consisted of 603 students (boys  $n=294$ , 49.7%; girls  $n=297$ , 50.3%; missing data  $n=12$ ) at four elementary schools (see Table 7). Of the 603 students, 65 were classified as ELs. Information on student grade level and ethnicity may be found in Tables 8 and 9. Information on ELs' grade level membership may be found in Table 10.

Table 7

*Number of Students at School Sites*

Statistic	School				Total
	School A	School B	School C	School D	
Frequency	105	83	210	205	603
Percentage	17.4	13.8	34.8	34.0	100

Table 8

*Students by Grade*

Statistic	Grade						Total
	Kinder	First	Second	Third	Fourth	Fifth	
Frequency	100	104	54	184	48	113	603
Percentage	16.6	17.2	9.0	30.5	8.0	18.7	100

Table 9

*Student Characteristics by Ethnicity*

Statistic	Ethnicity					Total
	Caucasian	African American	Hispanic	Asian American	Other	
Frequency	464	35	69	4	15	587
Percentage	79.0	6.0	11.8	.7	2.5	100

Table 10

*EL Students by Grade*

Statistic	Grade						Total
	Kinder	First	Second	Third	Fourth	Fifth	
Frequency	13	10	6	22	3	3	57
Percentage	22.8	17.5	10.5	38.6	5.3	5.3	100

**Student achievement and teacher professional development.** In order to investigate any relationships between teachers' participation in the CRI professional development program and student achievement, numerous analyses were conducted to measure learning gains for all students and for ELs. During the school year, students ( $n = 603$ ) were administered standardized tests to measure reading ability and mathematical ability. Tests were administered three times during the school year; fall, winter, and spring. For analyses, fall

administrations will function as pretests and spring administrations will function as posttests. Students took two different types of standardized tests, the Measures of Academic Progress Test in both reading and mathematics. For various reasons endemic to public education, such as student mobility and absenteeism, not all students took each test administration. See Table 11 for descriptive data of students by test.

Table 11

*Number of Students Taking MAP Tests by Administration*

Test	Fall		Spring	
	MAP Reading	MAP Math	MAP Reading	MAP Math
Student $n$	515	574	523	578
Missing Data	131	72	123	68

Note: Missing Data refers to no test score.

### Student Performance

#### MAP Performance

**MAP reading performance.** A one-way repeated measures ANOVA was conducted to determine if students' scores ( $n = 506$ ) on MAP reading tests increased significantly from fall administrations ( $\bar{x} = 181.46$ ,  $s = 27.41$ ) to spring administrations ( $\bar{x} = 195.84$ ,  $s = 23.14$ ). Results show that students' MAP reading scores were significantly higher at spring administration, Wilks's  $\Lambda = .32$ ,  $F(1, 505) = 1105.13$ ,  $p < .001$ , partial  $\eta^2 = .69$ .

**MAP mathematics performance.** A one-way repeated measures ANOVA was conducted to determine if students' scores ( $n = 551$ ) on MAP mathematics tests increased significantly from fall administrations ( $\bar{x} = 183.19$ ,  $s = 26.52$ ) to spring administrations ( $\bar{x} = 198.69$ ,  $s = 23.33$ ). Results show that students' MAP mathematics scores were significantly higher at spring administration, Wilks's  $\Lambda = .26$ ,  $F(1, 550) = 1597.70$ ,  $p < .001$ , partial  $\eta^2 = .74$ .

**Comparison of gains by gender, ethnicity, and EL.** In order to determine whether or not learning gains were significantly higher for students due to sex (boy or girl), ethnicity (Caucasian, African American, Hispanic, Asian American or Other), or EL status (yes or no), a series of 2 (sex)  $\times$  5 (ethnicity)  $\times$  2 (ELL status) ANCOVAs were conducted on MAP reading and MAP mathematics tests.

**MAP reading.** A 2  $\times$  5  $\times$  2 ANCOVA was conducted using gender, ethnicity, and EL status as fixed factors, fall MAP reading scores as a covariate, and spring MAP reading scores as a

dependent variable. Results showed that there were no significant differences in spring MAP reading scores due to gender, ethnicity, or EL status ( $p > .05$ ).

**MAP mathematics.** A  $2 \times 5 \times 2$  ANCOVA was conducted using gender, ethnicity, and EL status as fixed factors, fall MAP mathematics scores as a covariate, and spring MAP mathematics scores as a dependent variable. Results showed that there were no significant differences in spring MAP mathematics scores due to gender, ethnicity, or EL status ( $p > .05$ ).

**English Language Learners' (EL) MAP reading scores.** A repeated-measures ANOVA was conducted using fall MAP reading scores as a pretest and spring MAP reading scores as a posttest. A one way repeated measures ANOVA was conducted to determine if EL students' ( $n = 49$ ) reading ability increased significantly from fall MAP reading pretests ( $\bar{x} = 162.20$ ,  $s = 25.24$ ) to spring MAP reading posttests ( $\bar{x} = 175.82$ ,  $s = 23.85$ ). Results show that reading ability as measured by MAP reading tests was significantly higher posttest, Wilks's  $\Lambda = .28$ ,  $F(1, 48) = 123.82$ ,  $p < .001$ , partial  $\eta^2 = .72$  (see Table 12 for scores and growth by grade).

Of the 49 students who took the MAP reading fall and spring tests, 95.9% ( $n = 47$ ) gained in MAP reading performance from fall to spring administrations and 57.1% ( $n = 28$ ) gained at least one year's growth as measured by the MAP reading test. Reading gains were observed across all grades (See Table 12 for reading growth by grades).

Table 12

*EL MAP Reading Scores*

Grade (number of students)	Fall		Spring		Change
	Mean	Standard Deviation	Mean	Standard Deviation	Mean Growth
Kinder (13)	131.62	6.19	145.38	8.73	13.76
First (10)	151.00	11.56	172.30	11.76	<b>21.30</b>
Second (6)	175.00	15.61	193.50	16.03	<b>18.50</b>
Third (16)	185.06	12.62	193.00	14.06	7.94
Fourth (3)	177.33	26.27	184.67	26.08	<b>7.34</b>
Fifth (1)	184.00	n/a	199.00	n/a	<b>15.00</b>

**Bold = Mean is greater than one school year growth**

**English Language Learners' (EL) MAP mathematics scores.** A repeated measures ANOVA was conducted using fall MAP mathematics scores as a pretest and spring MAP mathematics scores as a posttest. A one way repeated measures ANOVA was conducted to determine if ELL students' ( $n = 57$ ) mathematical ability increased significantly from fall MAP pretests ( $\bar{x} = 167.68$ ,  $s = 27.16$ ) to spring MAP posttests ( $\bar{x} = 182.33$ ,  $s = 24.59$ ). Results show that mathematical ability as measured by MAP mathematics scores was significantly higher posttest, Wilks's  $\Lambda = .24$ ,  $F(1, 56) = 181.17$ ,  $p < .001$ , partial  $\eta^2 = .76$  (see Table 13 for scores and growth by grade).

Of the 57 students who took the MAP mathematics fall and spring tests, 96.4% ( $n = 55$ ) gained in MAP mathematics performance from fall to spring administrations and 68.4% ( $n = 39$ ) gained at least one year's growth as measured by the MAP mathematics test. Mathematics gains were observed across all grades (See Table 13 for math growth by grades).

Table 13

*ELs' MAP Mathematics Scores*

Grade (number of students)	Fall		Spring		Change
	Mean	Standard Deviation	Mean	Standard Deviation	Mean Growth
Kinder (13)	126.46	7.21	146.23	15.21	<b>19.77</b>
First (10)	156.10	10.02	173.80	9.48	<b>17.70</b>
Second (6)	177.83	9.26	189.33	5.61	<b>11.50</b>
Third (22)	187.36	10.22	199.86	11.06	<b>12.50</b>
Fourth (3)	188.33	9.07	197.67	3.51	<b>9.34</b>
Fifth (3)	199.67	5.51	207.33	4.04	<b>7.66</b>

**Bold = Mean is greater than one school year growth**

**Culturally Responsive Instruction and Student Achievement**

**High vs. low implementation of culturally responsive instruction.** In order to determine whether or not implementation of culturally responsive instruction related to student learning,

teachers were separated by scores on winter ( $\bar{x} = 16.27$ ,  $s = 2.31$ ) or spring CRIOP observations ( $\bar{x} = 16.5$ ,  $s = 2.45$ ) into High Implementation and Low Implementation groups. High Implementation teachers ( $n = 8$ ) were defined as those who had CRIOP at least one winter or spring observation score at or above one standard deviation from the mean ( $x \geq 19$ ), while Low Implementation teachers ( $n = 6$ ) were defined as those who had at least one winter or spring observation score at or below one standard deviation from the mean ( $x \leq 14$ ). MAP reading and mathematics test results were used to determine relationships of CRI implementation to student achievement.

### Standardized Learning Gains

Because the teachers identified as HIGH and LOW taught different grade levels, it was necessary to create a standardized type score so comparisons could be made between grade levels. A standardized score was created for each student based on grade level yearly learning gains as defined by the by the Northwest Evaluation Association. The following formula was used:

$$\frac{\text{Spring MAP Score} - \text{Fall MAP Score}}{\text{Grade Level One Year Expected Learning Gains}}$$

The resulting score represented the percent of expected yearly learning gains that each student made at his/her grade level. Thus, comparisons could be made between students at different grade levels.

**Reading performance.** Researchers hypothesized that students with teachers identified as High Implementers would have significantly higher reading performance on spring tests than students who had teachers identified as Low Implementers ( $p < .05$ ). An ANOVA was conducted using standardized reading learning gains as dependent variable and implementation level (high or low) as fixed factor. Results indicate that there was no significant difference in reading performance between students with teachers identified as High Implementers and students with teachers identified as Low Implementers on spring MAP reading tests  $F(1, 255) = .26$ ,  $p = .61$ , (see Table 14 for means).

Table 14

*Standardized Learning Gains Reading High and Low Implementation Means*

Standardized Reading Score		
Level	Mean	Std. Deviation
LOW	1.63	1.16
HIGH	1.72	1.53

**Math performance.** Researchers hypothesized that students with teachers identified as High Implementers would have significantly higher mathematical performance on spring tests than students who had teachers identified as Low Implementers ( $p < .05$ ). An ANOVA was conducted using standardized math learning gains as dependent variable and implementation level (high or low) as fixed factor. Results indicate that students with teachers identified as High Implementers scored significantly higher than students with teachers identified as Low Implementers on spring MAP mathematics tests  $F(1, 309) = 5.57, p < .01, \eta^2 = .02$  (see Table 15 for means).

Table 15

*Standardized Learning Gains Math High and Low Implementation Means*

Standardized Math Score		
Level	Mean	Std. Deviation
LOW	1.14 <sup>a</sup>	.73
HIGH	1.36 <sup>a</sup>	.82

A = Difference significant at  $p < .01$ .

### Discussion and Conclusions

Similar to findings from the first and second years' evaluations, the professional development model was implemented at high levels during the third year of the project. During the 2014-2015 school year, 25 educators participated in the CRIOP professional development



program. The project staff documented participants' high attendance at professional development sessions and provided a robust number of hours of school-based coaching support for participating teachers.

Classroom observations and interviews provided evidence of teachers' learning and implementation of new practices gained through the professional development model. In the first and second year of the project, increasing CRIOP scores demonstrated that teachers gained in their implementation of culturally responsive practices from fall to spring, but observations were not conducted to determine teachers' practices prior to participating in summer institutes. During the third year, pre- and post-observations were conducted in teachers' classrooms. These observations indicated increases in teachers' CRIOP scores from before project participation to after project participation. This change indicates a significant impact of the CRIOP project on teachers' implementation of CRI. The pattern of positive change across the three observations demonstrates the effectiveness of the overall model of summer institutes, follow-up institutes, and school-based coaching.

Teacher interviews indicated similar patterns that have emerged in previous project years. Teachers reported the project supported their abilities to build relationships with their students and to meet their students' needs instructionally. A new finding that emerged from interviews during the third year was that teachers learned and utilized strategies for developing students' vocabularies. Teachers especially valued the school-based coaching component of the project and the personalized, on-site resources that the project provided. Through the support of coaches, teachers reported improving their instruction overall and for English Learners in particular. Although teachers reported many successes in implementing CRI through their project participation, they also reported challenges. Difficulties with time limitations and language barriers with families posed problems for teachers as they worked to implement CRI in their classrooms.

Outcome results for participating teachers and their students are positive in the third year of project implementation, just as they were in the first two years. Results on the teacher survey indicate participating teachers experienced significant increases in their sense of efficacy for CRI after participating in the project. In the areas of reading and mathematics, students in participating teachers' classrooms made significant gains across the year. There were no significant differences in the progress of ELs and students who were not ELs, which suggests that ELs made at least as much progress overall as native English-speaking students. In fact, test results indicate greater than one year's gain over the course of the year, overall, at four of the elementary grades in reading and all six grade levels in mathematics. Although it is impossible to attribute student progress to the professional development project in the absence of a comparison group, the student achievement data do serve as supportive documentation of

participating teachers' efforts to meet the needs of their ELs over the course of the year they participated in the professional development model. Further, these positive results provide validation of project staff member's efforts to support participating teachers.

As in years past, evaluators examined the relationship between CRIOP scores and student achievement. Consistent with prior years' findings, results indicated significant positive relationships between CRIOP scores and student achievement in mathematics. However, in contrast with prior years' results, there was not a statistically significant relationship between CRIOP scores and student achievement in reading (even though mean reading scores were higher for high CRIOP implementers). Evaluators will continue to examine patterns of achievement as they relate to CRIOP implementation throughout the remainder of the project.

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