Culturally Responsive Instruction Observation Protocol (CRIOP) Professional Development: Year 2

Program Evaluation

Collaborative Center for Literacy Development

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2013-2014

Acknowledgements

The authors of this report are grateful for the opportunity to work with Dr. Rebecca Powell and Carolyn Witt-Jones at Georgetown College on this project. Also, we appreciate the contributions of Debbie Carter, who served as a field observer on this evaluation.

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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 second year of a five-year project. Professional development that focused on the Culturally Responsive Instruction Observation Protocol (CRIOP) was provided for 27 classroom teachers and one principal in three elementary schools in central Kentucky. The yearlong 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 a five-day summer institute focusing on culturally responsive practices. Teachers received training in principles of second-language acquisition, implementing WIDA standards for lesson planning and assessment, and building partnerships with parents and families of their ELs. Additional grade-level professional development meetings were held prior to the start of school.
- School and classroom-based coaching was provided for an average of 53.2 hours per teacher 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 many 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.
- Fall and spring classroom observations using the CRIOP as an evaluative tool to measure teachers' culturally responsive practices indicate 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 and teachers' outcome expectancies related to 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 of improved classroom community, positive effects of student collaboration, linking instruction with students' prior knowledge, and increased student engagement.
- Teachers reported constraints due to core content/prescribed curriculum (particularly with a scripted reading program that was adopted at one school), language barriers with students, and a lack of understanding of the complexity of culturally responsive instruction.

Teacher Education Component

As one element of this grant program, teacher educators in the teacher preparation program at the sponsoring institution participated in a professional development seminar. Subsequently, these college faculty revised course objectives, course outcomes, and course assignments within teacher preparatory course syllabi. Modifications in course syllabi included additions and revisions focused on course content, assignments, assessment of students, and field experiences.

Conclusions

As was the case the first year of this professional development project, project staff achieved high implementation of the professional development model during the second year. Classroom observations and interviews indicate teachers' learning and implementation of new practices gained through the model. Increases in implementation from fall to spring 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 though the professional development model. Outcome results are again positive in the second 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). Another component of the project concentrates on embedding the elements of the CRIOP into teacher education courses at Georgetown College. Since the project's onset in 2011-2012, 55 K-5 educators have participated in the professional development. During the second year of the project's implementation, 28 K-5 educators from three elementary schools in central Kentucky participated in the project. This evaluation report focuses on the project's second 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' performance in reading and math. Data were disaggregated for English Learners (ELs) and for other student groups. In addition, the course syllabi from courses taught by seven teacher educators at Georgetown College were analyzed for modifications consistent with the objectives of the CRIOP. 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 and outcome expectancy?
- 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?
- To what extent did teacher educators modify their course syllabi to match the CRIOP objectives?

Background and Description of CRIOP Model

The CRIOP is an instructional framework and measurement tool designed to assess and support instruction in seven components of culturally responsive instruction: classroom relationships, family collaboration, assessment, curriculum, instruction/pedagogy, discourse, and socio-political consciousness.

The CRIOP instrument consists of the seven holistic areas of culturally responsive instruction listed above and 24 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 identified by the team were identified as major components of culturally responsive instruction and incorporated as pillars of the CRIOP instrument. This work lead 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 creating and strengthening relationships with families and learning about best practices for ELs. In addition, plans were included for an August or September social event for families or for teacher visits to students' homes prior to the beginning of the school year.

School-based mentoring. During the fall semester, participating teachers were to participate in two days of professional development devoted to theories and application of second language acquisition and technology applications for ELs. The training sessions were to be conducted by a bilingual consultant, a technology consultant, and a representative from the Kentucky Department of Education. Two additional professional development days dedicated to implementing components of the CRIOP were to be held in the spring semester.

Site-based coaching was planned for participating teachers throughout the school year. The project director and the school-based coach 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 second year of project implementation, participants who had not previously participated in the project were drawn from the same three elementary schools that had participated in the first year of the project. School A is one of 35 public elementary schools located in a mid-sized city with a population of approximately 300,000 (US Census Bureau, 2013). School B is one of three elementary schools in a county school district in a rural area located 20 miles from School A. School C is in an independent elementary school district located in a town with a population of approximately 10,000 (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	276	94	$10,479	95.4
School B	452	69	$ 7,718	95.4
School C	364	81	$10,851	95.6

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

Teacher participants. Twenty-seven teachers and one principal participated in the evaluation. Participants were predominantly female (females n = 24, 88.9%; males n = 4, 11.1%), were predominantly White (n = 24, 85.2%; African American n = 3, 11.1%; Other n = 1, 3.7%), and were all native speakers of English (n = 28, 100%). Twenty-one teachers taught in self-contained elementary classrooms (kindergarten n = 4, first grade n = 1, second grade n = 2, third grade n = 5, fourth grade n = 5, fifth grade n = 3, fourth/fifth grade split n = 1), three teachers taught reading, one teacher taught Special Education, and two taught Music. 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	11	13	3	0	27
Percentage	40.7%	48.1%	11.1%	0%	100%

Table 3

Years' Experience at School Site

	Years					
Statistic	0-3	4-7	8-11	12-15	16+	Total
Frequency	11	5	2	4	5	27
Percentage	40.7%	18.5%	7.4%	14.8%	18.5%	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, school-based mentoring, and syllabi from teacher preparation courses.

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 coach 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 and kept field notes of session topics, discussions, and participant activities.

School-based mentoring. The project director and school-based coach maintained coaching logs of classroom coaching, planning meetings, classroom observations, and school-based professional development conducted with participating teachers. Coaching logs were submitted to evaluators who tracked the coaching and professional development hours for each participating teacher.

Implementation of the Professional Development Model

Summer training. During the summer preceding the 2013-14 school year, participating teachers attended a five-day summer institute focusing on culturally responsive practices and meeting the needs of ELs. The project director and an ESL consultant planned and led the full-day sessions. Teachers received training in principles of second-language acquisition, implementing WIDA standards for lesson planning and assessment, and building partnerships with parents and families of their ELs. Elements of the CRIOP were a focus of the institute, and

holistic areas of culturally responsive instruction were presented and discussed. Portions of the institute were devoted to presentations by teacher participants from the 2012-2013 CRIOP professional development cohort, who shared their implementation of integrating literacy in the content areas, facilitating parent involvement in the classroom, and authentic uses of language for ELs. During these institute sessions, participating teachers collaborated with their grade-level peers from other participating schools to develop integrated, inquiry-based units to use during the coming school year.

Following the summer institute, the project director met with fifth-grade teachers at School A for one day devoted to curriculum development and with third and fourth grade teachers at the school for two curriculum development days. Attendance was high during these sessions, with 96% of School A teachers attending. One day for curriculum development was held for all teachers at School C, with 100% of School C participants attending the session.

School-based mentoring. During the 2013-14 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. Table 4 shows the number of coaching and professional development hours the coaching staff provided to teachers throughout the 2013-14 project year.

Table 4

Teacher Participation in Professional Development and School-Based Mentoring

Participating School	Number of Teachers	Range of Coaching Hours Per School	Average Coaching Hours Per Teacher
School A	11	17-77	57.2
School B	8	22-57	47.1
School C	9	34-63	53.3
Total for All Schools	**28**	**17-77**	**53.2**

Evaluation of Classroom Implementation

Classroom Implementation Measures, Data Collection, and Analysis

CRIOP. The CRIOP is a 7-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 second 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 observations in the classrooms of the 27 participating teachers in the fall and spring of the 2013-2014 school year. Fall observations took place in October, November, and December, and spring observations were conducted in March, April, and May, at least five months after teachers' initial 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 the session.

Observers, training, and inter-rater reliability. Two trained field researcher conducted the fall, 2013 and spring, 2014 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 is a former elementary classroom teacher, holds a masters' degree in education, has had prior training in the CRIOP, and is a full-time graduate student. Both field researchers conducted the classroom observations during the first year of this project.

In the fall of the 2013-2014 project year, the two field researchers conducted an initial 2.5 hour classroom observation together, taking field notes at five-minute intervals throughout the observation. They discussed the classroom observation and collaboratively assigned ratings for each CRIOP indicator and holistic area, arriving at consensus for each CRIOP rating. Subsequently, Field Researchers One and Two conducted another classroom observation together in a second participating teachers' classroom. The two researchers individually used the CRIOP to evaluate the observation and then compared their ratings. At the conclusion of the second observation, inter-rater agreement on the CRIOP holistic pillars for the two field researchers was 86%.

Inter-rater reliability analysis was conducted for the two field researchers for this study using the CRIOP holistic pillars for analysis. Overall inter-rater reliability between the field

researchers was Cohen's Kappa = 0.80 ($p < .001$). A Kappa of .80 is considered to be a substantial strength of agreement (Landis & Koch, 1977). Overall perfect inter-rater percent of agreement was 76%, while inter-rater percent of agreement within one point of disagreement was 100%.

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, Field Researcher One read the interview data and assigned codes representing the seven 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 27 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 from fall observations ($\bar{x}$ = 17.50, s = 2.27) to spring observations ($\bar{x}$ = 18.54, s = 2.97). Results show that teachers' CRI as measured by CRIOP was significantly higher posttest, Wilks's $\Lambda = .88$, $F(1, 25) = 3.42$, $p < .05$, partial □²□□□.12.□ Although this effect size is small, it is important to note that teachers had participated in extensive professional development (at least 5 days) prior to their first observation. The impact of that prior professional development is not reflected in teachers' change from fall to spring observations.

Teachers' perceptions of CRI. By analyzing interview data regarding teachers' perceptions about implementing culturally responsive instruction, evaluators were able to discern the CRIOP elements that teachers implemented most and least readily. Data from fall

and spring interviews allowed evaluators to analyze changes in teachers' perceptions over time. Table 5 delineates teachers' interview responses coded by CRIOP pillar from fall, 2013 and spring, 2014 interviews.

Although a majority of participants defined CRI in terms related to Classroom Relationships during interviews conducted in the fall, by the spring of the school year, more teachers perceived CRI in terms of Pedagogy/Instructional practices. Teachers most often identified successes in the areas of Classroom Relationships and Pedagogy/Instructional practices. Interestingly, a majority of participants responded that their biggest challenges were with these same two holistic elements of the CRIOP. Across both interviews, several teachers noted their experiences with Curriculum were the biggest challenges with implementing the CRIOP and several teachers identified Family Collaboration as their biggest challenge. CRIOP holistic elements of Assessment practices, Discourse/Instructional conversation, and sociopolitical consciousness were mentioned rarely in response to questions about definitions of CRI, and successes or challenges with CRI.

Table 5

Teachers' Interview Responses Coded by CRIOP Pillar

Interview Responses Coded by CRIOP Pillar	Fall Participant Responses	Spring Participant Responses
Definition of CRI		
Classroom Relationships	17	10
Family Collaboration	0	0
Assessment Practices	0	0
Curriculum/Planned Learning Experiences	2	2
Pedagogy/Instructional Practices	8	13
Discourse/Instructional Conversation	0	1
Sociopolitical Consciousness	0	0
Successes with CRI		
Classroom Relationships	17	11
Family Collaboration	2	2
Assessment Practices	0	0
Curriculum/Planned Learning Experiences	0	2
Pedagogy/Instructional Practices	7	9
Discourse/Instructional Conversation	2	1
Sociopolitical Consciousness	1	0
Challenges with CRI		
Classroom Relationships	7	5
Family Collaboration	3	5
Assessment Practices	0	0
Curriculum/Planned Learning Experiences	6	4
Pedagogy/Instructional Practices	11	11
Discourse/Instructional Conversation	0	1
Sociopolitical Consciousness	0	0

Note: Data from one spring teacher interview are not included here. One participant was not asked about her successes with CRI in the spring interview.

Teacher 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 of improved classroom community,

positive effects of student collaboration, linking instruction with students' prior knowledge, and increased student engagement.

Improved classroom community. Many teachers described their classroom communities as their biggest success with implementing CRI. These teachers related that their students were more comfortable in the classroom and supported each other in learning. Teachers commented that students "were more respectful" and "more open to sharing." One third-grade teacher reflected that her ELs' willingness to share in class was her biggest success. Other teachers acknowledged affective factors in the classroom that influence student collaboration, students' willingness to take risks, and student learning. One second-grade teacher commented:

> As educators, we often talk about the successes as equated to academics and test scores and data, which we have had those successes. One of my ESL students this year tested out of the Migrant Program, so that was a success. He just took his reading MAP test and . . . met his goal. . . . So in terms of numbers, that's successful. However, more important to me… is that student comfortable in the classroom? Does that student feel wanted? Does that student feel liked? He has a place here, that he's no different from anyone else. So that's how I would measure success more myself. Being able to share from your culture with the class freely. Asking questions, too and being unafraid to ask questions.

Other teachers observed that students' behavior improved, which affected the classroom environment and learning. One fourth-grade teacher stated:

> I think that behavior is a huge success by using this [CRI]. If the students know that you respect them and that you respect where they come from, and you respect the way they are in your room, and you don't expect them to conform to a certain way that you deem is appropriate, then the classroom just runs so much smoother. And that totally affects their learning, other students' learning, affects the whole flow of the classroom. So I've found that just by being culturally responsive that it really, really, affects the whole flow and behavior in the whole room.

Another teacher equated her classroom community to a family as she described her students' relationships, acceptance of one another, and classroom collaboration:

> I think my greatest asset is the ability to build a relationship and my kids know that it's okay to be wrong because they know that either I will be there or another classmate. . . . it looks like a family at a family reunion. It looks like all the aunts and uncles, all the cousins are together sitting around and we are just having this discussion. We are all

> talking like we need to because we are so comfortable. If that even makes sense, because it makes so much sense to me.

Student collaboration. A number of participating teachers perceived that their biggest classroom successes with CRI involved student collaboration. Teachers described students assisting other students with learning new concepts and serving as resources for their peers. One teacher stated that as her students worked in different groups, they talked together, "taught each other," "worked together," and developed ownership and pride in their work. Some teachers particularly emphasized the benefits of collaboration to their non-native English speaking students and lower level students. One teacher stated that some of her students, including some Hispanic students, do not contribute during whole group lessons, "but if they turn and talk to someone next to them, they are more likely to communicate their opinion or something they are thinking about." As one third-grade teacher responded:

> I feel like, especially with my bilingual students or even my lower level learners, they have more ownership and more confidence because . . . they talk about it, they teach each other, they share things. I feel like that's been one of the biggest successes – the ownership that the kids have because it becomes theirs.

Another kindergarten teacher described her students as they would "turn and talk":

> Well, the kids who would never respond, they would turn and talk to their friends, and they were so involved! And they would be excited to answer a question, and they would just be so eager to tell me. And if they didn't know the answer, or if they didn't know for sure, they would turn and talk to their friend again about it, and then they'd know and they're involved now.

One kindergarten teacher described her students collaborating during close reading lessons and their progress in literacy:

> They've become readers. Like it's been amazing. I put some texts out, they chose their textbooks that they wanted to read, and chose a partner. I gave them sticky notes to write questions about things they didn't know, writing unknown words they didn't know, interesting things they found out, and used the pictures. It was really cool for me to let go. And they just went and did it one their own, so it was pretty cool. They are definitely picking up the details more while they read. It's really cool the stuff that they are doing, and from that, applying it to everyday kind of things like it's neat.

Students' background knowledge. Several teachers stated that their biggest successes with CRI were using students' prior knowledge to plan for instruction. One teacher discussed her success with using students' background knowledge as, "being able to really anticipate

what's going to be a struggle for them and being able to prepare for that when we're teaching." Another teacher related:

> I'm able to bring certain aspects of [pop culture] into the classroom where they can build on prior knowledge . . . versus just introducing a concept that has no connection whatsoever toward what they already know and just shooting in the dark hoping that they understand what's going on. And always try to build bridges. Always build bridges.

Increased student engagement. While reflecting on their successes with implementing CRI, many teachers observed that their students were "more engaged," "more excited to learn," and that selecting study topics of interest to students led to students being "more active and engaged." Teachers also connected increased student engagement with greater student confidence. As one classroom teacher responded to the question about her biggest successes with using CRI with her students, "I think higher student engagement. I see more student confidence, and where the kids take more ownership with their learning. " Another fifth-grade teacher stated, "A lot of times they get bored if it's just me up there, but I have them involving more of their own opinions and ideas and they tend to want to learn and do it." Teachers also described their students' love of learning, as a kindergarten teacher stated, "They love to learn. I think that, you know it's more at a kindergarten level, but they are like little sponges, and they love to hear that new language."

Teachers' perceptions of 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 core content/prescribed curriculum, language barriers with students, and a lack of understanding of the complexity of culturally responsive instruction. A number of teachers also responded that communicating with parents and encouraging parent involvement were challenging.

Constraints due to core content/prescribed curriculum. Teachers described challenges of implementing culturally responsive practices and limitations of time due to meeting expectations of teaching core content. Teachers reflected that their biggest challenge with CRI is "just fitting it into the curriculum. A lot of times feeling frustrated just to have the time to teach it," and, "I'm consumed with doing core content and getting to it. You just want that time to have those discussions. It is the core content issue . . . so I think that makes it very time bound." Another teacher described her biggest challenge of implementing culturally responsive instruction as the limitations of a regimented schedule that precluded family collaboration and integrating families' funds of knowledge.

> Honestly, I feel like probably the structure of our day and our schedule and the curriculum makes it pretty hard to know how to do it effectively. I just feel like our day is so regimented and just doesn't allow for as many opportunities to incorporate that curriculum. Even though I'm trying to do some things with families, I don't do a whole lot, and probably a big part of bringing in that culturally responsive[ness] is knowing the families and learning more about them and being able to incorporate that into the classroom.

Other teachers expressed frustration with utilizing CRI while meeting the demands and rigidity of a school-required scripted reading program. One teacher described the limitations of incorporating CRI due to the commercial reading program.

> It is a direct instruction scripted program. It's basically read it every day, and the kids answer on command. So there's not a lot of critical thinking questions, because we all answer on signal, so it has to be a one- or two-word answer obviously for all, say it all at the same time. And before, you could choose your text for reading for small group. . . . Then we would write the plans, and . . . it was cross-curricular. And that's now not an option.

Language barriers with students. Several project teachers named language barriers with their ELs as their biggest challenge with using CRI. Almost all teacher participants in the professional development program were monolingual, and several described their difficulties with teaching and communicating with their non-native English speaking students. One teacher with several Spanish-speaking students stated, "I guess the biggest thing is I wish I knew Spanish more." Similarly, a reading teacher reflected, "I know with the Hispanic children, I don't speak or understand their language, so that's a boundary." A fourth-grade teacher discussed her concerns with teaching ELs and her efforts to mediate language barriers:

> So I've tried to be better about, you know, when I say a word, to make sure that we define it and try to relate it to the real world so maybe they [ELs] can visualize it or maybe just showing them pictures or looking it up on a computer. Because sometimes I look over there and they look confused, because maybe they've never heard that word before or they're not familiar with it and I just . . . that's my biggest challenge. Trying to make sure that they understand the vocabulary and meaning. Trying to ensure that they understand it and can visualize it.

Another intermediate-grade teacher commented:

> The biggest challenge I've had this year is, just overall, the language barrier. I still have a student who speaks very limited English. But she has come leaps and bounds this year because she, I think she feels comfortable in knowing that she can say "I do not

> understand," " will you repeat that again?," "can I get a friend to help me?". So I feel like that has been a big challenge for me.

Lack of knowledge of CRI. Participating teachers acknowledged that their lack of knowledge of CRI was a challenge for them. When asked about her biggest challenges in using CRI, one third-grade teacher responded, "Personally, just understanding it." A fourth-grade teacher alluded to her classroom success with CRI as she related:

> This is only my second year teaching and last year I didn't know anything about this. . . . I think that just it's difficult because there is so much to learn about it, and there's so much room that you can grow with it. There is so much more that I want to know and that I want to learn about. I'd love to observe teachers who have been doing this for a while and really have a firm grasp on this. That way, I can make my classroom so much better. 'Cause just in the little that I do know and the little that I have practiced this year, it's really made a big difference.

Communicating with parents and parent involvement. Many teachers in the program discussed challenges of communicating with parents and facilitating parent involvement. As one teacher reflected, ". . . something that I haven't done well or been able to carry over would be more getting the families involved, and actually bringing their cultures into the classroom. So, I would like to see more family involvement." Participants acknowledged the value of collaborating with students' families as they responded about the challenges of parent involvement. One teacher participant stated, "I think that I will always struggle with parent involvement, with not just EL students, but just the general culture in the school and in the classroom. I think that academics are not a high priority for the majority of the parents in the classroom."

Other teachers discussed difficulties in communicating with parents due to logistical issues. As a second-grade teacher observed:

> I think parent involvement is always a challenge. Mainly because it is so individualized. You know, just getting in touch with the parent. I have a challenge right now with one parent. They don't have a phone. We are communicating via paper which sometimes gets to the parent and sometimes it does not. . . . Another parent, it may be a different issue. It may be the times that they work during the day or night for us. A lot of our students' parents work in factories. I think the parent involvement, finding the time and figuring out the proper way of communicating with parents.

Other teachers mentioned limitations of time that affected their abilities to build relationships with their students' families:

> Because I have so many kids, it's like you can't really get to know them and their families as well as you would like to. Because in the past, . . . I would go to basketball games, or football games, soccer games. But when you have this number [of students], it's kind of hard to be able to do that and get to know them and their families as well as you'd like to.

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 several ways. It was noted by many teachers that the sessions were informative and helpful. Both novice and experienced teachers learned teaching strategies and new ideas for classroom teaching. For example, a first-grade teacher noted:

> I think that it has been phenomenal. I've learned so many new techniques for teaching. This is my first year teaching . . . [The coach] has been super supportive and helpful for me in making some posters for some close reading strategies and just introducing new strategies that I was not aware of because I don't have time to do all these things and be on top of all the research.

Another more experienced teacher shared:

> I mean everything that she would tell me would be like an ah-hah moment, you know? Especially because this is my twelfth year, and I've moved a lot. And I've taught a lot at different grades, but there are things that I do that I haven't thought of in a long time.

Teachers also pointed out that these sessions promoted networking and collaboration within schools, between schools, and within the community. For instance, one teacher stated, "I've gained networking. It's really a beneficial thing for teachers . . . We get to network with other people from other schools. I like that I can reach out to somebody else, so that helped." Another teacher said, "I don't think teachers ever have the opportunity to get together and have those kinds of conversations, and share out what you are doing in the classroom. What's working, what's not working."

In addition, it was emphasized that these sessions helped teachers push themselves to be more creative. One teacher, who indicated that the majority of her students' MAP scores went up, stated:

> We sort of felt like at the beginning of the year, we were just going to read the textbooks of fifth grade and she [the coach] sort of helped us see other ways that you could accomplish the same objectives. This was different because they were more student-led, more student-choice.

Many teachers praised the CRIOP coaching, stressing that the coaches were helpful and supportive. The following quote summarizes teachers' impressions:

> It doesn't even feel like—when you look back on it, it's like 'Okay, maybe I was corrected.' But it didn't feel you were corrected. It was just being guided. And so the coaching is just that. It's very respectful and it's great.

Overall, teachers' comments indicated that classroom modeling of lessons, discourse protocols, learning inquiry activities, resources, and feedback provided by the CRIOP school-based coaches enhanced classroom instruction and teachers' learning.

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 toward meeting those objectives during the second year of the project.

Outcome Measures, Data Collection, and Analyses

Teacher surveys. The Culturally Responsive Teaching Survey (CRTS) consists of two scales designed to assess teachers' self-efficacy for implementing culturally responsive instruction and their beliefs regarding expected outcomes of culturally responsive teaching practices (Siwatu, 2007). The Culturally Responsive Teaching Self-Efficacy Scale (CRTSE) 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" (Siwatu, 2007).

The other component of the CRTS is the Culturally Responsive Teaching Outcome Expectancy Scale (CRTOE), a 26-item measure of teachers' beliefs regarding culturally responsive instructional practices and student outcomes (Siwatu, 2007). Teachers use a 100-point scale to rate their beliefs that a given behavior will have a positive outcome by indicating their level of confidence on a 100-point scale ranging from 0 (entirely uncertain) to 100 (entirely certain). Some examples of items from the CRTOE are "providing English Language Learners with visual aids will enhance their understanding of assignments" and "helping students from diverse cultural backgrounds succeed in school will increase their confidence in their academic ability" (Siwatu, 2007). Factor analysis confirmed reliability of the two measures comprising the survey. Internal reliability of the CRTSE was .96, as estimated by Cronbach's alpha, and reliability of the CRTOE was .95, as estimated by Cronbach's alpha (Siwatu, 2007).

Teachers participating in the CRIOP professional development program completed the CRTS at the beginning of the training and again at the end of the 2013-2014 school year. Reliability analyses were conducted for the CRTSE survey and the CRTOE 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. The fall administration CRTOE survey had a Cronbach's alpha of .97, while the spring administration CRTOE survey had a Cronbach's alpha of .98.

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 three participating schools during the 2013-2014 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 CRTS (Siwatu, 2007) were analyzed. Teachers' self-efficacy for

implementing CRI was measured by the CRTSE. The other component of the CRTS, the CRTOE, measured participants' beliefs regarding culturally responsive instructional practices and student outcomes (Siwatu, 2007).

Statistical analyses were conducted to determine if intervention may have had any significant effect on teachers' scores on the CRTSE and CRTOE inventories. Teacher efficacy for implementing CRI as measured by CRTSE increased for 22 of the 28 full-year teacher participants 79%). Repeated measures ANOVAs were utilized in order to provide effect sizes for any significant findings.

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 summer 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 summer pretests ($\bar{x}$ = 2954.19, s = 489.60) to spring posttests ($\bar{x}$ = 3256.52, s = 301.86). Results show that CRTSE scores were significantly higher posttest, Wilks's $\Lambda = .70$, $F(1, 26) = 11.026$, $p < .01$, partial $\eta^2 = .30$ (see Table 6).

Effect of professional development on teachers' CRTOE scores. Evaluators hypothesized that teachers who participated in the professional development would show significantly higher posttest CRTOE survey scores ($p < .05$).A repeated measures ANOVA was conducted using summer CRTOE survey scores as pretests and spring CRTOE survey scores as posttests.

A one way repeated measures ANOVA was conducted to determine if teachers' summed scores on CRTOE surveys increased significantly from summer pretests ($\bar{x}$ = 2225.61, s = 181.42) to spring posttests ($\bar{x}$ = 2367.04, s = 353.80). Results show that posttest CRTOE scores were significantly higher posttest, Wilks's $\Lambda = .87$, $F(1, 26) = 3.74$, $p < .05$, partial [illegible].13 (see Table 6).

Table 6

CRTSE and CRTOE Survey Scores

Survey	Fall		Spring		Change
	Mean	Standard Deviation	Mean	Standard Deviation	Mean
CRTSE	2954.19	489.60	3256.52	301.86	305.33[a]
CRTOE	2225.61	181.42	2367.04	353.80	141.43[b]

[a] is significant at $p < .01$; [b] is significant at $p < .05$.

Student achievement. Participants in this study consisted of 524 students (boys *n* = 259, 49.4%; girls *n* = 258, 49.2%, missing data *n* = 7) at three elementary schools (see Table 7). Of the 524 students, 85 (16.2% of total sample; 44 boys, 51.8%; 41 girls, 48.2%) 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

	School			
Statistic	School 1	School 2	School 3	Total
Frequency	249	118	157	524
Percentage	47.5%	22.5%	30%	100%

Table 8
Students by Grade

	Grade						
Statistic	Kinder	First	Second	Third	Fourth	Fifth	Total
Frequency	89	22	53	108	139	113	524
Percentage	17%	4.2 %	10.1%	20.6%	26.5%	21.6%	100%

Table 9
Student Characteristics by Ethnicity

	Ethnicity					
Statistic	Caucasian	African American	Hispanic	Other	Missing	Total
Frequency	194	133	150	40	7	524
Percentage	37%	25.4%	28.6%	7.6%	1.4%	100%

Table 10
EL Students by Grade

	Grade						
Statistic	Kinder	First	Second	Third	Fourth	Fifth	Total
Frequency	7	4	10	16	33	15	85
Percentage	8.2%	4.7%	11.8%	18.8%	38.8%	17.6%	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 = 524) 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*	506	508	504	504

MAP reading performance. A one way repeated measures ANOVA was conducted to determine if students' scores (*n* = 486) on MAP reading tests increased significantly from fall administrations ($\bar{x}$ = 180.41, *s* = 25.16) to spring administrations ($\bar{x}$ = 191.29, *s* = 22.60). Results show that students' MAP reading scores were significantly higher at spring administration, Wilks's Λ = .41, *F*(1, 485) = 697.79, *p* < .001, partial □□□□□□□□□□

MAP mathematics performance. A one way repeated measures ANOVA was conducted to determine if students' scores (*n* = 488) on MAP mathematics tests increased significantly from fall administrations ($\bar{x}$ = 182.68, *s* = 25.60) to spring administrations ($\bar{x}$ = 195.47, *s* = 24.23). Results show that students' MAP mathematics scores were significantly higher at spring administration, Wilks's Λ = .47, *F*(1, 487) = 542.86, *p* < .001, partial □□□.53.

Achievement for ELs. In order to investigate any relationships between intervention and EL student performance, numerous analyses were conducted to measure learning gains for EL students (*n* = 85).

ELs' reading performance. EL Students in this study (*n* = 85) completed the MAP reading tests. Three ELs students did not take both pretest and posttest MAP reading tests, leaving 82 students for analysis.

ELs' MAP reading performance. 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* = 76) reading ability increased significantly from fall MAP reading pretests ($\bar{x}$ = 175.65, *s* = 16.80) to spring MAP reading posttests ($\bar{x}$ = 186.95, *s* = 13.05). Results show that reading ability as measured by MAP reading tests was significantly higher posttest, Wilks's Λ = .44, *F*(1, 81) = 103.86, *p* < .001, partial $\eta^2 = .56$ (see Table 13 for scores and growth by grade).

Of the 82 students who took the MAP reading fall and spring tests, 89% (*n* = 71) gained in MAP reading performance from fall to spring administrations (change $\bar{x}$ = 11.31, s = 10.05). Reading gains were observed across all grades (See Table 12 for reading growth by grades).

Table 12
ELs' MAP Reading Scores

	Fall		Spring		Change
Grade (number of students)	Mean	Standard Deviation	Mean	Standard Deviation	Mean Growth
Kinder (7)	132.71	7.39	148.29	12.75	15.58
First (4)	167.44	16.78	177.75	16.78	10.31
Second (9)	164.56	17.39	188.22	15.01	**23.66**
Third (16)	178.88	14.17	187.44	12.74	8.56
Fourth (33)	181.79	13.34	190.42	11.83	**8.63**
Fifth (15)	187.73	13.29	199.71	7.42	**11.98**

Bold = Mean is greater than one school year growth

ELs' mathematics performance. EL students in this study (*n* = 82) completed the MAP mathematics test. Three EL students did not take both pretest and posttest MAP mathematics tests, leaving 76 students for analysis.

ELs' 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 EL students' (*n* = 82) mathematical ability increased significantly from fall MAP pretests ($\bar{x}$ = 181.89, s = 21.84) to spring MAP posttests ($\bar{x}$ = 194.44, s = 19.36). Results show that mathematical ability as measured by MAP mathematics scores was significantly higher posttest, Wilks's $\Lambda = .35$, $F(1, 81) = 158.32$, $p < .001$, partial $\eta^2 = .66$ (see Table 13 for scores and growth by grade).

Of the 82 students who took the MAP Mathematics tests, 90.2% (*n* = 76) gained in MAP mathematical performance from fall to spring administrations (change $\bar{x}$ = 12.55, s = 9.03).

Table 13
ELs' MAP Mathematics Scores

	Fall		Spring		Change
Grade (number of students)	Mean	Standard Deviation	Mean	Standard Deviation	Mean Growth
Kinder (7)	130.43	6.85	147.43	10.86	**17.00**
First (4)	152.25	16.68	180.00	11.40	**27.75**
Second (9)	169.56	10.25	187.11	8.62	**17.55**
Third (16)	182.69	9.83	194.63	9.75	**11.94**
Fourth (33)	190.52	9.64	201.39	10.94	**10.87**
Fifth (15)	200.07	11.24	209.36	12.49	**9.29**

Bold = Mean is greater than one school year growth

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, or Other), or EL status (yes or no), a series of 2 (sex) x 4 (ethnicity) x 2 (EL status) ANCOVAs were conducted on MAP reading and MAP mathematics tests.

MAP reading. A 2 x 4 x 2 ANCOVA was conducted using gender, ethnicity, EL status, and free/reduced lunch 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 x 4 x 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 ($p > .05$).

High vs. low implementation of CRI. In order to determine whether or not implementation of CRI impacted student learning, teachers with students who were administered the MAP reading and MAP mathematics test ($n = 20$) were separated by scores on the spring CRIOP observations ($\bar{x} = 18.60$, s = 2.84) into HIGH implementation and LOW implementation groups. HIGH implementation teachers ($n = 4$) were defined as those who had Holistic CRIOP spring observation scores at or above .8 standard deviations from the mean ($\bar{x} \geq$

21), while LOW implementation teachers (*n* = 6) were defined as those who had Holistic CRIOP Spring observation scores at or below .8 standard deviations from the mean ($\bar{x} \leq 16$).

Reading performance HIGH vs. LOW CRIOP. 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 ($p < .05$). In order to determine if students with teachers identified as HIGH implementers scored significantly higher on Spring MAP reading tests than students with teachers identified as LOW implementers, a one way ANCOVA was conducted using spring MAP reading tests as a dependent variable, implementation level as fixed factor, and fall MAP reading tests as a covariate. Results indicate that students with teachers identified as HIGH implementers scored significantly higher than students with teachers identified as LOW implementers on spring MAP reading tests $F(1, 220) = 3.02$, $p < .05$, $\eta^2 = .01$ (see Table 14 for adjusted means).

Table 14
MAP Reading HIGH and LOW Implementation Adjusted Means

Dependent variable: Spring MAP Reading Test

Level	Mean	Std. Error
LOW	196.32[a]	0.73
HIGH	198.30[a]	0.82

[a]Covariates appearing in the model are evaluated at the following values: Fall MAP Score Reading = 186.78.

Math performance HIGH vs. LOW CRIOP. 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 ($p < .05$). In order to determine if students with teachers identified as HIGH implementers scored significantly higher on spring MAP mathematics tests than students with teachers identified as LOW implementers, a one way ANCOVA was conducted using spring MAP mathematics tests as a dependent variable, implementation level as fixed factor, and fall MAP mathematics tests as a covariate. 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 $F(1, 221) = 5.16$, $p < .05$, , $\eta^2 = .02$ (see Table 15 for adjusted means).

Table 15

MAP Math HIGH and LOW Implementation Adjusted Means

Dependent variable: Spring MAP Math Test		
Level	Mean	Std. Error
LOW	202.28[a]	.68
HIGH	204.71[a]	.77

[a]Covariates appearing in the model are evaluated at the following values: Fall MAP Score Math = 190.91.

University-Based Teacher Education Component

Project plan. The teacher educator component of the planned grant project included analysis of course syllabi and aligning those syllabi with CRIOP pillars. The grant proposal included plans for teacher educators at Georgetown College to revise their syllabi in core courses to ensure that course content is aligned with CRIOP pillars and that the courses include standards for teaching ELs. The project plan for the second and third years of the CRIOP professional development initiative included three professional development sessions for college faculty and one professional development session for school administrators.

Collection of course syllabi. Seven college faculty members in the teacher preparation program at the sponsoring institution submitted course syllabi to the project director, who subsequently submitted them to evaluators. Evaluators analyzed these syllabi for alignment with elements of the CRIOP. Course syllabi modifications in course outcomes, candidate assessment, and clinical experiences were tracked. Syllabi revisions in course content, assignments, readings, and resources were also examined and recorded.

Revision of teacher preparation course syllabi. During each of the first two years of the project, seven teacher educators in the teacher preparation program at the sponsoring institution attended a three-day professional development workshop and submitted revised course syllabi to evaluators. Course syllabi for the following courses were submitted in the first year of the program: Literacy Leadership in Schools Practicum; Final Clinical Practice – Field Component in LBD Special Education; Curriculum and Instruction for Students with Moderate to Severe Disabilities; Field Component in LBD I; Foundations of Environmental Education; Teaching Language Arts in the Elementary School; and Classroom Applications of Technology and Content Literacy. Revisions to these syllabi focused on one or more of the following areas: course outcomes, course content, candidate assessment, and field experiences.

An analysis of the syllabi revealed that course outcomes relating to ELs were revised in four of the course syllabi. The implementation of elements of the CRIOP in lesson planning was

included in two of the courses, and meeting the learning needs of ELs was added in four of the course syllabi. Examples of course objectives added or modified in these four syllabi included: explain advantages and disadvantages of various instructional strategies for meeting the needs of ELs and special needs learners and identify and implement explicit teaching strategies for diverse populations (racial, ethnic, and language diverse students).

Three of the course syllabi included revisions of the course content to include CRI or the CRIOP, and course topics devoted to teaching ELs were included in six syllabi. Some examples of these course topics are: Integration of Literacy and CRIOP Standards into the Content Areas; ELs and Culturally Responsive Teaching; Differentiation of Lesson Plans to Meet the Needs of these Learners; and Meeting the Needs of EL Students through CRIOP. Five of the course syllabi listed course assignments or readings incorporating WIDA standards for ELs. Content topics of three of the courses included implementing elements of the CRIOP or culturally responsive teaching.

Candidate assessments using the CRIOP were included in two course syllabi, with one of these assessments utilizing the Curriculum, Pedagogy, and Sociopolitical consciousness pillars of the CRIOP as an evaluation guide for a lesson-planning project. Another course included the development of a five-day, content-based unit incorporating literacy and elements of the CRIOP, along with practice teaching to peers.

Most of the course syllabi did not include modifications related to clinical experiences. One course syllabus included an additional field experience assignment of selecting an EL within the school fieldwork site and assessing the student's needs using the WIDA standards.

During the second year of implementation, syllabi were collected from the following teacher preparation courses: Curriculum and Assessment for Teacher Leaders, Educational Programming for LBD, Final Clinical Practice-Field Component II in LBD Special Education, Learning and Behavior Disorder (LBD), Teaching in Middle/Secondary School; section A, Teaching Science in Elementary School, and Transition Services for Students with Disabilities. Revisions in the syllabi for these courses focused on one or more of the following areas: course content, readings and resources, course assignments, and candidate assessments.

An analysis of the syllabi revealed that course content was revised in three syllabi. Each syllabus includes discussions and topics on CRI. In particular, the discussions are based on issues related to contrasting beliefs, values, and practices; importance of respect for different cultural, racial, and socio-economic backgrounds; teaching reading and comprehension to ELs. One syllabus contains topics on responsive teaching and differentiated instruction for ELs.

Five of the course syllabi included the revision of the readings and resources. Two articles, two books, two power point presentations, and two book chapters on topics, such as

assessment, curriculum design, and teaching reading and comprehension to ELs, were added to the syllabi. In addition, links to TESOL K-12 Proficiency Standards, TESOL Technology Standards, CCSS, TESL, and WIDA were listed. One of the syllabi also contains a reading of the students' choice related to the topic of EL and cultural diversity.

Two of the course syllabi have revised course assignments. According to the first assignment, students are required to keep journals that reflect the CRIOP indicators. The other assignment presupposes a preparation of a power point presentation on the topic of multicultural transition.

Candidate assessments using the CRIOP were included in three syllabi. One of these assessments utilized the instructional practices and discourse pillars of the CRIOP as an evaluation guide for keeping journal entries. The assessment criteria of the other two syllabi were based on the indicators of the following CRIOP pillars: Assessment, Classroom Relationships, Family, and Instructional Practices.

Modifications to clinical experiences are inferred in the expectations for clinical experiences in a unit assessment rubric included in one of the syllabi, however, none of the syllabi includes modifications related to outcomes.

Discussion and Conclusions

Similar to findings from the first year's evaluation, the professional development model was implemented at high levels during the second year of the project. During the 2013-2014 school year, 28 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. Increases in implementation from the fall observation to the spring observation show growth in classroom implementation of CRI over time, and these data sources illustrate the power of school-based coaching and mentoring for supporting teachers as they try new approaches in their work with students. Although the effect size from fall to spring CRIOP comparisons is smaller than in the first year, it is important to note that teachers participated in considerably more summer professional development in year two than in year one. It is likely that fall observations were conducted well after teachers had begun to make changes in their classroom practices, and thus those changes are not reflected in the fall to spring CRIOP scores. Despite challenges that serve as barriers to implementation, such as one school's adoption of a mandatory scripted reading program with methods directly contradictory to CRI, teachers

perceived positive outcomes for students related to their implementation of the practices they learned though the professional development model.

Outcome results for participating teachers and their students are positive in the second year of project implementation, just as they were in the first year. Results on the teacher survey indicate participating teachers experienced significant increases in their sense of efficacy for CRI and in their outcome expectancies related to 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 three of the elementary grades in reading and at ALL of the 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, and they provide validation of project staff's efforts to support those teachers.

Another important goal of this project is to influence university-based teacher education through professional development in CRI for teacher educators. During the second year of the project, course instructors participated in professional development based on the CRIOP. Analysis of course syllabi indicates instructors in the higher education institution have modified course content to include standards for ELs and elements of the CRIOP. This emphasis on CRI at the university level illustrates the comprehensiveness of this project in better equipping educators to serve ELs in school.

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