

College Readiness via Rhetorical Literacies:

Expanding and Validating the Success of the Expository Reading and Writing Course

INTRODUCTION: Each fall newly-minted high school graduates across the country get set to begin college believing they are well prepared for college reading and writing only to discover that their scores on placement tests indicate that they cannot enroll in credit-bearing English courses because they need remediation. Although college readiness has increased in recent years, 27.5 percent of incoming first-year students are identified as needing remediation in English at the California State University (CSU) (CSU, 2016). The consequences for students in terms of time, money, and degree attainment are substantial. In their recent report, *Out of Pocket*, Nguyen Barry and Dannenberg argue that not only are American families spending billions each year in extra college costs because students are underprepared, but these students are more likely to delay college completion or drop out because their motivation and sense of self-efficacy have been undermined. “Our analysis indicates among rising first-time full-time bachelor’s degree seeking students, over one-quarter of those who take a remedial or developmental education course in their first year of postsecondary education drop out of college and do not return within six years. This makes them 74 percent more likely to drop out of college than first-time full-time students who do not need remedial education. For those that do cross the finish line, they still take 11 months longer to graduate” (Nguyen Barry, & Dannenberg, 2016, p. 9).

The Expository Reading and Writing Course (ERWC) is an innovative high school English course “that effectively integrates multiple theories from the fields of reading comprehension, rhetoric, literacy, and composition to foster college readiness, academic literacy development, and literate identity formation at the high school level” (Katz, Brynelson, & Edlund, 2013, p. 978). Taken together, the ERWC fosters abilities referred to as *rhetorical literacies*. An

important component in the ERWC, “rhetoric targets the conventions and processes of high academic literacy, including the sophisticated responsiveness to context that characterizes college and workplace writing” (Fletcher, 2015, p. xv). Created as a part of the CSU’s Early Assessment Program (EAP) in 2004 to help students avoid remediation in first-year college English, the course engages students with fiction and nonfiction texts and debatable questions exploring compelling issues of interest to adolescents. Texts and questions address issues, such as racial profiling, the value of life, good food vs. bad food, juvenile justice, bullying, and preparing for life after high school. Now adopted by over 850 high schools in California (CA), the ERWC is recognized not only as an effective support for students’ transition to college but as a powerful curriculum to **implement internationally benchmarked college- and career-ready standards and assessments (Absolute Priority 1)**. The Smarter Balanced Assessment Consortium (SBAC, 2015) and other college readiness scholars (Barnett, 2013, 2016; Kurlaender 2010, 2014) have reported on the EAP and the ERWC, citing them as effective responses to college readiness needs identified by Smarter Balanced and other assessments.

Figure 1. Comments from a College Student Who Took ERWC in High School

I signed up for ERWC because I heard it was helpful for college level English and I knew for a fact I needed that...It was a class that absolutely prepared me for two years of college level English and ALSO my science classes...I'm very confident in my writing now and my ability to look “outside the box” when it comes to reading/writing. *Ashley B.*

The 2011 Investing in Innovation (i3) Development grant awarded to the Fresno County Office of Education (FCOE) in collaboration with the CSU enabled the expansion of the ERWC across grades and schools throughout CA. In a quasi-experimental study conducted for the grant, WestEd found statistically significant and positive results for students participating in the ERWC

in 24 schools across the state, many of which were serving **high-need students**. Students who were enrolled in the ERWC scored higher on the CSU's English Placement Test compared to those who did not enroll. Building on these significant accomplishments, the FCOE is applying for an i3 Validation grant to expand and validate the course. For this application, **high-need students** are defined as students at risk of needing remediation in English upon entry into a two- or four-year institution of higher education, students who are English learners (ELs), and students with disabilities. The proposed project, *College Readiness via Rhetorical Literacies*, will expand the evidence-based ERWC to encompass both grades 11 and 12 and will **scale ERWC implementation** in CA and Washington (WA) in a **variety of settings**.

Specifically, the **project's objectives and activities** are 1) Establish leadership teams at the project and state levels to guide revisions to ERWC curriculum, pedagogy, and professional learning and to scale implementation with fidelity in CA and WA high schools at grades 11-12; 2) Revise ERWC curriculum to address all English language arts (ELA)/literacy standards for grades 11-12; 3) Refine course pedagogy, including strategies for ELs and students with disabilities; 4) Lead professional learning for teachers, site leaders, administrators, coaches, and professional learning facilitators, including face-to-face sessions, classroom coaching, and communities of practice; 5) Teach the course in grade 11-12 classrooms in 40 study schools in CA and WA; and 6) Validate the success of the ERWC by evaluating student results using a multi-site cluster-randomized trial design and by examining the success of project replication.

Expected outcomes are higher scores on the Smarter Balanced ELA/literacy summative assessments for students having participated in ERWC classrooms at grades 11-12; higher rates of passing credit-bearing English courses for such students in their first semester of college; and demonstrated capacity to scale ERWC with fidelity in a new state. The **project will serve** 9,600

students in the evaluation study; an additional 50,000 students at schools where the ERWC is already implemented will benefit from improved curriculum and professional learning.

The FCOE and its partners in CA and WA will work collaboratively to accomplish the project's goals and objectives. Key partners include the CSU Chancellor's Office, CSU campuses, CA Community College Chancellor's Office (CCCCO) and its campuses, CA Department of Education (CDE), WA State Board for Community and Technical Colleges (SBCTC), WA Office of Superintendent of Public Instruction (OSPI), CA county offices of education (COE), school districts in CA and WA, and WestEd. Other private-sector partners, including the five 2011 funders, will be solicited to augment funding promised by The Foundation @ FCOE.

A. SIGNIFICANCE

A.1. Magnitude or Severity of the Problem. Low levels of college completion are a significant national challenge in which the **academic preparation** of incoming students plays a major role. The **ERWC** provides a solution as one of the few secondary interventions in literacy in the country demonstrating **statistically significant and positive impacts on measures of college readiness**. In 2011 Vice President Biden stated "Providing every American child with the opportunity to *go to college* is critically important, but we can't stop there. We need more American students to *graduate* from college. The President has set a clear goal: By 2020, America will have the highest proportion of college graduates in the world. Right now we are ninth" (Levine, 2011). The goal, as articulated by the College Board, is to increase the proportion of 25- to 34-year olds who hold an associate degree or higher to 55 percent by the year 2025 (Hughes 2013). According to the Organization for Economic Cooperation and Development's most recent data, 46 percent of U.S. 25- to 34-year olds have a postsecondary degree (NCES, 2016). Taken up by colleges and universities across the nation, this **call to increase college completion** has led to

many initiatives, including the CSU's Graduation Initiative, which implements various strategies to increase the six-year graduation rate and halve the achievement gap.

Central to these efforts to increase graduation is the **need for students to begin college academically prepared**. The data are clear: many students are entering college in need of remedial English courses, and these students are significantly less likely to graduate. "Remedial students graduate at about half the rate of their college-ready peers—rates that are already far too low" (Complete College America, 2013). Of the 1,845,787 high school graduates who took the ACT in 2015, 64 percent met college readiness benchmarks in English and 46 percent met the benchmarks in reading, representing declines in English from 66 percent and in reading from 52 percent in 2010 (ACT, 2015). Reading literacy assessed by the Program for International Student Assessment of 15-year-old students ranked the U.S. as 24th out of 65 countries in 2012 (NCES, 2015). On the National Assessment of Educational Progress (NAEP) the average reading score for 12th graders in 2015 was 287, while a score of 302 is considered proficient and an indicator of students' academic preparedness for college. According to NAEP estimates, only 37 percent of 12th graders are academically prepared for entry-level coursework in English (NAEP, 2015).

Of high school graduates entering two-year colleges nationwide, 51.7 percent enrolled in remediation as did 19.9 percent of those entering a four-year college. According to Complete College America (2012), although the majority of community college students completes remediation in their first two years of college, less than half go on to complete key college-level, or "gateway," courses that are important to transfer from a two-year institution to a four-year institution and to complete a major. At two-year colleges, 62 percent of remedial students complete remediation but only 22.3 percent complete gateway courses; at four-year colleges 74.4 percent of remedial students complete remediation but only 36.8 percent complete gateway courses.

The two states targeted in this application demonstrate comparable profiles of need. The need for an approach to ELA/literacy that engages students, results in readiness for college-level English, and enables students to transfer their literacy skills to other subject areas is critical.

Figure 2. Profile of Higher Education Systems’ Need for Remediation in Three States

System	Number of Campuses	Total Student Population	Rates of Remediation	Notes and Sources
CA State University	23	474,571	27.5% of first-time “freshmen” (17,683)	English (CSU 2016)
CA Community Colleges (CCC)	112	2,100,000	74% of incoming students ¹	English & math (CCCCO 2014, p. 8)*
WA Community and Technical Colleges	34	392,785 (WA SBCTC, 2015)	40% of incoming K12 HS graduates	English – (Education Research & Data Center 2016)

* The rate of completion for students who arrive needing remediation is 40.5 percent compared to 70.2 percent of the students who arrive prepared (CCCCO 2014, p. 8).

A.2. Demonstration of Promising New Strategies. The ERWC is a promising new strategy that “aims to facilitate access to higher education through a substantive inquiry-oriented curriculum that helps high school students develop the high-level literacies they need to succeed in college and beyond” (Katz, Graff, & Brynelson, 2013, p. 1). The ERWC “integrates literacy pedagogies with concepts and practices from Aristotelian rhetoric to promote principled debates about ideas and texts ... that enable students to acquire high-level *rhetorical literacies*” (Katz et al., 2013, p. 979). Unlike most current approaches to teaching ELA, the ERWC couples rigor with support; it engages students in critical thinking about issues of the day while teaching skills

¹ The CA and WA two-year systems provide only percentages of students needing remediation; a numerical count is not available.

needed to read, discuss, and write about them; it integrates reading and writing focusing on topics and texts that students find interesting; it fosters an environment of inquiry in which teachers and students give voice to their opinions; and it uses concepts from rhetoric to make learning powerful, purposeful, and motivating for students and teachers alike. “Writing rhetorically means writing with the attention to argument, purpose, audience, authority, and style demanded by academic texts.” (Fletcher, 2015, p. xv). Students in ERWC become “more versatile readers, flexibly responding to the needs of each rhetorical situation” (Katz, Graff, & Brynolson, 2013, p. 2). “For the many low-income, underrepresented, and multilingual students for whom higher education is an alien world, the study and practice of rhetoric offers essential training in the imaginative and empathic capacities of writers to write for diverse audiences, purposes, and occasions. Rhetoric helps us inhabit other social worlds and identities” (Fletcher, 2015, p. xv). Although other curricula include many of these features, **the ERWC is unique in effectively integrating all of them with demonstrated impact on student outcomes.**

Through a sequence of eight to ten rigorous instructional modules in the last one to two years of high school, students in the ERWC develop advanced proficiency in expository, analytical, and argumentative reading, writing, and language. The central organizing structure of the ERWC modules is the Assignment Template (AT), which is used to design all modules. The elements of the AT are applied dynamically by module developers to meet course outcomes and ensure appropriateness for grade level and position in the course sequence. The AT is organized into three domains: Reading Rhetorically, Connecting Reading to Writing, and Writing Rhetorically. Each domain contains strands (listed in figure 3) and elements. The Reading strand within the Reading Rhetorically domain, for example, contains five elements: Reading for Understanding, Considering the Structure of the Text, Noticing Language, Annotating and Questioning the

Text, and Analyzing Stylistic Choices. See Appendix J for a list of all 26 AT elements.

Figure 3. Critical Curriculum Components: ERWC Assignment Template and Arc

Domain	Strand	Intellectual Moves Students Are Guided to Make
Reading Rhetorically	Prereading	Preparing: Each ERWC module begins with a professional text or texts and ends with a student text; thus, we say it is “text to text.” Students begin by preparing to read the text, skimming, scanning, and sampling to activate background knowledge and make predictions.
	Reading	Understanding: Students work on understanding the text according to its own principles and purposes.
	Postreading	Questioning: Only when students understand the text are they ready to begin questioning it, analyzing arguments and evidence while looking for assumptions and unsupported points. Throughout these initial stages, the student’s relationship to the text becomes more and more complex, a dynamic synthesis of the author’s ideas and the student’s questions.
Connecting Reading to Writing	Discovering What You Think	Responding: As the student returns to the text with an eye toward responding to it through the lens of the writing prompt, he or she begins selecting words, phrases, and ideas to use in developing his or her own stance.
Writing Rhetorically	Entering the Conversation	Writing: Then the student begins writing a draft, getting his or her ideas on paper or on the screen of a device.
	Revising and Editing	Revising: Finally, the student begins revising the draft, taking feedback into account and thinking about his or her own readers. The journey from text to text, as the student moves from reading to writing, is of course more complex and recursive than this chart can show.

Instruction for each module follows an “arc,” beginning with professional texts that students read and leading to texts that students write. Although the arc is depicted as moving in one direction (figure 4), the actual process is iterative with students writing from the earliest stages and professional texts informing the process throughout. The key is that teachers and students engage in instruction for all strands of the template, moving along the arc, so that students read, speak, listen, and write in every module. As students internalize the intellectual moves and progress through the arc for each course module, they become increasingly independent, and teachers adjust instruction based on assessment within and across modules, the semester, and the year.

Figure 4. The ERWC Arc

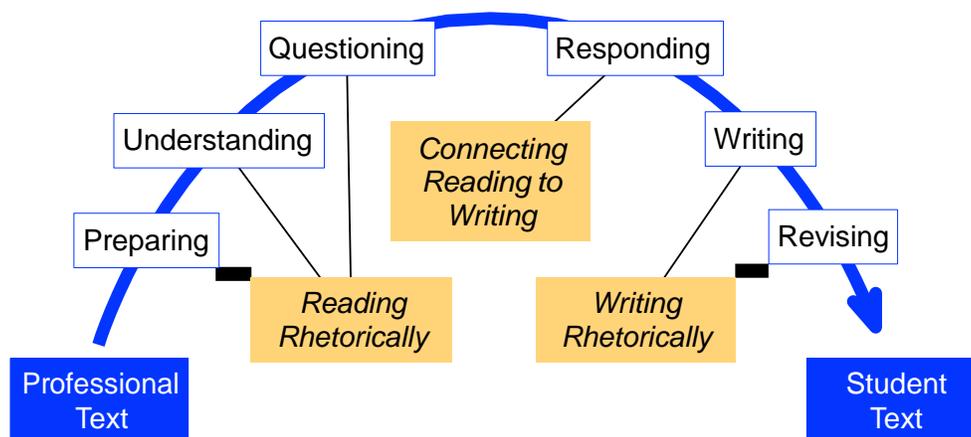


Figure 5. Comments from a College Student Who Took ERWC in High School

I would definitely say that ERWC was super helpful in preparing me for college English classes. Something that helped ... was the annotating and discussion we had... I found that interpreting sentences and putting them into my own words and perspectives really helped me write my essays. I found myself a lot more prepared than others in my class who had only taken a normal high school English class. I remember my professor specifically saying on the first day, “We are going to do a lot of things you guys haven’t done before like annotation” and I laughed to myself. I ended up getting an A too! I definitely wouldn’t have if it wasn’t for ERWC preparing me or for your superb teaching skills.

Salvador M.

The proposed project, *College Readiness via Rhetorical Literacies*, will demonstrate the ERWC as a **promising strategy**—proven to be effective in CA—and will institute curricular and instructional enhancements based on “lessons learned” through implementation to date.

A.3. Exceptional Approach to the Priority. The ERWC is an **exceptional approach** because it has empirically demonstrated its success with students. Numerous studies had documented positive responses of students and teachers to the ERWC prior to 2015 when WestEd completed the evaluation study for the i3 Development grant, yielding statistically significant

and positive results.² The rate of course adoption also attests to ERWC’s successful scaling in CA. Growing from less than 100 schools in 2006, now more than 850 comprehensive and alternative high schools in CA offer the course to its seniors, with over 12,000 educators having participated in ERWC professional learning. Approved to meet college eligibility requirements for CA’s public universities, the ERWC leverages existing school infrastructure as well as school district and COE systems of professional learning.

The ERWC also represents an **exceptional approach to the priority** because of the close alignment of its goals and practices with the Common Core State Standards (CCSS) (**internationally-benchmarked college- and career-ready standards and assessments**). Long before the CCSS and the Smarter Balanced summative assessments were instituted in 2010 and 2013 respectively, the ERWC had identified critical practices necessary for developing proficiency in ELA/literacy and becoming college ready. From the outset, the ERWC was designed to focus on informational text, argumentative writing and speaking based on evidence, and analysis of complex academic language and texts, all of which are named as “key shifts” of the CCSS for ELA/Literacy (NGA/CCSSO, 2010a). The goals and approaches of the ERWC are also consistent with the description of students who are college and career ready in the CCSS for ELA/ Literacy. Often referred to as the “capacities of the literate individual” (NGA/CCSSO, 2010 b), these descriptors align closely with the intent of the curriculum discussed in the ERWC’s course outcomes (CSU, 2013, pp. xx-xxi). For example, the capacities of the literate individual include “they respond to the varying demands of audience, task, purpose, and discipline,” and the ERWC

² The results were statistically significant at the 1 percent level, and the effect size was calculated to be 0.13. See section D for more information on the study.

course outcomes include “write a variety of text types for real audiences and purposes, making effective rhetorical choices in light of those audiences and purposes.” Another capacity, “they comprehend as well as critique,” is consistent with the ERWC outcome, “cite strong and thorough textual evidence to support analysis of what a text says and implies,” as well as the CCSS Reading Standard 1. The ERWC also states outcomes for “habits of mind,” such as “act as motivated, self-directed learners” and “persist during difficult academic tasks,” consistent with the capacity, “they demonstrate independence.”

B. STRATEGY TO SCALE

B.1. Unmet Demand for the Practice. As states and school districts receive the results of Smarter Balanced assessments with students’ scores reported in terms of college readiness, they will look for proven solutions to the lack of readiness in ELA/literacy and mathematics. For most states, the spring 2016 results will be only the second time students’ college and career readiness is reported by a state-mandated test in grade 11. Results of the spring 2015 testing indicate that 44 percent of students in CA and 73.7 percent of students in WA did not meet the college-content ready level in ELA/literacy (CDE, 2016; WA OSPI, 2016). Far too many students did not demonstrate readiness in ELA/literacy, and the ERWC is poised to meet this demand.

The SBAC defines the College Content-Ready level in ELA/literacy (Level 4) as the following: “Students who perform at the College Content-Ready level in ELA/literacy demonstrate reading, writing, listening, and research skills necessary for introductory courses in a variety of disciplines. They also demonstrate subject-area knowledge and skills associated with readiness for entry-level, transferable, credit-bearing English and composition courses.” Within the SBAC, 197 IHEs have committed to using the exam to make placement decisions for incoming students. In addition to CA, Delaware, HI, Oregon, South Dakota, and WA will “use the high school score

as evidence that students are ready for entry-level, credit-bearing courses and may be exempted from remedial courses” (SBAC, 2015). These institutions include 47 public universities, 10 independent colleges and universities, and 140 public community and technical colleges. **These states, and likely others, need the solution that the ERWC provides.**

Demand for the ERWC in the country is real and largely unmet. National presentations³ and publications (Leal, 2015; Katz, Brynson, & Edlund, 2013; Barnett et al., 2013 & 2016) about EAP and the ERWC have generated inquiries from individuals and states around the country. Inquiries from educators in HI and WA resulted in their participation in ERWC professional learning and their use of the curriculum through informal partnerships. Neither state has fully instituted the curriculum, due largely to CA’s and its partners’ limited resources to support full implementation. Recently, however, the HI P-20 Council recommended that the course be used to support students who score below level 3 on the Smarter Balanced summative assessments.

In WA, the SBCTC has created a transitional “Bridge to College English” (BCE) course that uses nine ERWC modules as course units. Leaders from WA attended workshops in CA in 2015 and 2016, and a CSU faculty member traveled to WA to work with a cadre of teacher leaders. The BCE course was implemented in 75 schools for the first time in 2015. In 2016, the course will include additional ERWC modules and will be expanded to 150 schools.

CA has received informal inquiries from educators in other states (e.g., Connecticut, Texas, Utah) but has been unable to do more than share resources, (e.g., provide access to the

³ American Educational Research Association, 2016; i3 Capitol Hill Briefing, 2015; i3 Directors’ Meeting, 2015; Community College Research Center Symposium, 2015; College Board Forum, 2014; International Reading Association, 2013; CCRC/Jobs for the Future Symposium, 2013.

ERWC Online Community). Mechanisms for more substantive involvement, such as licensing agreements and opportunities for nationwide professional learning, currently do not exist. This Validation grant would allow the ERWC team and its partners to create the tools and strategies, through the proposed implementation in WA, to meet current and future demand.

B.2. Barriers to Reaching Level of Scale. The barriers to broader implementation of the ERWC exist in several categories: breadth of **curriculum** design; availability of a range of **professional learning** opportunities; strategies for **ELs and students with disabilities**; differences in **policy contexts** in other states; and **human resources and capacity**.

The ERWC **curriculum** is currently offered as a one-year course at grade 12. However, the standards for ELA/literacy are stated for grades 11 and 12, and teachers continue to report that the course needs to begin earlier in a student’s academic career. The proposed project will address this barrier by expanding the course to grade 11 and addressing the full range of ELA/literacy standards across the CCSS strands of Reading (literary and informational texts), Writing, Speaking and Listening, and Language. With the expansion of the ERWC curriculum, it will be critical to identify a clearer trajectory of instruction across semesters and years, including a timeline for focusing on different threshold concepts, “flexible tools for imagining a progression of student learning across a curriculum rather than at one specific moment or in one short period of time” (Scott and Wardle, 2015, p. 123). Threshold concepts in the ERWC include 1) reading and writing are social and rhetorical activities; 2) argumentation is a form of inquiry; 3) we can choose to read a text with or against the grain; 4) writing addresses and creates specific audiences; and 5) the effectiveness of a writers’ choices depends on the contingencies of the rhetorical situation. Considering these concepts will help structure the overall sequence of course modules as it is expanded from one to two years.

The **availability and quality of ERWC professional learning** is constrained by limited funding. While the CSU provides almost \$1 million to support the ERWC and professional learning, that amount is insufficient to keep up with demand in CA and to institute needed enhancements such as regular coaching, communities of practice, advanced professional learning for teachers, and professional learning for administrators. Moreover, the variable levels of teacher implementation revealed by the 2011 i3 Development project evaluation suggest that stronger professional learning is needed. Although student results were positive, teachers and students struggled with the level of rigor and pace of the course. One lesson learned from the previous project was that teachers struggled to make instructional adjustments in response to the needs of diverse students and that the project needs to support teachers more to plan effectively and use processes of formative assessment to inform instruction. Applying these and other lessons learned will strengthen the professional learning design, expand the range of professional learning opportunities, and explore ways to leverage existing state, county, school district structures and resources to support ongoing learning for ERWC educators.

An additional barrier is the lack of ERWC curriculum materials specifically designed to address the linguistic and other needs of **ELs and students with disabilities**. While ERWC leaders have developed some resources designed to support ELs, such as the paper “Modifying the ERWC Assignment Template for English Learners,” and its accompanying video, teachers must use these resources to modify and adapt the curriculum for their EL students on their own. To support teachers more completely, more implementation-ready curriculum materials are needed. The proposed project will address this barrier by modifying selected modules to incorporate integrated and designated English language development (ELD) more effectively. Strategies designed to support students with disabilities will be created for several modules as well.

The 2014 *English Language Arts/English Language Development Framework for California Public Schools: Kindergarten Through Grade 12*, which provides guidance on implementing the CA CCSS for ELA/literacy and the CA ELD standards, will be a primary resource for this work. Professional learning to help teachers effectively differentiate instruction and assessment for ELs and students with disabilities will be designed and provided to ERWC teachers.

Barriers to scaling exist in **other states** where **policy contexts**, present curricula, professional learning infrastructure, college placement procedures, and awareness of the ERWC are different than in CA. While CA and WA have some experience working together, ERWC leaders will need to further clarify WA's existing systems and plan ERWC implementation accordingly. Building on the state policy and management infrastructure created for the BCE initiative will be key. Leadership teams for each state will be formed to plan project implementation within the context of each state's unique systems, opportunities, and challenges.

Another set of barriers to broader implementation relates to the **human resources and capacity** needed to accomplish several administrative and legal functions. These include negotiating print and electronic copyright permissions for student reading selections; developing licensing agreements, including trademarks, for the use of the materials in other states; and preparing personnel to conduct professional learning, including coaching, outside CA. Since the first meeting of the ERWC Task Force in 2003, this initiative has relied largely on the voluntary, professional contributions of professors, teachers, specialists, and administrators. Inadequate staffing is a barrier to expanding and disseminating the curriculum. The proposed project will leverage university and other resources to consult with individuals with expertise in licensing, trademarks, permissions, communications, and strategic planning. To achieve the proposed scale and ensure sustainability, the state leadership teams will consider alternative organizational

structures, such as adding nonprofit partners separate from the university and creating fee-for-service professional learning offerings. By the end of the grant period, the infrastructure for future scaling and sustainability will be well established.

B.3. Feasibility of Successful Replication. Created in 2004 as a component of CSU’s EAP, the **ERWC is well suited to be replicated in states outside CA.** The EAP began in 2002 as an assessment of college readiness at the end of grade 11 in English and mathematics. The initiative quickly grew to include outreach to educators and families; supplemental high school preparation, including the ERWC; professional learning; and teacher preparation. Ground-breaking at the time, the use of assessment results at grade 11 to determine college readiness is now a fundamental premise of the SBAC and reflects the emphasis of the CCSS on college and career readiness. As the ERWC’s purpose is to help students become college ready, and the content and approaches of the ERWC is aligned with the CCSS for ELA/Literacy, other states are likely to be interested in adopting, or **replicating**, the course. As indicated earlier, other states beyond WA and HI have already made inquiries.

Often identified as a “transitional” course for students who need to shore up their skills before entering college, the ERWC satisfies that purpose and more. In conjunction with SBAC testing, the EAP in CA identifies students at grade 11 as college ready in English if their score falls within the “standard exceeded” or level 4 band in ELA/literacy. Upon entering the CSU or participating CCCs, these students are exempted from placement testing and enter directly into credit-bearing or transfer-level English courses. Students who score within the “standard met” or level 3 band are identified as conditionally ready for college-level work in English and are required to take an approved course in grade 12 (e.g., ERWC, Advanced Placement English) and pass with a C or better to be exempted from placement testing. Students scoring at levels 1-2 are

considered not yet ready and are required to take an English placement test upon entering the CSU and participating CCCs. The CSU now mandates that students deemed not ready participate in the Early Start program and begin remediation in the summer before enrolling in fall classes.

Based on a statewide agreement among IHEs, students in WA who score at levels 3 and 4 on SBAC ELA/literacy testing in grade 11 are considered college ready. The BCE course, which consists largely of ERWC modules (see section B.1), is designed for students at level 2. In order to address differences in policy contexts and initiatives between CA and WA, the current ERWC leadership structure (described more fully in section C.2) will be augmented by a project leadership team with CA and WA representatives. State leadership teams for both CA and WA will also be established. These structures will be responsive to the needs of both states and will ensure that the ERWC is implemented effectively with students in grades 11 and 12 at study schools. Regardless of particular context, the ERWC course content is well suited to achieve both states' goals for college readiness in academic literacy.

Aligned with **internationally benchmarked standards and assessments**, the ERWC, in addition to being an effective transitional course, is a significant reform in the way ELA is conceptualized and taught. The proven benefits of the ERWC provide good reasons to adopt the course and **support ERWC's replication in new schools**. Since nearly all students take four years of English to graduate from high school and enter college, implementing the ERWC does not demand major restructuring of school schedules or staffing or additional costs beyond initial and ongoing professional learning. This “built-in” institutionalization makes it **feasible** for schools to implement the course within the existing structure of a high school master schedule and thus far more likely that the course will be sustained once the project is finished. Also important, the proposed project will strengthen supports for ELs and students with disabilities, thus

increasing the **feasibility of replication** as strategies to support these student populations.

A critical component of the ERWC is professional learning, including coaching and communities of practice. In CA, teachers participate in 24 hours of professional learning over the course of several months to be certified to teach the ERWC. Exemplifying the collaborative relationships at the heart of the ERWC, these sessions are co-led by higher education faculty and high school teachers or COE specialists. Teachers receive the curriculum materials as a condition of participating in the professional learning. Once introduced to the course, teachers are further supported through a vibrant online community <<http://writing.csusuccess.org>>; the password-protected ERWC online community is made available once teachers attend a professional learning session. Teachers also take part in school-, district-, and county-based networks of coaching and communities of practice. In WA, the proposed project will build on a similar existing structures currently being implemented for the BCE initiative. The project's state leadership teams will **replicate critical components** of the ERWC by leveraging existing collaborative relationships among IHEs, regional structures (e.g., COEs), districts, and high schools.

C. QUALITY OF THE PROJECT DESIGN AND MANAGEMENT PLAN

C. 1. Goals, Objectives, and Outcomes. The theoretical framework for the proposed project, *College Readiness via Rhetorical Literacies*, is depicted by the **logic model** (figure 6) and includes project goals, existing inputs, proposed project activities, intended outputs, and measurable outcomes. The **clearly specified and measurable goals, outcomes, and objectives** of the proposed project are displayed in figure 7. These demonstrate the project's alignment with the priority to **implement internationally benchmarked college- and career-ready standards and assessments for high-need students**, including students at risk of needing remediation in English upon IHE entry, students who are ELs, and students with disabilities.

Figure 6. Logic Model: College Readiness via Rhetorical Literacies: Expanding and Validating the Success of the ERWC

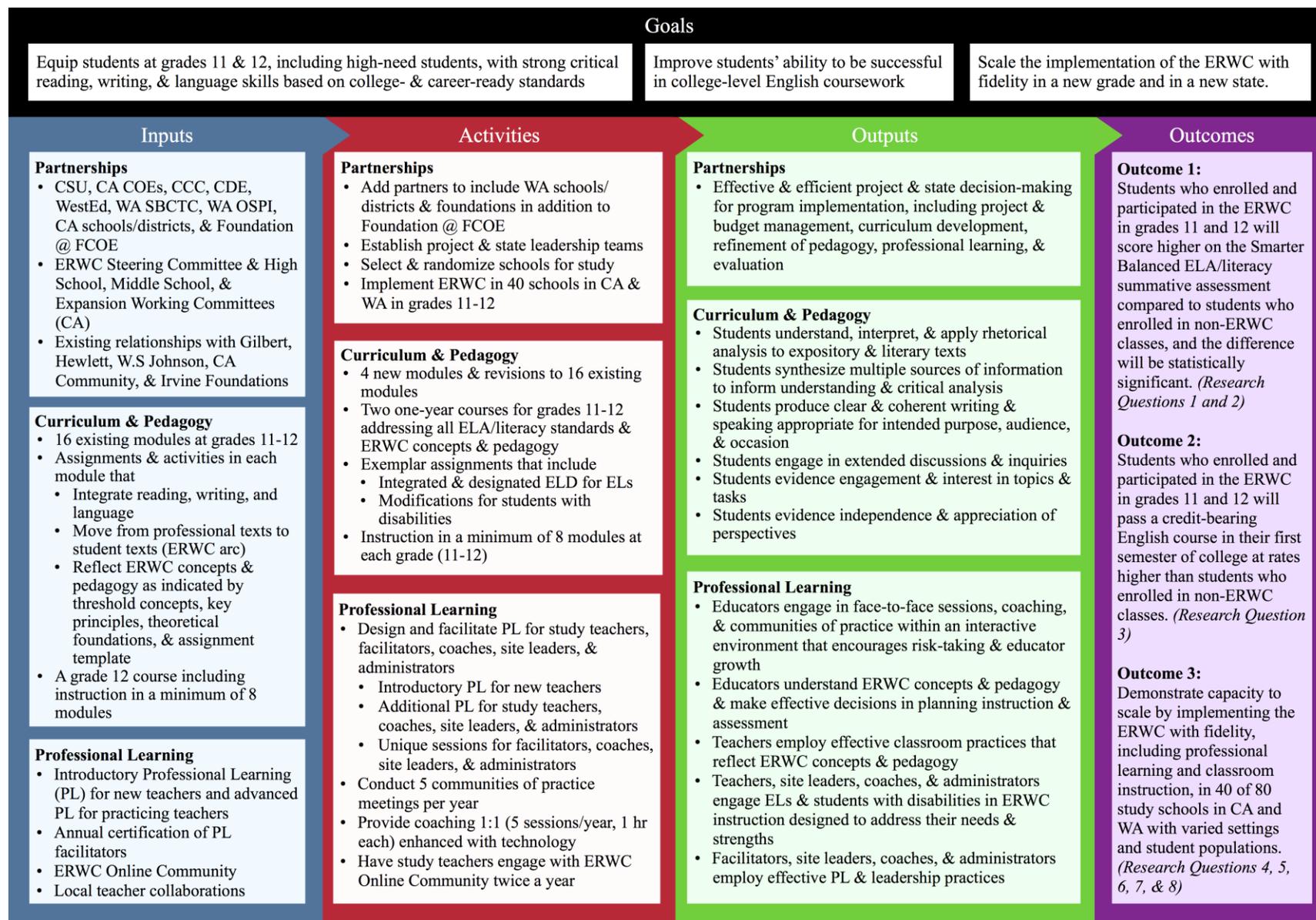


Figure 7. Project Goals, Outcomes, and Objectives

Goals	Outcomes	Objectives
1. Equip students at grades 11 and 12, including high-need students, with strong critical reading, writing, and language skills based on college- and career-ready standards.	1. Students who enrolled and participated in the ERWC in grades 11 and 12 will score higher on the Smarter Balanced ELA/literacy summative assessment compared to students who enrolled in non-ERWC classrooms, and the difference will be statistically significant.	1. Establish leadership teams at the project and state levels to guide revisions to ERWC curriculum, pedagogy, and professional learning (PL) and to scale implementation with fidelity in CA and WA high schools at grades 11-12.
2. Improve students’ ability to be successful in college-level English coursework.	2. Students who enrolled and participated in the ERWC in grades 11 and 12 will pass a credit-bearing English course in their first semester of college at rates higher than students who enrolled in non-ERWC classrooms.	2. Revise ERWC curriculum to address all ELA/literacy standards for grades 11 and 12. 3. Refine course pedagogy, including strategies for ELs and students with disabilities. 4. Lead PL for teachers, site leaders, administrators, coaches, and PL facilitators, including face-to-face sessions, classroom coaching, and communities of practice.
3. Scale the implementation of the ERWC with fidelity in a new grade and in a new state.	3. Demonstrate capacity to scale by implementing the ERWC with fidelity, including professional learning and classroom instruction, in 40 of 80 study schools in CA and WA with varied settings and student populations.	5. Teach the course in grade 11 and 12 classrooms in 40 study schools in CA and WA. 6. Validate the success of the ERWC by evaluating student results using a multi-site cluster-randomized trial design and by examining the success of project replication.

C.2. Adequacy of the Management Plan. The proposed project will be managed by a central project leadership team and two state leadership teams—one each in CA and WA. The project leadership team will be drawn from members of the existing CA ERWC Steering Committee and Working Committees currently composed of 12 CSU faculty members, one CCC faculty member, three COE literacy specialists, one high school administrator, and two high school literacy coaches. One CSU administrator staffs the committees. Representatives for WA will be

recruited from the OSPI, SBCTC, and schools participating in the BCE project. The project leadership team will have six members—four from CA and two from WA—and will be led by two project co-directors and supported by three administrative/accounting staff members. State leadership teams will have six members with at least one member from the project leadership team. CSU administrator, Nancy Brynelson, will serve as co-director, with FCOE administrator, Lisa Benham, serving as co-director and the CA state **project coordinator**. A WA-based coordinator will be hired to lead its state team. The three teams will advise the project on school recruitment, curriculum revisions, professional learning design, pedagogy to support high-need students, implementation, and evaluation and will collaborate with private-sector partners. Project coordinators will lead the curriculum, pedagogy, and professional learning design processes. The project teams will draw from CA’s over 100 certified ERWC professional learning facilitators and WA’s BCE course instructors and coordinators to identify key project staff.

Approximately 10 part-time developers and designers will be contracted for the project. **Developers** will revise existing and develop new ERWC **curriculum and pedagogy**. **Designers** will revise existing and design new ERWC **professional learning**. Approximately 40 part-time facilitators and coaches will also be contracted for the project. **Facilitators** will lead **professional learning via** face-to-face and distance sessions. **Coaches** will observe teachers and work with them in face-to-face and distance settings to collaboratively improve their practice. In the first year and a half of the project, draft modules, including modifications for high-need students, and preliminary professional learning materials will be reviewed and piloted by teachers and facilitators now involved in the ERWC and the BCE initiative to solicit feedback.

Project evaluators, led by Anthony Fong and Neal Finkelstein from WestEd, will be responsible for conducting the evaluation, including the selection and randomization of study

schools. **Participating teachers** (estimated at seven teachers per school at 40 schools) will participate in a three-day *professional learning institute* (18 hours) each summer for three years. Teachers new to the ERWC will participate in face-to-face professional learning (12 hours) before the first summer institute. At each study school, a **site leader** will be identified from among participating teachers. The site leader will be the point of contact for the project and will coordinate with professional learning facilitators and coaches. Site leaders will receive an additional six hours of professional learning. **Administrators and other leaders** from the study schools, such as the principal, assistant principal, English department chair, literacy coach, and/or head counselor, will also be involved in professional learning for the project. At least one school administrator or other leader will participate in face-to-face professional learning with teachers from their school on selected days, although others will all have the option to participate. An additional half-day session will be provided exclusively to school administrators and other leaders. Once course implementation commences in the study schools, teachers will receive five *coaching visits* each year and participate in five *communities of practice meetings* facilitated by site leaders and project coaches. Site leaders and coaches will participate in an additional two to three meetings a year designed to continue their professional learning and address problems of implementation. Meetings and coaching sessions will be conducted in person or via webinar, supported by the ERWC online community. Video technology, such as the Swivl, will facilitate remote coaching. At the end of the study, **teachers from the 40 control schools** will be invited to participate in professional learning and receive ERWC curriculum materials.

The project will take place over five years, from January 2017 through December 2021. For planning purposes, the timeline has been divided into six periods, as described below. The first year and a half of the project (**periods 1-2 = Jan. 2017-June 2018**) will be dedicated to

establishing teams, hiring staff, developing curriculum, refining pedagogy for high-need students, designing professional learning, recruiting and selecting schools, and identifying study teachers and site leaders. **Key milestones** for periods 1-2 include established teams and personnel (objective 1), completed curriculum (objective 2), refined pedagogy (objective 3), redesigned professional learning (objective 4), and selection of study schools (objectives 5 & 6). In **period 3** of the project (**2018-19**), initial and ongoing professional learning will be provided to participating school staff, and classroom implementation will begin. **Key milestones** for period 3 include provision of professional learning (objective 4) and initial course implementation at grades 11-12 (objectives 2, 3, & 5). In **periods 4-5** of the project (**2019-20 & 2020-21**), the ERWC will be fully implemented in study classrooms, ongoing professional learning will be provided to school staff, and evaluators will collect data. **Key milestones** for periods 4-5 include full implementation in study classrooms (objective 5), provision of professional learning (objective 4), and data collection (objective 6). In the last half year of the project (**period 6 = July-Dec., 2021**), professional learning will be offered to teachers at control schools, and evaluators will analyze and report data. **Key milestones** for period 6 include provision of professional learning to teachers at control schools (objective 4) and data analysis and reporting (objective 6). See figure 8 for timelines, project tasks, and persons responsible. See Appendix J for a detailed plan by objective.

Figure 8. Selected Timelines, Project Tasks, and Persons Responsible

Project Period	Project Tasks	Persons Responsible for Project Tasks
Period (P) 1 Jan-June 2017	<ul style="list-style-type: none"> • Establish project team [PT] & state teams [ST] • Hire project coordinators [C] • Identify curriculum/pedagogy developers [CD] & professional learning designers [PLD] • Begin curriculum/pedagogy development & professional learning [PL] design work • Apply to Institutional Review Board for evaluation 	<ul style="list-style-type: none"> • Co-Directors [D], PT • D, PT, ST • D, C, PT • D, C, CD, PLD, PT, ST • Evaluators [E]

Project Period	Project Tasks	Persons Responsible for Project Tasks
	<ul style="list-style-type: none"> Finalize recruitment processes & forms 	<ul style="list-style-type: none"> E
P2 2017-18	<ul style="list-style-type: none"> Advise & monitor implementation Continue curriculum development & PL design work Review & pilot new & revised modules/pedagogy & PL materials in existing locations using ERWC Develop & pilot teacher survey & classroom observation instruments Recruit & select schools Identify PL facilitators [F] & coaches [CH] Conduct PL for facilitators & coaches 	<ul style="list-style-type: none"> PT, ST C, CD, PLD, D, PT PT, ST, current teachers & PL facilitators E E, ST, D D, C, ST D, C, PLD
P3 2018-19	<ul style="list-style-type: none"> Advise & monitor implementation Conduct initial PL for study teachers [TCH], site leaders [SL], & administrators & other leaders [AL] Begin implementing in grades 11-12 at study schools & monitor/adjust as needed Conduct ongoing PL/coaching as planned Continue piloting evaluation instruments 	<ul style="list-style-type: none"> PT, ST D, C, F, CH TCH, SL, AL, F, CH, C C, F, CH, SL, AL E
P4 2019-20	<ul style="list-style-type: none"> Advise & monitor implementation Conduct PL for participating TCH, SL, AL Implement ERWC in grades 11-12 Conduct ongoing PL/coaching as planned Observe classrooms & conduct surveys as planned Collect SB data for grade 11 students 	<ul style="list-style-type: none"> PT, ST C, F, CH TCH, SL, AL F, CH, SL, C E E
P5 2020-21	<ul style="list-style-type: none"> Advise & monitor implementation Implement ERWC in grade 12 Conduct ongoing PL/coaching as planned Observe classrooms & conduct surveys as planned Collect SB data for grade 12 students 	<ul style="list-style-type: none"> PT, ST TCH, SL, AL F, CH, SL, C E E
P6 July-Dec 2021	<ul style="list-style-type: none"> Advise & monitor implementation & analysis Conduct PL/coaching for control teachers Analyze data for grades 11-12 Collect & analyze data for first-year college students 	<ul style="list-style-type: none"> PT, ST F, CH, SL, C E E

C.3. Financial and Operating Model and Plan to Operate at Regional Level. The **multi-year operating model** is introduced in figure 8, in which the timelines, project tasks, and persons responsible for tasks are specified. See appendix J for a detailed plan by project

objective. The **multi-year financial model** for the use of project funds reflects several phases. Costs for the co-directors, administrative and accounting staff, and state coordinators will be relatively constant across project periods 1-6. Costs for curriculum developers and professional learning designers will occur primarily in periods 1-2; costs for professional learning facilitators and coaches will be highest in periods 3-5. Evaluation costs, including stipends for teachers, schools, and districts will be highest in periods 3-5. Costs for professional learning materials will be greatest in periods 3-4 with some in period 6. Costs for classroom materials will be highest at initial implementation and decrease in period 5. See the budget narrative for more information.

Scaling at the regional level is cost effective because, at its core, implementing the ERWC costs very little more than any other course offered in high school. The base costs are teacher salaries and benefits, books and reading selections for students, and classroom supplies, for which local school districts are already responsible. Added costs are incurred for professional learning, including coaching, professional collaborations, and online community supports, which are quite low in comparison to the leveraged resources of school infrastructure and teacher salaries. Scaling is made feasible through the use of existing professional learning structures, including that provided by school districts, COEs, or other regional groups, and through college-readiness initiatives such as WA's BCE and CA's EAP. Building capacity among teachers, specialists, and college faculty to become future and continuing coaches and facilitators will sustain the ERWC once the project finishes. Site leaders are the natural candidates to become new coaches and facilitators and to lead regional communities of practice. Maintaining partnerships and leveraging existing initiatives will be key to sustaining the ERWC as an effective classroom practice.

C.4. Procedures for Ensuring Feedback and Continuous Improvement. Since its inception the ERWC has operated collaboratively to make decisions about course content and the

design of professional learning. The initial task force of 11 CSU faculty members and high school teachers and administrators developed the curriculum through consensus. The task force collected teacher and student feedback on all modules as the course was piloted and initially implemented in 2004-2008. Based on teacher feedback the course was revised and published as a 1st edition in 2008, after which the group grew to an advisory Committee of over 25 members, including CCC faculty members and COE representatives. The 2nd edition was published in 2013, after which the group restructured into a 10-member Steering Committee and three working committees. Teacher feedback has been critical to each stage in ERWC's history.

Building on earlier efforts, structures will be created to **gather input, provide feedback, and make continuous improvements** throughout the course of the proposed project. The central project leadership team and two state leadership teams will monitor and guide project implementation based on information they collect and data from evaluators. Feedback on revised and new ERWC modules will be requested from team members and currently practicing ERWC teachers, who will also pilot new and revised modules in period 2. Elements of new professional learning designs will be piloted as well by current professional learning facilitators. Existing feedback forms for modules and professional learning will be modified as needed to gather needed information. In addition, the focus of the initial course implementation at grades 11-12 in period 3 will be for teachers to become familiar with the curriculum, participate in professional learning, and offer suggestions for improvement. Feedback from WA will be particularly important to determine if efforts to scale the project are sufficiently sensitive to local contexts, especially smaller schools in more rural areas. During full implementation in periods 4-5 when student outcomes will be evaluated, all study teachers will regularly provide classroom implementation feedback—not just as a way to monitor fidelity but also as a way to inform program developers

of implementation challenges and successes. Many of the improvements recently made to the ERWC and contemplated in the proposed project are the result of feedback from teachers and coaches during the 2011 i3 Development project. Feedback on professional learning will be solicited and reviewed by the project and state leadership teams with the aim of proactively correcting issues as early as possible. It is entirely within the spirit of the ERWC to value the input and suggestions of participating students, teachers, professional learning facilitators, coaches, and administrators. This commitment to high school, college, and university partnerships and collaboration will continue into this Validation project.

D. QUALITY OF PROJECT EVALUATION

D.1. Methods Used to Meet What Works Clearinghouse (WWC) Evidence

Standards Without Reservations. For the proposed independent evaluation, WestEd will conduct a cluster randomized controlled trial (RCT) with schools in California (CA) and Washington (WA) to estimate the impact of enrollment in the Expository Reading and Writing Course (ERWC) on student achievement. The evaluation will be conducted to ensure that the **confirmatory impact analyses meet the WWC group design standards without reservations** (What Works Clearinghouse, 2014). Details about the study design and impact estimation techniques are described in section D.4, with additional technical details in Appendix J.

D.2. Key Evaluation Questions and the Appropriateness of Methods to Address the Questions. Three overarching types of research questions will be addressed, as listed below.

Confirmatory Research Questions – Question #1: Does enrollment in the ERWC in grade 11 have a positive impact on ELA/literacy skills as measured by the grade 11 Smarter Balanced ELA/literacy summative assessment? *Question #2:* Does enrollment in the ERWC in grades 11 and 12 have a positive impact on ELA/literacy skills at the end of grade 12 as

measured by the grade 11 Smarter Balanced ELA/literacy summative assessment?

Exploratory Research Questions – Question #3: Does enrollment in the ERWC in grades 11 and 12 have a positive impact on the likelihood of passing a credit-bearing English course in a student’s first semester of college if the student enrolled in such a course in his/her first semester? ***Question #4:*** To what extent are key components of the ERWC (partnerships, curriculum/pedagogy, and professional learning) being implemented with fidelity? ***Question #5:*** How does the impact of the ERWC vary depending on level of fidelity of implementation?

Research Questions to Identify Moderating and Mediating Factors – Question #6: How do the impacts of the ERWC vary across different subgroups of students (English learner [EL] students and students with disabilities [SWD]) and across the two different states? ***Question #7:*** Do ERWC teachers’ classroom discourse and pedagogical practices, as measured by classroom observations and teacher surveys, differ from control teachers’ classroom discourse and pedagogical practices? ***Question #8:*** Does the level of student engagement, as measured by classroom observations and student surveys, differ between the ERWC and control courses?

The methods for answering the confirmatory research questions (***Questions #1 and #2***) and exploratory research ***Question #3*** are provided in section D.4. Details concerning the methods for addressing exploratory research ***Questions #4 and #5*** can be found in section D.5. Research ***Question #6*** (moderating factors) is discussed in section D.3. Finally, research ***Questions #7 and #8*** (mediating factors) are discussed in section D.5.

D.3. Studying the Project at Scale and Generating Information about Differential Effectiveness in Diverse Settings and for Diverse Student Populations. Districts and schools in two states will participate in the evaluation, enhancing the external validity through this multi-state validation study. A diverse group of 20 school districts and 80 schools will be selected for

inclusion in the evaluation based on criteria such as: geographic location, urbanicity, enrollment size, academic performance, and socio-economic status of the student body. All of the sample schools and the eligible students in those schools will be included in the evaluation. Research **Question #6** explores how the effectiveness of the ERWC varies across different student population groups (EL and SWD) and different states. These subgroup analyses will be conducted by adding interaction terms in the hierarchical linear regression equation similar to that used in the confirmatory research questions (see, for example, Schochet, Puma, & Deke, 2014); refer to section D.4 for a description of the regression equation. Also, interviews will be conducted with the project and state leadership teams and the professional learning facilitators and coaches to understand and document qualitatively how the ERWC is implemented in different states and settings. Questions in these interviews will focus on identifying barriers and supports for building capacity in diverse settings and with diverse student populations. Refer to “Qualitatively Assessing the Scaling of the ERWC” in Appendix J for additional details.

D.4. A Clear and Credible Analysis Plan and an Analytic Approach to Address the Research Questions. *Randomization* – School-level random assignment will occur during the spring of 2018, with randomization at the school level to reduce the possibility of spillover effects. In the randomization process, blocking will occur at the district level, with each block consisting of two schools. The blocks will be created based on school-level achievement and student demographics. Within each block one school will be randomly assigned to the treatment condition and the other to the control, with the control-condition schools being wait-listed to receive the treatment in the 2021-22 school year (after schools have completed the study).

Schools randomly assigned to the treatment condition will offer the ERWC in both grades 11 and 12 during the 2018-19, 2019-20, and 2020-21 school years. However, the 2018-19

school year will be an initial implementation (non-evaluative) year to allow teachers to become familiar with and develop a thorough understanding of the curriculum; prior research has documented the importance of not evaluating a program in its first year of implementation (Ginsburg & Smith, 2016). In addition, the 2019-20 year will be a second year of initial implementation (and not evaluative) for the grade 12 teachers, as the grade 12 students will not be evaluated until the 2020-21 school year.

Because students must have the option of enrolling in an Advanced Placement (AP) English course in grades 11 and 12, the evaluation team will use an active consent process for students to participate in the study. More specifically, only students who are willing to enroll in the ERWC or a non-AP/non-ERWC English curriculum in grades 11 and 12 will complete a consent form to participate; students who are thinking about enrolling in AP English in either grade 11 or grade 12 will not be allowed to participate. Students who complete the active consent process (at the end of grade 10) will then either enroll in the ERWC or a non-AP/non-ERWC English course, depending on the condition to which the school is randomly assigned. The AP English courses at both treatment and control schools will be excluded from the analysis, so that the ERWC will only be compared to the English courses that are not AP English. The control schools may offer any English course besides the ERWC in grades 11 and 12 for their non-AP English courses, such as English/British literature or world literature. The effect of the active consent process is reflected in the power analysis described later.

Impact Methodology – The design of the evaluation is a multi-site cluster-randomized trial (Spybrook, Bloom, Congdon, Hill, Martinez, & Raudenbush, 2011), with the impact of the ERWC being assessed using hierarchical linear modeling (HLM) to account for students nested within schools (Gelman & Hill, 2007). The model will be estimated with controls included for

the random assignment block, student-level covariates, and school-level covariates. School-level random errors will be included in the model to account for the clustering. Please refer to the section in Appendix J titled “Impact Methodology Details” for further details of the hierarchical model. The hierarchical model will be run separately for each of the two confirmatory research questions. Both confirmatory research questions will examine the same cohort of students; these students are in grade 11 in 2019-20 (*Question #1*) and grade 12 in 2020-21 (*Question #2*). The *Outcome Measure* used to assess the impact of the ERWC for both grade 11 and grade 12 in research *Questions #1* and *#2* will be the overall scale score from the grade 11 Smarter Balanced ELA/literacy summative assessment. Please refer to the section in Appendix J titled “Confirmatory Academic Outcome Measure” for additional details about this outcome measure.

With respect to analytic decisions of the impact analysis, students with missing data will be handled analytically through the use of the “dummy variable adjustment” (Puma, Olsen, Bell, & Price, 2009); however, missing outcome data will not be imputed, and students with missing outcome data will be excluded from the analysis (and included in the attrition calculation). We will not include in the analytic sample students who join the study schools after random assignment (“joiners”). And since the majority of student attrition usually occurs in grade 9 (e.g., Stearns & Glennie, 2006), attrition and mobility are likely to be relatively low among the grade 11 and 12 students in this sample. Therefore, it is expected that attrition will remain within the acceptable levels as guided by the WWC (2014). Nevertheless, the evaluation team will employ strategies to minimize attrition, including providing strong messaging to the schools and teachers about the importance of retention in the study and providing additional opportunities for students to take the summative assessment if they missed the first administration.

For research *Question #3* the evaluation team will work with the public institutions of

higher education (IHEs) in CA and WA to track and collect data on students in the evaluation as they matriculate into college in the 2021-22 school year (i.e., the students' first year of college). These IHEs include the CA Community Colleges, CA State Universities, Universities of CA, WA Community and Technical Colleges, and Universities of WA. HLM with a binary outcome variable (passing a credit-bearing English course with a grade of C- or better in the first semester of college) will be used to determine the impact of the ERWC on this college-level outcome; only students who enrolled in a credit-bearing English course in their first semester of college will be included in this research question. This research question is exploratory because it is likely that many students in the study may attend a college out of state, may not attend college at all in the 2021-22 school year, or may delay enrollment in a credit-bearing English course.

Statistical Power – Power calculations were conducted based on a blocked cluster RCT design, where schools are blocked at the district level, and districts are treated as fixed effects. The power calculations were conducted using Optimal Design software (Spybrook, Bloom, Congdon, Hill, Martinez, & Raudenbush, 2011). The following assumptions were made regarding the sample size: 20 school districts, 4 schools per district, 6 non-AP English class periods per grade level per school, and 20 students per class period; a total of 9,600 students are estimated to participate in the evaluation. The 120 students per grade level per school that are estimated to participate in the study reflects the within-school-year attrition among students, the students who are missing outcome data, and the students who do not actively consent to participate in the study (typically there are over 300 students in a given grade level). With regards to the power calculation, the following assumptions were made: 80 percent power, a two-tailed test of statistical significance, 15 percent of the variation in the outcome measure is between schools (prior to blocking), 40 percent of the variation in the outcome measure is

explained by blocking on districts, and school-level covariates (including pre-test achievement) are available that explain 60 percent of the variation in post-test scores. Based on these assumptions, the minimum detectable effect size (MDES) is 0.14 for the confirmatory research questions. For additional notes on the estimated MDES, please refer to the section in Appendix J titled “Additional Notes about the Estimated Minimum Detectable Effect Size.”

D.5. Articulation of Key Components, Outcomes, and Measurable Thresholds for Acceptable Implementation. The key components of the proposed project are 1) partnerships, 2) the ERWC curriculum/pedagogy, and 3) the ERWC professional learning (PL). Project partnerships include a central project leadership team and two state leadership teams to advise the project on its implementation. Partners also include individuals from CA and WA identified to implement the project, including module developers, PL designers and facilitators, coaches, administrators, school site leaders, and teachers. Acceptable implementation for the evaluation requires that these teams and individuals be identified and documented, have developed and revised the new curriculum, and have a process in place for providing the PL meetings in advance of the implementation year. The course curriculum consists of 20 instructional modules at grades 11 and 12 (10 modules per grade) based on the ERWC Assignment Template (AT). An ERWC teacher must teach at least eight modules a year in order to meet the threshold for acceptable classroom implementation. Professional learning consists of a three-day summer institute for teachers each year, with two additional days for teachers new to the ERWC; five coaching interactions per year; five meetings of the communities of practice per year; and the ERWC Online Community. A teacher must participate in all summer institute days, four coaching sessions, and four meetings of the communities of practice to meet the threshold for acceptable implementation. The teacher must also log in to the ERWC Online Community at least twice. All of the

thresholds described here will be used to answer research *Question #4*, which assesses fidelity of implementation. Research *Question #5* will assess whether students in ERWC classrooms that exhibited higher levels of fidelity (as measured above for the key components) performed better than students in ERWC classrooms that exhibited lower levels of fidelity. For this analysis HLM will be used, similar to the model for the confirmatory research questions, with fidelity measures added to the model. This research question will only include the treatment students.

To measure fidelity of implementation in *Question #4*, attendance logs and teacher surveys will be administered using instruments similar to those in Fong et al. (2015). For instance, in order to identify which modules a teacher taught, teachers are asked to document which activities in each module they taught. Additional instruments will also be created and administered during the study period to measure other aspects of fidelity that will be assessed in research *Questions #7 and #8* and to assist project replication for practitioners in other states who wish to replicate the model. The instruments will be applied to both treatment and control teachers, classrooms, and students, and they will include classroom observation protocols, interview protocols, focus group protocols, and surveys. All of these instruments will be used either to measure fidelity of implementation or to better understand the factors that help or hinder the implementation of the curriculum, pedagogical practices, student engagement, professional learning, and project replication. These instruments will be collaboratively created and refined by the evaluation team and the ERWC project team, using previously-developed instruments to guide the process. During the creation and refinement of the measures in the 2017-18 and 2018-19 school years, reliability and validity (content and face) will be assessed (Nelson, Cordray, Hulleman, Darrow, & Sommer, 2012). The mediation analyses (*Questions #7 and #8*) will use the results of the observations and surveys in an HLM framework similar to the analysis of the confirmatory

research questions (Krull & MacKinnon, 2001), with the possibility of also using propensity scores as described in Jo, Stuart, MacKinnon, and Vinokur (2011) to allow for estimation under different distributional and functional form assumptions. See the section in Appendix J entitled “Measurement of Mediating Factors” for more details on the instruments.

Outcomes of the proposed evaluation are the following: 1) Assess the impact of enrollment in the ERWC on student achievement (*Questions #1 - #3*); 2) Assess fidelity of implementation among all ERWC teachers (*Question #4*) and the relationship between implementation fidelity and student achievement (*Question #5*), 3) Identify moderating factors (*Question #6*) and qualitatively understand how the project scaled in diverse settings and with diverse population groups (EL and SWD), 4) Identify mediating factors (*Questions #7 and #8*), and 5) Report qualitative and implementation findings back to the ERWC development team in real time to allow for adjustments and improvements to be made for cycles of continuous improvement.

D.6. Sufficiency of Resources to Carry out the Project Evaluation Effectively. The WestEd evaluation team, with Dr. Anthony Fong and Dr. Neal Finkelstein as the Co-Principal Investigators, is the same team that conducted the i3 Development grant evaluation (Fong et al., 2015). Since the proposed Validation grant will include over three times as many schools as the Development grant (80 schools compared to 24 schools), considerably more resources have been budgeted for expenses such as travel, surveys, interviews, and observations. These activities are essential to understanding how the curriculum is being implemented across study schools. These findings will be communicated back to the development and implementation teams through progress reports so that mid-term adjustments can be made as necessary. The evaluation team will also disseminate summative findings nationally. The FCOE and the CSU fully support the allocation of sufficient resources to WestEd to conduct an evaluation of the highest quality.