

Collaborative to Improve Classroom Engagement and Outcomes for Native American and Rural Students

TABLE OF CONTENTS

- A. SIGNIFICANCE 1
 - A.2. Overview 1
 - A.2. Absolute Priority 1: Strong Evidence 2
 - A.3. Absolute Priority 2: Evidence-based, field-initiated innovations..... 2
 - A.4. Com. Pref. Priority 1: Promoting Equity for Students: Implementers and Partners..... 3
 - A.5. Com. Pref. Priority 2: Addressing the Impact of COVID-19 3
 - A.6. Promising New Strategies Building on Existing Evidence-Based Strategies. 5
- B. STRATEGY TO SCALE 8
 - B.1. The Specific Strategies to Scale that Address Prior Barriers 8
 - B.2. Management Plan to Achieve Objectives On-Time and Within Budget 11
 - B.3. The Capacity of Personnel, Resources and Management for National Scale 13
 - B.4. Plan to Broadly Disseminate 17
 - B.5. Utility of Products and Potential to Be Used in a Variety of Settings 18
- C. QUALITY OF THE PROJECT DESIGN..... 20
 - C.1. The Quality of the Conceptual Framework..... 20
 - C.2. The Goals, Objectives, and Outcomes to be Achieved 20
 - C.3. The Design of the Project Meeting Native-serving and Rural School Needs 22
- D. QUALITY OF THE PROJECT EVALUATION 23
 - D.1. Producing Evidence to Meet WWC Standards Without Reservations 24
 - D.2. Providing Guidance for Replication and Testing in Other Settings..... 32
 - D.3. Evaluation Plan: Components, Mediators, Outcomes and Thresholds 35

(A) Significance

Overview

The Collaborative to Improve Classroom Engagement is an Expansion grant that will evaluate and scale implementation of Class-Wide-FIT (CW-FIT), an evidence-based classroom engagement program, to some of the nation’s highest needs Native and rural students. This project will investigate adaptations to CW-FIT to make it more scalable, so it can be widely, efficiently, and effectively implemented with Native American and rural students. This project will be led by our team at the University of Kansas, partnering with Northern Arizona University (a minority serving-institution), the National Rural Education Association (six state affiliates), Abt Global (external evaluation), and innovation leaders such as Active Logic (see appendix C).

This project will directly support **Native-serving** (schools with greater than 25% Native American students) and rural schools (grades K-8) with high percentages of high needs students (defined here as students eligible for free or reduced-price lunch), with 492 teachers, 7,380 students, and 984 target students. It is estimated that an additional 20,000 students will benefit from CW-FIT in the scaling within the first two years following the project. With this proposal, we have 116 Native-serving and rural schools interested (see letters of support).

Table 1. *Native-serving and Rural Partner Districts*

State	NCES # of Rural Schools	# Partner District interested to date	# of eligible Partner Schools	*AI/AN student inclusive state estimate
Arizona	296	20	32	91,190
Colorado	428	6	12	27,451
Kansas	593	14	30	13,278
Nebraska	515	6	12	9,416
New Mexico	305	3	21	49,278
Oklahoma	905	7	9	126,186
Total	3042	56	116	316,799

*INDIGENOUS STUDENTS COUNT | A Landscape Analysis of American Indian and Alaska Native= Student Data in U.S. K–12 Public School: <https://www.air.org/indigenous-students-count>

Absolute and Competitive Preference Priorities

Absolute Priority 1- Strong Evidence

In 2023, What Works Clearinghouse (WWC) published an Intervention Report (<https://whatworks.ed.gov/>) on CW-FIT classifying it as Tier 1 Strong (highest evidence Tier-SEL/ Behavior). The four studies submitted with this application's Evidence Form list randomized control trials (RCTs) that met WWC standards without reservations and show strong positive outcomes for improving academic engagement and reducing disruptive behaviors of K-8 students. Our 2019 CW-FIT EIR Midphase project also showed strong positive outcomes and was designed (and carried out in accordance) to meet WWC standards without reservations.

Absolute Priority 2- Field Initiated Innovation- General

This project will address two barriers to scale (see Strategies to Scale). Despite the strong evidence supporting CW-FIT, these barriers have prevented CW-FIT from scaling to Native-serving and rural schools. First, CW-FIT has not been adapted to be culturally relevant for Native-serving schools. The CW-FIT team has not collaborated with key indigenous and Native-serving school leaders to make needed adaptations and thus, to date, no Native-serving schools have implemented CW-FIT. Second, CW-FIT is limited by the school or district level personnel's availability to support implementation of effective interventions amid competing demands (e.g., protect the time to observe and give timely feedback to teachers). Further, training new teachers from year to year requires additional time and managing competing instructional initiatives or programs. School personnel who serve as coaches need support to make coaching teachers more efficient. In response to EIR (EIR, 2024), this project will address these barriers with Strategies to Scale to implement with core CW-FIT fidelity while providing implementors with flexible coaching, training, and implementation practices feasible for Native-serving and rural schools.

Competitive Preference Priority 1-Promoting Equity for Students, Implementers, and Partners

This project will be implemented with partners at Northern Arizona University (NAU, See MOU) a minority-serving institution, led by partner site Director [REDACTED]. NAU is a partner throughout all project years and research areas including playing a key role in guiding adaptations to improve the cultural relevance of CW-FIT for Native-serving schools. NAU is uniquely positioned as a strong partner based on their: a) commitment to indigenous education (nau.edu/indigenous), b) Native American faculty and students, c) collaborations and partnerships with Tribal Nations, and d) their core mission to become the leading university serving Native Americans. This partnership with NAU, along with the commitment of Native-serving schools as implementers, will strengthen EIR program's portfolio of partners.

Competitive Preference Priority 2-Addressing the Impact of COVID-19

With limited resources, evidence-based interventions, and professional development (AASA, 2017), Native-serving and rural schools are ill-prepared to make up for lost instruction time that was exacerbated by COVID-19 (Fahle et al., 2024). In response to Priority 2, we will build the CW-FIT evidence base, *“to improve achievement for high-needs students by expanding existing innovative education practices to address these challenges and inequities”* (EIR, 2024, p. 37210). This project addresses the priority area of using evidence-based supports such as professional development, coaching, and ongoing support for educators (with district/school coaches and adapting options with this project) and addressing inequities and challenges such as lost learning time and absenteeism (EIR, 2024). With this project, new innovations utilizing Artificial Intelligence (AI) will be added to coaching options through our new CW-FIT Mobile Application (providing automated and instant feedback on teacher performance) and the new CW-FIT AI Coach (providing in-the-moment support to teachers).

The National Concern

The success of our Native and rural students is stifled by structural inequalities and systems often creating negative classroom climates with low engagement and attendance, conditions that limit academic success (Reyhner, 2006; Rowlands & Love, 2021). Additionally, in Native-serving and rural schools across the country, disengagement, absenteeism, and disciplinary actions are resulting in significant loss of instructional time. Further, educational outcomes for rural students lag non-rural students by over half of a grade level. Native American rural students have the lowest achievement of any racial/ethnic subgroup (Cai, 2020; Hussar et al., 2020; Rowlands & Love, 2021). On average, Native students are two to three grades behind in reading and math, experience dropout rates 237% higher, and are 207% more likely to face expulsion, disciplinary action, special education designation, and chronic absenteeism compared to White students (U.S. Department of Education, 2017).

Native and rural students are educated in some of the most resource restrained schools across the country (Logan & Burdick-Will, 2017; Tieken et al., 2021). These schools often lack personnel with the time to coach, support, and give timely feedback to teachers (Logan & Burdick-Will, 2017; Running Bear et al., 2021). Thus, these teachers are often ill-prepared to engage their students through culturally relevant, positive, and supportive practices. While the Every Student Succeeds Act promotes adoption of strong evidence-based practices such as CW-FIT, research is lacking to confirm how these practices translate into outcomes for students in Native-serving and rural schools (Showalter et al., 2019). These schools are largely left out of education research in general and are especially absent from the WWC reviewed interventions.

Promising New Strategies Building on Existing Evidence-Based Strategies

CW-FIT engages students and improves instruction time, thus the slogan “*More Time to Teach, More Time to Learn*” (CW-FIT, 2024). In response to the RFA, this project builds on the CW-FIT evidence-base and expands its reach with adaptations that will “balance implementation fidelity with flexibility for scaling” (EIR, 2024, p. 37209). Promising New Strategies: **(1) Adapt CW-FIT for cultural relevance, (2) Implement CW-FIT Artificial Intelligence (AI) Coaching Supports** will create new flexible, efficient, and effective paths to CW-FIT implementation. The strategies will scale CW-FIT to improve academic engagement, academic competence, social competence, and attendance for high-needs K-8th grade students in Native-serving and rural schools.

Tier 1 of CW-FIT is implemented class wide and designed to increase academic engagement for most students. Tier 2 is implemented for those students unresponsive to Tier 1. The primary components of CW-FIT are described below. CW-FIT can be implemented across curricula and subject matter in K-8 grades. Recent CW-FIT studies demonstrate high-needs K-8 students show a 20-40% increase in engagement during instructional periods (██████ et al., 2021; ██████ et al., 2016). These engagement gains translate into 1-2 periods per week of recovered learning time. *Over the course of the school year, this increase in engagement will provide an estimated equivalent of adding 36 lessons (elementary) to 72 lessons (middle school). Potential attendance gains with CW-FIT could greatly increase these estimates.*

Tier 1 Teaching Expectations Component. CW-FIT teachers teach lessons on classroom expectations. The goal is that teachers explicitly teach their positively stated classroom expectations. CW-FIT teachers teach two to three brief 10-15 min expectation lessons having students model, practice, and review them. If a teacher does not have their own class

expectations, they can select from ones available at the CW-FIT website. The lessons most widely used from the website at the elementary level are: (a) appropriately gaining attention and assistance, (b) following expectations, and (c) ignoring minor peer inappropriate behavior. At the middle-school level, teachers involve students in generating the expectation on what respect looks like in their classroom as disrespect is one of the primary disruptions to engaged learning leading to disciplinary actions.

Tier 1 Group Contingency Component. This class-wide component consists of a group contingency where students earn points as part of teams (4-6 teams per class) by meeting classroom expectations and demonstrating academic engagement (e.g., completing assignments, reading). The goal of utilizing a group contingency is to reinforce and reward students for meeting the expectations in an efficient and equitable way. A team chart displays each team's points, and teams meeting a preset goal (set by the teacher) earn privileges or rewards. At times during instruction (prompted by a timer), the teacher briefly stops and awards points.

Tier 2 Self-Management Component. Historically, approximately 1-2 students, on average, per class have been non-responsive to CW-FIT Tier 1. Teachers, with coach support, report student responsiveness after 3-4 weeks of implementing Tier 1 (Tier 2 form). Tier 2 consists of student self-management (e.g., students learning to monitor their own engagement, develop independence, and self-regulate) that requires little teacher time and is embedded while Tier 1 is implemented. The teacher (or coach if available) provides a 10-min pullout lesson for selected students. Tier 2 has resulted in positive results for 70% of students (██████ et al., 2016).

Program Monitoring Component. This component includes coaches keeping records of implementation (e.g., how often teachers implement), fidelity of implementation, and brief observations to improve or maintain implementation quality. With the current CW-FIT, coaches

can monitor fidelity in person or via videos (CW-FIT's web-based video coaching feedback system). Coaches can make data-based decisions about which teachers need additional coaching.

Coach and Teacher Training Support Component. The current implementation supports offer two training options to allow schools to select the most acceptable and feasible model for their schools. The first option is a traditional professional develop model where district coaches attend a day long training from the CW-FIT team to learn implementation and coaching practices, then train teachers to implement CW-FIT, and receive ongoing support through CW-FIT Regional Director calls. The second option is a more resource efficient micro-credential model where district coaches and teachers complete eight existing micro-credential modules (10-20 min each) to learn implementation, and a 1-hour live video training session with CW-FIT Regional Directors is provided to coaches to improve coaching practices. To address the needs of Native-serving and rural schools, this project will enhance the micro-credential model with **three NEW micro-credentials modules and website resources to help support cultural relevance** (see Strategy to Scale).

Teacher Coaching Component. With both existing training options, coaches conduct a minimum of three observations of teachers and provide feedback on fidelity and implementation. Although coaches occasionally observe in person, they primarily observe asynchronously utilizing the cloud-based TORSH (Today's One Room School House) platform that allows teachers to record and securely upload videos of their CW-FIT implementation and coaches to then review and directly annotate within the video to provide targeted feedback. **NEW CW-FIT Artificial Intelligence Coaching Supports** including a **Mobile App** and **CW-FIT AI Coach** along with two new micro-credential modules and website resources will be added to help with their use (see Strategy to Scale).

(B) Strategy to Scale

The Specific Strategies to Scale that Address Prior Barriers

Despite strong evidence supporting CW-FIT, we have encountered two major barriers to scaling. First, **CW-FIT is lacking cultural relevance for Native-serving schools**. We have not partnered with Native-serving education leaders to date, resulting in no Native-serving schools having implemented CW-FIT. This limitation is part of a greater issue than schools not having implemented CW-FIT. Native students, their communities, and schools serving them have largely been left out of most WWC reviewed studies and have thus not directed the evidence base, funding, resources, and their voice. The limitation includes not understanding how CW-FIT fits within culturally responsive indigenous schooling. Second, **CW-FIT is limited by the school or district coaches' capacity**. We have not been able to reach the most resource-limited schools as they struggle to find coaches who can provide feedback and support to teachers in a timely and efficient manner. With our 2019 EIR Midphase project, coaches in urban and suburban schools found it difficult to keep up with the coaching demands of multiple teachers.

These concerns are exacerbated in rural schools, where schools will decline adopting CW-FIT because of the demands of coaching and providing ongoing support to teachers. Feedback from rural partners indicates that our rural schools have smaller staff resources, leading administrators (e.g., principals, superintendents) to commonly take on the CW-FIT coach role. Yet these leaders “wear many hats” (e.g., driving the bus, substituting, IEP meetings, coaching teams) and struggle to provide feedback to teachers in a timely manner. Our extensive experience implementing CWFIT in schools across the country indicates that teachers and leaders- especially rural and under-resourced schools require low-cost and efficient methods to gather data/share feedback.

To address these barriers, this project will implement two scaling strategies: (1) **we will**

adapt CW-FIT for cultural relevance to Native-serving schools by a) collaboration with Northern Arizona University and University of Kansas's (KU) Tribal Relations leaders along with Native-serving schools grades K-8; and b) adapting any training materials, posters, resources, and procedures; and (2) **we will implement the new CW-FIT AI Coaching Supports** including a) CW-FIT Mobile App and b) CW-FIT AI Coach.

Strategy 1

We will work with Native American students, teacher, leaders, and community members to **adapt CW-FIT for cultural relevance** to Native-serving schools. This will be led by Co-Directors for Tribal Relations, [REDACTED] (KU) and [REDACTED] (NAU). During Year 1 Piloting, [REDACTED] and [REDACTED] will conduct 10 initial focus groups with Native American school administrators and educators to gather feedback on the cultural relevance of the CW-FIT core components and implementation procedures. This feedback will be used to create adaptations to align with Native American cultural values for lessons taught, ways to involve the community (including elders and family), creating a set of training materials (e.g., demonstration videos) that reflect their community, and making customizable posters with inclusion of symbols, images, and words or phrases relevant to Native American culture. Given the large number of non-native teachers of Native-American students (over 70%), we will add three micro-credential modules that will describe the purpose and importance of using culturally responsive classroom practices, and provide recommendations developed by Indigenous people on how CW-FIT could be adapted to the unique customs and cultures of local Tribes and relevance to Native students while maintaining core components. We will track adaptations and the extent to which core fidelity has been preserved. (See Table 2 next page).

Table 2. Strategy to Adapt CW-FIT for Cultural Relevance

Activity/Product	Description
Collaboration	Partnering with Northern Arizona University collaborating with KU’s Tribal Relations leaders along with Native-serving schools grades K-8. Our Indigenous Advisory Council will meet 2 times a year throughout the project to review products and resources.
Focus Groups and continuous feedback	Led by our partners at NAU and KU’s Tribal Relations leaders, we will conduct 10 focus groups in year 1 with Native American teachers and school leaders to inform the adaptations. Each year of the project, 20% of Native American participating teachers and school leaders will be recruited to participate in the implementation study focus groups to further inform changes and adaptations.
NEW: Micro-credential modules and website resources	3 new <u>micro-credential modules</u> will provide (1) overview of the importance of adapting CW-FIT for culturally relevant language and practices of their unique school while preserving core components of the program; (2) help navigate the new products to support cultural relevance (website, online manual, customizable posters) ; and (3) share stories and examples of cultural relevance in partner schools (<u>Website resources</u> will add pages dedicated to freely available resources including video examples and a customized CW-FIT manual.)

Strategy 2

Beyond adaptations made for cultural relevance, we will implement the innovative **CW-FIT AI Coaching Supports** to help adapt CW-FIT for flexibility in coaching, training, and implementation. We will provide choices for schools to adhere to our current coaching model and to utilize our innovative CW-FIT AI Coaching Supports. These supports include the **CW-FIT Mobile Application** and the **CW-FIT AI Coach**, and they will allow teachers access to on-demand feedback, coaching, and resources without the need to access the coach directly. (See Table 3 next page)

Table 3. CW-FIT AI Coaching Supports

Products	Description (also see Appendix J)
<p>NEW: CW-FIT Mobile Application</p>	<p>A mobile app (phone, tablet) allows teachers to record the audio of their lesson. The encrypted audio file will be processed by our private and secure AI model to transcribe the lesson, code it for teacher engagement practices such as praise (to groups, individuals, specific, general), reprimands, and opportunities to respond. A teachers' mobile app dashboard will display these data and teacher feedback (within 30 minutes of submission) inclusive of a core CW-FIT fidelity breakdown.</p>
<p>NEW: CW-FIT AI Coach</p>	<p>This AI chatbot support allows teachers to type in questions regarding CW-FIT. The CW-FIT AI Coach provides immediate answers, and the teacher can ask follow-up questions, leading to a natural dialog between the CW-FIT and teacher. The AI Coach is trained on the CW-FIT manual, CW-FIT website, all published literature on CW-FIT, and micro-credential information, including documented adaptations.</p>
<p>NEW: Micro- credential modules and website resources</p>	<p>2 new <u>micro-credential modules</u> will focus on (1) Using the mobile application for automated feedback and (2) Utilizing the CW-FIT AI Coach. 3 new <u>micro-credential modules</u> will focus on improving attendance with CW-FIT: (1) Student risk factors for chronic absenteeism, (2) improving classroom climate, and (3) use of CW-FIT to improve climate and reduce student risk factors.</p> <p><i>***All new micro credential module information from Strategy 1 (3 modules), Strategy 2 (2 modules), and Priority 2 (3 modules) will be added to the AI Coach to assist educators</i></p>

Management Plan to Achieve Objectives On-Time and Within Budget

The management plan with goals, objectives, measures, activities, timelines, and responsible personnel is provided in Tables 4 (p. 19) and 5 (p. 21). Our team and partners, along with our external evaluator (Abt), are well prepared to achieve the objectives of the project on time and within budget. We have budgeted contributions to the 10% contributed funds required for this competition (see Budget Justifications). Between us, we have decades of successful project management, including large RCTs. Our funding and evaluation record with agencies (e.g., EIR and IES) demonstrates our accountability and research integrity.

The Roles and Responsibilities of Partners. The NAU and CW-FIT teams, along with our Recruitment Advisory Board will be responsible for recruitment and communication with Native-serving and rural schools. Abt will serve as the external evaluator and ensure ongoing feedback and continuous improvement. Strong communication will include meetings to coordinate, review feedback and records, and document timelines with milestones. Implementation of key activities will be monitored and tracked per due dates, performance, and personnel responsible. As the lead applicant, [REDACTED] will oversee all aspects of implementation and will coordinate evaluation with the Abt team led by [REDACTED] [REDACTED] (KU) along with [REDACTED] (NAU) and NREA State affiliate Executive Directors will collaborate in this project in close work with school leaders and teachers.

District and School-based Staff. The 126 participating schools (120 RCT/ 6 Pilot) will be supported by Regional Directors (CW-FIT Staff) to create their own road map - a customized plan of how they choose to adapt CW-FIT for cultural relevance and how they plan on adapting coaching, training, and implementation of CW-FIT. Coaches may include a teacher as an extra duty role, or any range of school or district personnel depending on the unique capacity of a school/district. Coaches will receive support from Regional Directors with an initial meeting reviewing Program Monitoring data and problem solving. Additionally, monthly open forums hosted by Regional Directors will provide the opportunity for Native-serving and rural schools to collaborate with each other.

The Recruitment Advisory Board. The board includes experts well suited to support recruitment of and dissemination to Native-serving and rural schools. Co-Directors for Tribal Relations- [REDACTED] and [REDACTED] National- [REDACTED], Director of the National Rural Education Association (NREA) and former teacher, principal, assistant superintendent, NREA

State affiliate Directors: Arizona – [REDACTED], Arizona Rural Schools Association, Colorado- [REDACTED], Colorado Rural Schools Alliance, Kansas- [REDACTED], Rural Education Center, Nebraska- [REDACTED], Nebraska Rural Community Schools Association, New Mexico- [REDACTED], Four Corners Regional Education Cooperative, Oklahoma- [REDACTED], [REDACTED], Organization of Rural Oklahoma Schools. Regional Directors will have quarterly video conference calls and annual in-person meetings with the Recruitment Advisory Board. These meetings will help guide recruitment, communication with and feedback from Native-serving and rural schools, and dissemination. (See Letters of Support).

The Indigenous Advisory Board. The board will include 5 Native-American educators and leaders representing Tribal Nations and our Native serving schools. [REDACTED] will lead board activities and communication with the board, NAU, and CW-FIT staff. The board will convene two times a year in all years of the project and will be updated quarterly with examples, issues, and overall project transparency so that they can guide the collaborative process of making sure CW-FIT is adapted to cultural relevance in Native serving schools.

The Capacity of Personnel, Resources, and Management to Bring the Project to Scale

The personnel are highly qualified to bring the project to a national scale and complete the objectives on time and within budget. (See Figure 1)

[REDACTED] University of Kansas (KU): (Project Director) is a Senior Scientist/Professor at KU's Juniper Gardens Children's Project (a community-based research unit). As the developer of CW-FIT, [REDACTED] has 24 years-of-experience in educational and community-engaged research. He has led over 18 federal education projects including three RCTs of CW-FIT. **Role:** Direct Project working with Implementation and Regional Directors to confirm implementation fidelity and coordinate with Abt to ensure timely completion of RCT

and project evaluation activities. He will oversee budgetary monitoring and collaboration with our rural partners. He will meet weekly with CW-FIT Staff: [REDACTED] (Project Manager), 13 years of experience leading development and research projects on CW-FIT team will, [REDACTED] [REDACTED] (Implementation Director), 15 years of experience in rural implementation of evidence-based intervention work including state level work for the largely rural Maine school system, [REDACTED] (Innovation Director), KU- Senior Researcher with over 20 years of development and testing of technology enabled school interventions. [REDACTED] will meet weekly with KU developers and monthly with Active Logic contractors for AI-supported coaching.

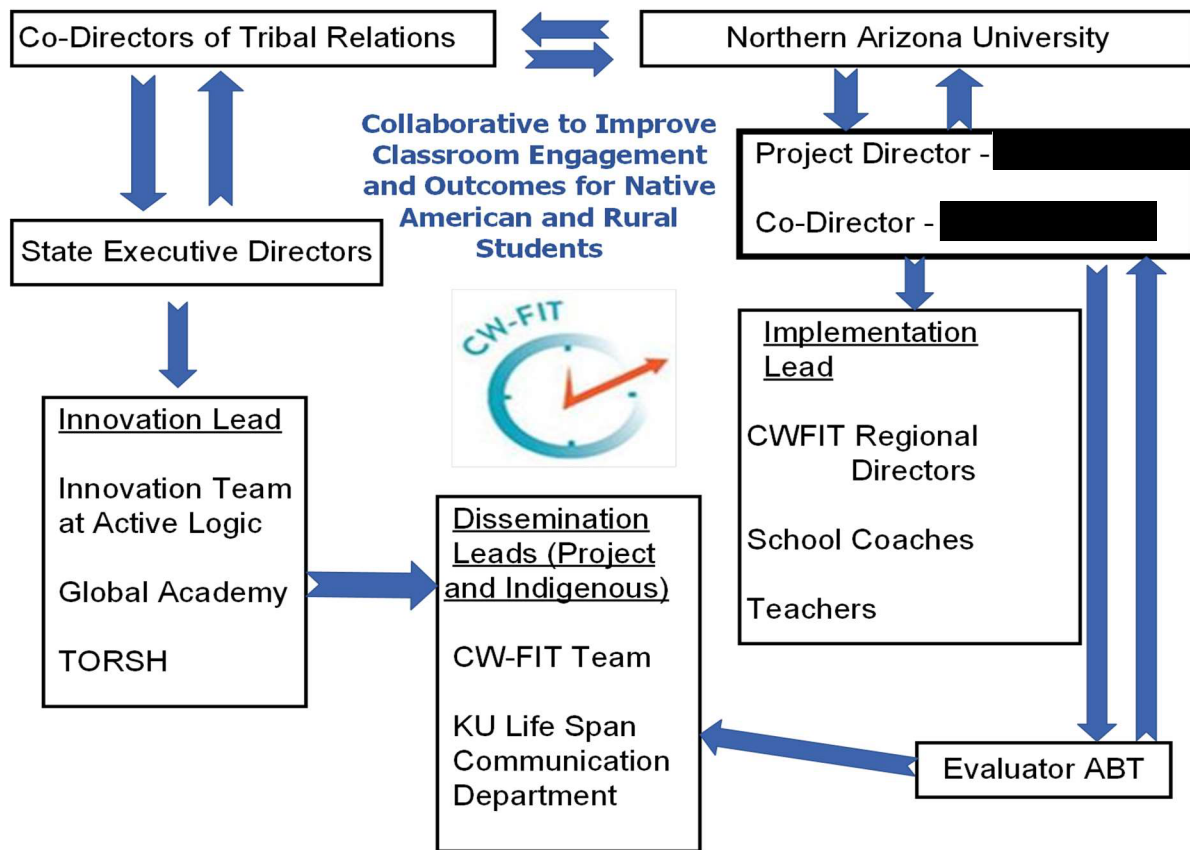
[REDACTED] (Co-Director for Project and Tribal Relations) At KU, [REDACTED] (4AZAZA/Osage) serves as Director and Associate Professor of Indigenous Studies, Associate Vice Chancellor for Tribal Relations, Executive Director of the Kansas Association for Native American Education, and Chairs the Kansas Advisory Council for Indigenous Education. His scholarship is focused on building capacities for Native Nations to take on a more prominent role in the education of their citizens, Indigenous research methodologies, and innovative forms of qualitative research. **Role:** Co-Director for Tribal Relations alongside [REDACTED], he will lead collaboration efforts with KU, NAU, Tribal Nations, and Native-serving schools. He will supervise and meet weekly with the **Indigenous Research and Partnership Director** and together they will collaborate with [REDACTED], Native-serving school leaders, Abt, and the CW-FIT team. This individual will coordinate research protocols and collaborative infrastructures with Tribal Institutions, help co-develop tribally specific research protocols when they do not exist, co-develop Indigenous study protocols for project staff in CITI course certifications, and work with the team at NAU to guide adaptations to CW-FIT.

██████████ (Partner Site Director and Co-Director for Tribal Relations) at Northern Arizona University, ██████████ is Chair of the Department of Educational Leadership and Professor in the College of Education. She serves as the Director of NAU's Preparing Indigenous Teachers for Arizona Schools program and has spent 7 years as the Founding Director of the Institute for Native-serving Educators. Her research interests center around diversity and equity, race, whiteness, and Indigenous Education. **Role:** Co-Director for Tribal Relations, she will direct efforts at NAU, hire project staff, and oversee focus groups with teachers from Native-serving schools. Her staff will also help with dissemination efforts.

██████████ (Evaluation Director- Abt) has extensive experience leading evaluation studies, particularly RCTs (funded by EIR). His expertise includes econometrics, quantitative methods, causal inference, and he is a certified WWC reviewer. **Role:** Supervise staff, coordinate with CW-FIT team, lead technical discussions and decisions, data analyses, project management, and deliverables, and yearly and final reporting/dissemination activities. ██████████ (Implementation Study Lead- Abt) has led a variety of research projects and evaluations of K-12 education programs and interventions (funded by EIR). **Role:** Lead implementation study, oversee remote data collection, contribute to data analysis, and participate in disseminating activities. ██████████

██████████ (Quantitative Analyst- Abt) has substantial experience in conducting applied econometric analysis, collecting and managing data, broadly communicating data findings, and leading analyses for RCTs. **Role:** Responsible for the random assignment process, data analysis, and for the final design plan and ensuring fidelity of the RCT methods

Figure 1. Management/Organizational Structure



The collaboration teams of Abt, NAU, KU, and CW-FIT have demonstrated resources necessary to bring the project to scale. The lead applicant organization is KU Center for Research (non-profit) and partner site NAU. The CW-FIT team is located at KU’s Juniper Gardens Children’s Project- a community-based organization and leader in education research/program development for over 50 years.

Our partnering Native-serving and rural schools from 6 states have shown tremendous interest and support for this project with signed letters of support representing 116 Schools. Each district/school will sustain CW-FIT after project funding based on their individualized implementation and sustainability Action Plans developed with assistance from Regional Directors. Plans will include a) noted adaptations and practices to support culturally relevance and b) allocation of time (professional development calendar) and/or funds post project. Plans

will also identify partner schools that they will collaborate with to sustain implementation. Further, partnering districts have appropriate bandwidth and computers for teachers to complete modules. The Active Logic company of Kansas City will provide full scale AI development support. The fully US-based team has core competencies in Natural Language Integrations (ability to understand and respond to human language) and Virtual Assistant Development (for seamless user engagement and personalized support and interaction through conversational AI).

The Global Education Academy (GA) is nested within KU and will offer our well vetted professional development in an online format offering micro-credentials which can be used for professional development hours and can be stacked for graduate credit. GA has extensive micro-credentialing and module development experience.

The TORSH System is an online professional development and coaching platform with HIPPA-level security protections that has been successfully used with CW-FIT for the past three years. With this project, TORSH will establish connections across schools within States that wish to collaborate in training efforts.

The Plan to Broadly Disseminate

Dissemination will be guided by NAU, the CW-FIT team, and State Executive Directors. We will reach additional Native-serving schools throughout the country and rural schools within participating States progressing to non-project States. We will track non-project Native-serving and rural schools adopting and implementing CW-FIT. Several factors contribute to CW-FIT being broadly disseminated. **First**, dissemination planning will begin in the first quarter with careful direction from our Indigenous partners and oversight from NAU on all dissemination with and about Native-serving schools and Native Americans. CW-FIT Dissemination Team will meet monthly with partners to discuss strategies and coordination with national organizations.

Upon completion of study participation, district maintenance of CW-FIT will be supported by continued access to all CW-FIT implementation supports including newly developed coaching, micro-credential modules, and website resources. **Second**, we will include school leaders and teachers in dissemination (and the project has budgeted funds for them), including (a) practice-focused presentations (e.g., NAU's American Indian/Indigenous Teacher Education Conference, state and national conferences); (b) publications (e.g., Journal of American Indian Education, Journal of Research in Rural Education); and (c) supporting school leaders to disseminate CW-FIT within their school, district, and state or region with dissemination resources (e.g., slide decks), budgeted school stipends, and support from the CW-FIT team. **Third**, KU Communications Department provides news releases and support for the website, cwfit.ku.edu, where we will have policymaker-friendly research briefs, and video resources making project findings widely accessible. Ongoing posts about the project via social media (e.g., YouTube, Pinterest, and Facebook) will help ensure broad dissemination.

Utility of Products and Potential to Be Used in a Variety of Settings

The potential utility of the CW-FIT products from this project is supported by three key advantages: (1) there is a strong need for evidence-based interventions in Native serving and rural schools, (2) the CW-FIT program and all available resources and products that result from this project will be freely available, and (3) the CW-FIT AI Coaching Supports will create more efficient feedback and reduce coaching time further reducing costs. These advantages enhance the utility of these products across multiple settings including Native-serving and rural schools. Further, the usage and utility of the adapted supports and resources will be measured throughout all years of the project to guide development and dissemination of high quality, useful, and relevant products.

Table 4. <i>Milestones, Timeline & Personnel</i>		YR1 Pilot				YR2 RCT Yr 1				YR3 RCT Yr 2				YR4 RCT Yr 3				YR5 Dissemination				Personnel								
		W	S	P	S	F	W	S	P	S	F	W	S	P	S	F	W	S	P	S	F		W	S	P	S	F			
Goal 1. Expand CWFIT to Native-serving and Rural Schools Across the Country																														
Milestones																														
Objective 1: Implement Strategy to Scale Adapting for Cultural Relevance in Native-serving Schools																														
Strategy 1.1.	Focus Groups	✓	✓	✓	✓	✓																								1,4
Strategy 1.2.	Adaptations of products/procedures		✓	✓	✓	✓	✓			✓	✓			✓	✓			✓	✓											1,3,4
Strategy 1.3.	Conduct training of pilot coaches			✓	✓	✓				✓			✓	✓			✓	✓			✓									1,3,
Strategy 1.4.	Distance consultation with pilot coaches			✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓							3
Objective 2: Implement Strategy to Scale CW-FIT Coaching Supports (Mobile App and CW-FIT AI Coach)																														
Strategy 2.1.	Teachers (Intervention) complete Micro-credential modules				✓			✓		✓	✓		✓	✓	✓		✓	✓	✓		✓	✓	✓							3,4,5
Strategy 2.2.	Intervention teachers implement CW-FIT				✓			✓		✓	✓		✓	✓	✓		✓	✓	✓		✓	✓	✓							3,4
Strategy 2.3.	CW-FIT AI Coaching Supports				✓			✓		✓	✓		✓	✓	✓		✓	✓	✓		✓	✓	✓							3,4
Goal 2. Contribute to the Evidence Base for Classroom Engagement in Native-serving and Rural Schools																														
Objective 3: Conduct an Implementation Evaluation and RCT (Led by External Evaluator Abt)																														
Strategy 3.1.	Recruit (120 schools)		✓		✓		✓	✓			✓	✓			✓	✓														1,2,3,5,6
Strategy 3.2.	Randomize (40 schools per cohort)							✓				✓				✓														
Strategy 3.2.	Collect pre- and post-evaluation measures						✓	✓		✓		✓		✓		✓		✓			✓	✓								2
Strategy 3.3.	Analyze data and evaluate impact									✓	✓			✓	✓			✓	✓		✓	✓	✓	✓	✓					2
Objective 4: Disseminate Project Findings and the CW-FIT resources																														
Strategy 4.1.	Indigenous protocols established/followed	✓		✓	✓	✓		✓		✓		✓		✓		✓		✓			✓	✓			✓					4,3
Strategy 4.2.	Disseminate novel states schools			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					1,3,4,5,6,7
Strategy 4.3.	Continue scaling																				✓	✓	✓	✓	✓					1,3,4,5,6,7

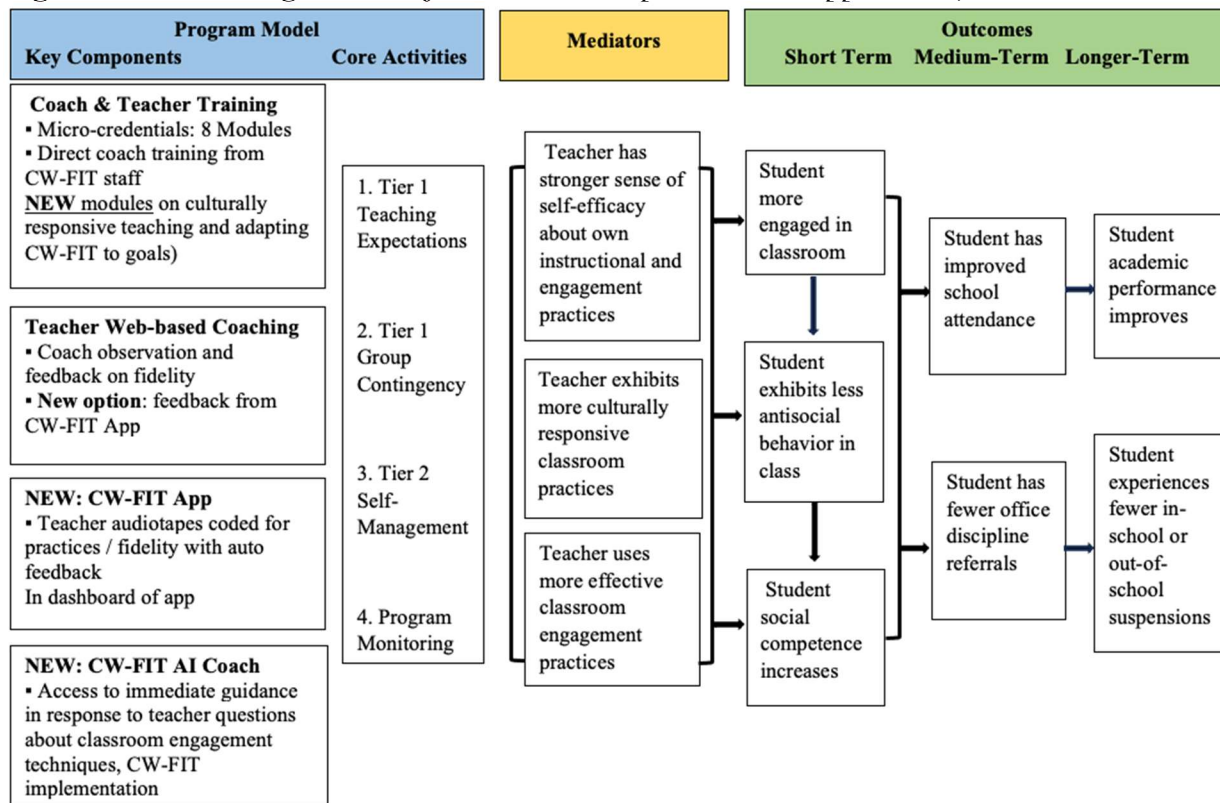
Implementation team=1, Eval Team=2, Regional Directors=3, Indigenous Advisors=4, School Coaches=5, State Directors=6, Dissemination Team=7

(C) QUALITY OF THE PROJECT DESIGN

The Quality of the Conceptual Framework Underlying the Proposed Research

The logic model for the CW-FIT project is provided in Figure 2 (and Appendix G). This model drives Project Objectives (Project Design and the Evaluation Plan). We expect that our coaching and training will be implemented with core fidelity and that, in turn, teachers will adapt CW-FIT with culturally relevant modifications and other adaptations while retaining core fidelity. The expected outcomes will reflect prior study outcomes of *increased student academic engagement and achievement* along with *improved teacher classroom engagement practices*. By meeting the project objectives, schools will develop capacity to sustain implementation of CW-FIT.

Figure 2. CW-FIT Logic Model (full version also presented in Appendix G)



The Goals, Objectives, and Outcomes to be Achieved by the Project

The proposed five-year project has two goals: 1) **Expand CW-FIT to Native-serving**

and rural schools across the country and 2) Contribute to the CW-FIT evidence-base in Native-serving and rural schools for (a) improving academic engagement and achievement for high-needs students in Native-serving and rural elementary schools, and (b) improving teachers’ classroom engagement practices in these Native-serving and rural schools. Table 5 (below) provides the specific project goal, objectives & milestones, expected outcomes, and measures.

Table 5. Project Goals & Milestones, Objectives, Outcomes and Measures of Progress

Project Goals / Milestones	Outcomes	Measures of Progress
Goal 1. Expand CW-FIT to Native-serving and Rural Schools Across the Country		
Objective 1: Implement Strategy to Scale: Adapt CW-FIT for Cultural Relevance (Yrs 1-4)		
Strategy 1.1. Conduct Focus Groups (Yr 1-4)	Analysis for themes conducted and area of feedback/adaptations shared with developers https://cwfit.ku.edu	Measure 1.1. 100% Focus Groups conducted, and data analyzed.
Strategy 1.2. Adaptation of products and procedures (Yrs 1-4)	Focus group feedback and input from the Indigenous Advisory Council will inform the changes to modules, website resources, and materials.	Measure 1.2. 100% of changes indicated made by start of RCT Yr 1 and then updated yearly following focus groups, surveys and Council meetings.
Strategy 1.3. Conduct training of 6 pilot school coaches (Fall Yr 1) and intervention school coaches (Fall of YRs 2-4)	Coaches complete micro-credential training and 1-hour supplemental training, implementing CW-FIT, and TORSH and CW-FIT AI Coach Supports to monitor fidelity and to provide feedback.	Measure 1.3. 100% of coaches complete training and demonstrate 90% or greater on Coaching Mastery Assessment.
Strategy 1.4. Initial distance consultation with coaches (and then as requested). (Yrs 1-4)	Coaches are fully trained and solutions for school level implementation are addressed. Reports on usage of CW-FIT AI Coaching supports documented.	Measure 1.4. Regional Directors Activity Logs record 100% coaches with 80% or greater participation.
Objective 2: Implement Strategy to Scale CW-FIT AI Coaching Supports (Yrs 1-4)		
Strategy 2.1. Pilot teachers (Fall Yr 1) and Intervention teachers (Fall Yrs 2-4) complete MC modules.	Regional Directors will facilitate teachers’ enrollment in CW-FIT MC.	Measure 2.1. Regional Directors tracks records of teachers’ module completion. All teachers complete 100% of modules.
Strategy 2.2 Intervention teachers implement CW-FIT. (Fall Yrs 1-4)	Intervention teachers implement CW-FIT 3 X week with Core Fidelity.	Measure 2.3 Redcap weekly survey by teachers indicates 80% of teachers implement CW-FIT 3 x week.

Strategy 2.3 Teachers receive feedback and support from school coach or CW-FIT AI Coaching Supports (Fall Yrs 1-4)	Within first two weeks of implementation, intervention teachers receive a minimum of 1 video review with feedback from coach Or feedback from CW-FIT AI Coach. If 80% fidelity, at least 1 follow-up 4 weeks later. If <80% on first observation, additional feedback sessions from coach or AI Coach until >80%.	Measure 2.3 Redcap weekly survey, TORSH and Mobile App records, 80% of all coaching observation sessions logged with dosages, strategies utilized, and fidelity recorded.
Strategy 2.4. Coaches or CW-FIT AI Coach guides Tier 2 procedures. (Yrs 1-5)	Coaches or elected use of CW-FIT AI Coach assist teachers to implement Tier 2 procedures for students identified by teachers.	Measure 2.4. Based on records, 100% of students receive Tier 2 that were nominated by teachers.
Goal 2. Contribute to the CW-FIT evidence-base in Native-Serving and Rural Schools		
Objective 3: Conduct an Independent Implementation Evaluation (Yrs 2-4)		
Strategy 3.1. Recruit 120 schools (total of 480 teachers) (Yrs 2-4). Recruit 6 Pilot schools (Yr 1).	Principals at schools noted by district leaders as supportive of the project.	Measure 3.1. Teachers (480) and Principals (120) in participating schools sign consent/agreement. (12 teachers 6 Principals for Pilot sign in Yr 1).
Strategy 3.2. School randomization. (Yrs 2-4)	120 schools randomly assigned (yearly cohorts).	Measure 3.2. Abt reports on randomization procedures.
Strategy 3.3. Collect pre- and post-evaluation measures. (Yrs 2-4)	Classroom /teacher data pre /post-measures collected (see evaluation plan).	Measure 3.3. Abt indicates 97% data collected with minimal missing data (<3%).
Strategy 3.4. Analyze data and evaluate CW-FIT impact. (Yrs 2-4)	Abt completes analysis and prepares publication meeting WWC standards without reservations.	Measure 3.4. Abt completed analysis with <5% attrition of teachers.
Objective 4. Disseminate Project Findings and CW-FIT with New Products and Resources		
Strategy 4.1. Plan for sustainability from start. (Yrs 1-5)	Individualized Action Plans will start at initial meetings with districts.	Measure 4.1. Abt receives each district sustainability Action Plan.
Strategy 4.2. Disseminate findings within and beyond project school districts. (Yrs 2-5)	Findings disseminated within districts, regions, at national conferences, in peer-reviewed journals and through social media.	Measure 4.2. Annual report on dissemination indicates 100% completion of Dissemination Plan activities per year.
Strategy 4.3. Continue scaling beyond the project funding. (Yr. 5 and future)	CW-FIT will be implemented in novel schools and novel districts.	Measure 4.3. CW-FIT team will record the # of teachers trained in current and novel districts.

The Design of the Project Appropriately Meeting Native-serving and Rural School Needs

This project has been designed in close collaboration with relevant Native American and

Indigenous partners to appropriately meet the needs of Native-serving schools and rural schools. Because of the strong support we have for the project and the careful design we have put together in collaboration with our partnering organizations, we are confident that this project will meet the needs of Native-serving and rural schools, will overcome the barriers to scaling up and expanding this evidence-based intervention, and contribute generalizable knowledge to the field about scaling evidence-based practices with schools, teachers and students typically not represented in WWC intervention development or evidence determination.

We are well prepared to address the Native-serving and rural school needs of our partners and on a national scale for three primary reasons. (1) **The strength of our partners and support for this project.** For this project, we have partnered with Northern Arizona University (a minority serving institution), NREA, and State affiliate Executive Directors to assure the project has been designed to meet their state and rural district needs. Partners will guide and be involved in every phase of the project. (2) **Adapting CW-FIT with flexibility for scale** is in direct response to our partnering schools, leaders, and teachers and will preserve the core of CW-FIT yet meet their unique needs. (3) **The Design builds on a strong CW-FIT foundation** of development and evidence over the past 16 years. CW-FIT has fully developed the foundation for coaching, micro-credential training, and freely available implementation resources and training to address the needs of K-8 classrooms. RCTs conducted with high-needs students have shown significant positive effects and have met WWC standards without reservations.

(D) QUALITY OF THE PROJECT EVALUATION

Overview

Abt Global will conduct an independent evaluation of the CW-FIT intervention implemented in this scaling strategy in a multi-state, multi-site cluster randomized controlled

trial (RCT) that will meet WWC version 5.0 Group Design Standards without reservations. The study will take place in 120 rural schools serving students in grades K-8, located in six states. Half of the schools will be randomized to implement CW FIT in the fall semester of the school year, and half will be a delayed treatment group randomized to business-as-usual in the fall semester with the opportunity to be trained on CW FIT in the spring semester. Recruitment will prioritize rural Native-serving schools, with a goal of having a third or more of the sample being Native-serving schools. Abt has substantial experience designing and conducting large-scale RCTs in both the I3 and EIR programs as well as in national and state evaluations funded by federal and state agencies. These RCTs are designed for, and many have been reviewed as, meeting WWC evidence standards without reservations. Abt has deep experience with the WWC through its multiple contracts leading WWC reviews. Evaluation Director, [REDACTED] is certified in WWC group design and advanced group design standards.

Design to Produce Evidence to Meet WWC Standards Without Reservations

The impact evaluation will examine the impact of CW-FIT using a blocked cluster RCT designed to meet WWC version 5.0 Group Design Standards without reservations. Participating schools will be randomized to implement CW-FIT in all participating classrooms in the fall semester of a school year or to delayed treatment (business as usual in the fall and CW-FIT in the spring.) The evaluation will include three cohorts (implementing CW-FIT in the first semester of the 2026-27, 2027-28, and 2028-29 school years), in 6 states, and 3 school configurations (K-5, K -8 and 6-8). The goal is a sample of 120 Native-serving and rural schools with approximately equal distributions of schools in the randomization blocks across treatment conditions with equal numbers of treatment and control schools across cohorts. School assignment to condition will be blocked by cohort, state, school grade configuration, and Native-serving status to remove some

of the variation in the outcome measures that are due to differences across blocks, improving the statistical power of the design. This design has been successfully used in prior CW-FIT evaluations and will allow Abt to evaluate the impact of all key CW-FIT components.

Random assignment of schools is preferred because most districts and schools prefer to have all teachers in the same schools implementing the same program to avoid issues of contamination that could occur if assignment to conditions happened at the teacher or classroom level, resulting in there being CW-FIT and control teachers in the same school. This is particularly relevant in small rural schools, where training and lesson planning collaboration is common. Moreover, in very small schools, there could be only one or a few teachers, making the random assignment of teachers within the same school difficult.

In each school agreeing to participate in the study, all interested core teachers will be invited to participate in the study for the fall semester and teachers in control schools will receive all training after post-intervention data collection (can implement CW-FIT in the spring semester). Interested teachers will be identified *prior to* school randomization but *after* their students have been assigned to them. For elementary grades in which teaching is not departmentalized, all general education teachers are eligible and will be recruited. For middle school grades and elementary grades in which teaching is departmentalized, all teachers are eligible and will be recruited regardless of the subject or grades of students that they teach. Teachers who decline to participate (and their students) will not be included in the study sample. The full student sample will include all students assigned to interested teachers prior to randomization of the school. No student joiners (students who are assigned to teachers after randomization) will be included in the study sample, although if they are in a treatment school, they will receive CW FIT.

Prior to randomization, each participating teacher will identify two to three target students in each classroom by using two reliable and valid screening measures. First, teachers will use Stage 1 of the Systematic Screening for Behavior Disorders (SSBD; Walker et al., 2014) (reliability of Stage 1: $\alpha = .77$ [Caldarella et al., 2008]). In Stage 1, teachers are given clear descriptions of externalizing and internalizing behavior problems, then separately evaluate all their students on the dimensions of externalizing and internalizing behaviors. Next, we will ask teachers to rate the top three students from the SSBD using the School Social Behavior Scales–Second Edition (SSBS-2, reliability: $\alpha = .98$ [Merrell, 2002]) to confirm their status as at-risk, defined as scoring at or above the 65th percentile on one of the domains: social competence or anti-social behavior. Student parental/caregiver consent forms will be sent out for all nominated target students prior to randomization.

In addition to the impact study, we will perform an implementation study that will support an improvement feedback loop for CW-FIT, focusing on strategies for the successful scaling of CW-FIT in rural communities and Native-serving schools.

This design will allow the study to address the core research questions on the impact of CW FIT shown in Table 6 below.

Table 6. Research Questions

Impacts on Students
1. What is the impact of CW FIT on the academic performance, attendance, disciplinary events, social competence, and antisocial behavior for all students and target students in grades K – 8 in rural and Native-serving schools?
Impacts on Teachers
2. What is the impact on classroom engagement practices, self-efficacy, and culturally responsive teaching for teachers in grades K – 8 in rural and Native-serving schools who received CW FIT training and coaching?
Moderators and Mediators of Impacts
3. To what extent is the impact of CW-FIT on outcomes for K – 8 students moderated by the characteristics of students (e.g., grade level, economic disadvantage, race) and schools (e.g., Native-serving schools, grade configuration, size)?

4. To what extent is the impact of CW-FIT on outcomes for K – 8 students mediated by teacher outcomes?
Intervention Fidelity
5. To what extent were the key support components of CW-FIT (teacher training, programmatic materials, coaching) delivered with fidelity across the multiple implementing cohorts of schools and classrooms?
6. Which adapted supports of CW-FIT did teachers use? What was their experience using them with respect to quality, relevance, and usefulness?
Cost Analysis
7. What was the cost effectiveness of delivering CW FIT in rural and Native-serving schools?

Statistical Power

Expected sample sizes are shown in Exhibit Table 7. For the full sample of 120 schools, we expect to have a student sample of 7,200 students including all students, 960 target students, and 480 teachers. Using the sample size assumptions in Table 7, the expected minimum detectable effect (MDE) size for analyses of outcomes using all students is 0.140 SD¹, which means that the study can detect a very small difference between the treatment and control students. For analyses using only the target students, the MDE is 0.175 SD. The MDE for analyses of teacher outcomes will be 0.208 SD.

Table 7. Sample Sizes for Impact Study

	Schools (6 states and all K-8 configurations)	Teachers (estimated 4 per school)	All students (estimated 15 per teacher)	Target students (estimated 2 per teacher)
Cohort 1 (Fall sem 2026)	40	160	2,400	320
Cohort 2 (Fall sem 2027)	40	160	2,400	320
Cohort 3 (Fall sem 2028)	40	160	2,400	320
Total	120	480	7,200	960

¹ MDE calculations from *PowerUp!* (Dong & Maynard, 2013). The power calculation assumptions use effect sizes in prior studies of SEL outcomes for elementary grades. Abt created a set of standard assumptions for calculating predicted power. See Appendix J for additional details on sample power assumptions and calculations.

Strategies for Minimizing and Addressing Attrition

Compositional changes to the analytic sample that occur due to differential attrition are a serious threat to the validity of findings from an RCT. We plan to use several strategies to avoid differential attrition in our evaluation of CW-FIT that have been successful in past studies. First, Abt will primarily collect outcome measures that are completed by the teacher based on their experience with the student, reducing the potential impact of student attendance on attrition. Other measures, like attendance, will come from administrative data, and its availability should not be impacted by treatment conditions. Second, the proposed evaluation period only lasts one semester, reducing time's impact on attrition. Third, the study team will communicate with project schools about the data collection requirements and the importance of their continued participation. Fourth, the study team will regularly communicate with project schools to identify concerns and develop solutions. Fifth, strong financial incentive will be provided to participating teachers and schools in both conditions. Altogether, these strategies will help ensure that the study produces strong evidence of CW-FITs effectiveness that will meet WWC standards without reservations.

Measures and Data Collection

All of the proposed student and teacher outcomes meet WWC standards and belong to WWC-identified outcome domains (aligned with WWC's Study Review Protocol Version 5.0), which means that they will be reviewable by the WWC. Table 8 shows the study outcome measures, the analytic construct that will be derived from each measure, the sample for measurement, and the timing of measurement. Although in a low attrition RCT, there is no requirement to establish the baseline equivalence of the treatment and control samples on each outcome, the study will collect baseline measures to ensure that the study will still meet WWC

standards with reservations if high attrition is observed and to use in the impact models, even if there is low attrition, to increase the precision of the impact estimates.

All of the student outcomes will be collected at the end of the fall semester of 2026-27 (Cohort 1), 2027-28 (Cohort 2), and 2028-29 (Cohort 3). For the outcomes based on administrative data, the baseline will come from spring of the prior year (spring 2026 for Cohort 1, spring 2027 for Cohort 2, and Spring 2028 for Cohort 3). For the study-administered measures, the baseline will come from fall of the first semester for each cohort.

Statistical Analysis Models

Abt's primary impact model will estimate intent-to-treat effects using linear regression with fixed effects estimated using ordinary least squares. Standard errors will be robust to heteroskedasticity and clustering at the school level. This strategy will estimate the difference in outcomes across the CW-FIT treatment and control groups, holding constant differences in outcomes across assignment blocks and other student- and school-level covariates. The model will include fixed effects at the randomization block level, controls for a baseline measure, and characteristics of students and schools. We will modify the impact model to examine moderators (RQ3) by including treatment-by-moderator interaction terms.

While the use of a clustered RCT produces unbiased estimates of the effect of CW-FIT on student outcomes, we include covariates in our analysis to improve the precision of our estimates. All models will include randomization block fixed effects to leverage the increased efficiency of stratified randomization strategies. Additionally, all models will include a control for a baseline measure because this measure will explain much of the variation in the outcome but is uncorrelated with the treatment, leading to an increase in precision. We will include other pre-treatment covariates if there is a theoretical reason to believe that the covariate is correlated

with the outcome of interest. In case of any missing data, we will use complete case analysis. For more details about the impact analysis model, see Appendix J.

Table 8. Measurement

WWC Domain	Outcome Measure	Description of Outcome Measure	Timing of Data Collection RCT
Student attendance	School attendance	Number of days absent will be collected from teachers or district, depending on site	Baseline: Spring of prior school year Observation: End of fall semester
Student behavior	Disciplinary actions	Number of disciplinary actions (office discipline referral, in-school and out-of-school suspension, expulsion) per semester.	B: Spring of prior school year O: End of fall sem.
Course performance	Core Subject Grades (grades 6-8)	Average semester grades in core academic subjects	B: Spring of prior school year O: End of fall sem.
Student behavior	Engagement vs. Disaffection with Learning (EvsD)	EvsD (Skinner et al., 2009). Teacher report on student engagement (4-pt Likert-type scale) <u>2 subscores</u> : Academic Engagement alpha = .73 and Behavioral Engagement alpha = .68.	B: Start of fall sem. (prior to randomization) O: End of fall sem.
Academic disposition	Social Skills Improvement System Rating Scales (SSIS). Subscale: Academic Competence	SSIS (Gresham & Elliott, 2008) is a standardized and norm-referenced teacher rating measure to evaluate children 3-18 years of age on 7 constructs. Alpha = .95 Test-retest reliability was estimated to be .92 (Gresham et al., 2011)	B: Start of fall sem. (prior to randomization) O: End of fall sem.
Student behavior	School Social Behavior Scales (SSBS) Subscales: Antisocial beh. Social competence	SSBS-2 (Merrell, 2002) is a standardized (norm-referenced) rating scale (5-pt Likert) for students' social and emotional behaviors. There are <u>2 subscores</u> --antisocial behavior and social competence. Alphas for overall scores are .98 (Merrell, 1993).	B: Start of fall sem. (prior to randomization) O: End of fall sem.
Teacher well-being	Teacher Sense of Self-Efficacy Scale (TES): Composite score	TES (Tschannen-Moran & Hoy, 2001) is a teacher self-rating using Likert scale items. The measure has a composite score (alpha = .89) and <u>3 subscores</u> (class management, alpha = .90; instructional practices, alpha = .91; and student engagement, alpha = .91).	B: Start of fall semester (prior to randomization) O: End of fall sem.
Teacher practice	Teacher Engagement Practices	Videotaped observations of teachers during instruction Inter-rater reliability to be established on study sample. Codes including subscores for Behavior Specific Praise, Opportunities to Respond, Error Correction, and Negative Feedback.	B: 3 videotapes start of fall sem. (prior to randomization) O: 3 videotapes end of fall sem.

Teacher practice	The Culturally Responsive Assessment of Indigenous School (CRAIS)	CRAIS (██████ et al., 2021) is a teacher self-report on extent to which their classroom instruction is responsive to the culture of the students and their families. Reliability to be established on study sample.	B: Start of fall semester (prior to randomization) O: End of fall semester
NA	CW-FIT Fidelity of key support components	Fidelity of components (logic model). Each measure specifies a sample level threshold for what constitutes adequate implementation. (study-developed)	Fidelity measured once in each cohort of CW FIT schools
NA	Post Implementation Teacher Survey	A study-developed survey on which supports teachers used and teachers' assessment of the relevance, usability, and quality of the supports.	End of fall semester

Implementation Study

We will assess the fidelity of implementation of the key support components of this expansion version of CW-FIT. The fidelity of implementation of CW-FIT will be collected using measures developed to meet EIR program expectations for a high-quality fidelity measure as was done in our 2019 EIR Midphase project. These include having a separate fidelity measure for each of the four key components in the logic model, specifying a sample-level fidelity threshold for each key component, and measuring fidelity each semester. We will measure fidelity of implementation for each cohort of schools, using a fidelity measure that aligns with the menu of teacher professional development supports provided by this version of CW-FIT. For each type of support, we will measure the amount delivered by the CW-FIT program, the take-up by teachers in each school, and teacher assessment of the quality/usefulness of each support.

Beyond measuring fidelity of implementation of the key components of CW-FIT, as referenced above, the evaluation will assess the extent to which the CW-FIT teachers are using classroom engagement practices that they are taught to use as part of their CW-FIT professional learning supports. The CW-FIT teachers will also be compared to the teachers in the business-as-usual schools to measure the contrast between the classroom strategies used by the teachers in the two conditions. The information on both types of fidelity is critical for future scaling of the

intervention, since it will allow future implementers, especially those in native serving and rural schools, to know whether the model can be fully and effectively implemented in their contexts.

In addition to the systematic measurement of fidelity of implementation, Abt will collaborate with Co-Director [REDACTED] (NAU) to collect information about teachers' experiences with CW-FIT in two ways. First, we will conduct focus groups with 20% of teachers and administrators in the CW-FIT schools (years 2-4), to better understand their experiences implementing CW-FIT and their perceptions of the cultural validity for their communities, the sufficiency of the supports provided to implementers, and suggestions for improvements to make the program more culturally appropriate and/or effective for their students. All focus groups will a) discuss implementation experiences, b) provide feedback to improve implementation feasibility, c) discuss the quality, relevance and usefulness of key coaching and training supports including the CW-FIT app and CW-FIT AI Coach. NAU will lead focus groups with Native-serving school educators engaging in a discussion about cultural validity and suggestions for culturally relevant improvement. Second, we will administer a short study-developed survey to examine which supports teachers used, cultural adaptations made, and teachers' assessment of the relevance, usability, and quality of the newly available products, resources and supports.

Providing Guidance for Replication and Testing in Other Settings

This evaluation will provide evidence that CW-FIT can be scaled at a national level inclusive of Native-serving and rural schools. This evaluation includes (1) a large sample representing Native-serving and rural schools across several states; (2) examining whether the impact of CW-FIT varies by different characteristics of schools, classrooms, teachers, and students; (3) collecting and analyzing implementation fidelity data from multiple sources at the school and classroom level; (4) including a cost analysis to provide valuable information about

the cost-effectiveness of the program; and (5) Abt and NAU will coordinate to conduct focus group interviews with participating teachers to inform adaptation needs and implementation barriers. Focus groups will be held both in person and online. These activities will inform the conditions under which CW-FIT is likely to have the greatest impact, and what supports may be needed in Native-serving and rural schools not meeting these conditions.

Diverse Settings and Samples

The six participating States include many high-need Native-serving and rural schools (See Table 1 and letters of support). Such diversity will support the generalizability of CW-FIT implementation in other Native-serving and rural schools.

Understanding Differential Impact

To examine potential moderators and mediators of treatment (RQs 3 and 4), school-, classroom-/teacher-, and student-level moderators will be incorporated into the impact models via interactions of the moderator variables with the treatment indicator. Moderating factors will include school characteristics (cohort indicator, size, percentage of minority students and students receiving free/reduced lunch), measures of fidelity, classroom/ teacher characteristics (e.g., teacher experience, teacher certification, baseline achievement level, and class size), and student characteristics (e.g., gender, ethnicity, free/reduced lunch status, disability status, and baseline achievement level). Results from these moderation analyses will help identify settings or populations for which CW-FIT is particularly effective or not well suited. Abt will also examine teacher- and student-level mediation models. The logic model specifies teacher (i.e., engagement practices) and student (i.e., academic engagement and achievement) outcomes. The intermediate teacher outcomes may mediate teacher self-efficacy, as well as impacts academic engagement, which in turn may mediate CW-FIT's impact on achievement.

Analyses of Fidelity of Implementation Data

Fidelity of implementation is a critical component of intervention effectiveness and is deliberately integrated into all components of this study to address research questions 7-9. The TORSH platform will provide fidelity of implementation and coaching data (for treatment and control- to identify if they are doing any parts of CW-FIT without training). Redcap online surveys will be used to gather all teacher completed measures on target students. After analyzing these data, we will examine fidelity of implementation of CW-FIT (e.g., the dosage and quality of coaching, teacher satisfaction, and effective implementation across diverse settings), and the scaling strategy (e.g., site selection, coaches, teachers, training, and monitoring).

Cost Analysis

Expansion grantees are asked to consider cost and changes with scaling. This study will examine cost variation when implementing CW-FIT to scale across rural schools and districts (led by Abt). With our EIR Midphase project, we found the average implementation cost for districts as they transitioned to full scale installation of CW-FIT fell to \$34.01/student, an estimated savings of \$24.99 as districts were able to train more teachers reaching a larger group of students. Additionally, with our micro-credential training we have found a lower **per student cost of \$28.37 in the first year of implementation, with further cost savings anticipated at full scale.** These findings suggest CW-FIT is likely to be resource-efficient and further cost-savings can be anticipated when brought to scale in Native-serving and rural schools. This project will extend these cost estimates by collecting start-up (including time spent individualizing CW-FIT for cultural relevance) and ongoing implementation cost data for both treatment and control schools to estimate annual total costs. The IES funded Cost Tool Kit will be used to: a) collect staff time, materials, and facility costs; b) calculate annual and total costs at

the per-student and per-school level; and c) conduct a Cost-effectiveness Analysis. The total cost of CW-FIT will be compared with intervention effects to calculate a cost effectiveness (CE) ratio, as an expression of the per student costs relative to achieved outcomes. Finally, the CE ratio for CW-FIT will be compared to the CE ratio of the control group.

Articulating Components, Mediators, Outcomes, and Thresholds

Abt will collect implementation data, including coaching logs, fidelity of coaching, fidelity of implementation, and teachers' satisfaction with training, coaching, and CW-FIT. Based on prior RCTs, Abt has set the following thresholds for acceptable implementation: (a) professional development and coaching fidelity must meet >90% fidelity (e.g., credentials completed, completion of coaching logs); and (b) teacher implementation of CW-FIT must meet 80% fidelity and be implemented at least 3 times a week. Abt is confident that these data will provide insight into the key project components. Further, the analysis plan will examine school, teacher/class, and student moderators of treatment effectiveness, and teacher-level mediators that may also impact treatment effects. The evaluation targets student-level outcomes aligned with prior RCTs of CW-FIT, including academic achievement in reading, academic engagement, and student behavior. Further, impacts on teachers' self-efficacy and classroom engagement practices will be explored.

Overall CW-FIT Expansion Project Summary

Strong evidence supports CW-FIT to improve student academic engagement and academic achievement, while reducing disruptive behaviors. Our team led by CW-FIT, KU, NAU, and NREA, with Abt as the external evaluator, have the capacity and qualifications to lead this important work addressing Native-serving and rural schools' needs to reengage students and improve academic achievement.

References

- American Institute of Research (2024). *Indigenous student count* [Interactive Map]. Retrieved June 3, 2024, from <https://www.air.org/indigenous-students-count>
- Cai, J. (2020, December 1). The Condition of Native American Students. *National School Board Association*. <https://www.nsba.org/ASBJ/2020/December/condition-native-american-students#:~:text=From%20the%20data%20collected%2C%20the,is%20not%20the%20only%20concern.>
- Caldarella, P., Young, E. L., Richardson, M. J., Young, B. J., & Young, K. R. (2008). Validation of the systematic screening for behavior disorders in middle and junior high school. *Journal of Emotional and Behavioral Disorders, 16*(2), 105–117.
- [REDACTED]
- [REDACTED]
- CW-FIT. (2024). *About CW-FIT*. <https://cwfit.ku.edu/>
- Dong, N., & Maynard, R. (2013). PowerUp!: A tool for calculating minimum detectable effect sizes and minimum required sample sizes for experimental and quasi-experimental design studies. *Journal of Research on Educational Effectiveness, 6*(1), 24-67.
- Education Innovation and Research (EIR) Program Expansion Grants, 89 F.R. 37208 (published May 06, 2024), <https://www.federalregister.gov/documents/2024/05/06/2024-09795/applications-for-new-awards-education-innovation-and-research-eir-program-expansion-grants>

- Fahle, E., Kane, T. J., Reardon, S. F., & Staiger, D. O. (2024). The first year of pandemic recovery: A district-level analysis. *Education Recovery Scorecard*.
<https://educationrecoverycorecard.org/wp-content/uploads/2024/01/ERS-Report-Final-1.31>.
- Gresham, F., & Elliott, S. N. (2008). *Social skills improvement system (SSIS) rating scales*. Bloomington, MN: Pearson Assessments.
- Gresham, F. M., Elliott, S. N., Vance, M. J., & Cook, C. R. (2011). Comparability of the social skills rating system to the social skills improvement system: Content and psychometric comparisons across elementary and secondary age levels. *School Psychology Quarterly*, 26(1), 27.
- Hussar, B., Zhang, J., Hein, S., Wang, K., Roberts, A., Cui, J., Smith, M., Bullock Mann, F., Barner, A., & Dilig, R. (2020). *The Condition of Education 2020* (NCES 2020-144). U.S. Department of Education. Washington, DC: National Center for Education Statistics. <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2020144>.
- Logan, J. R., & Burdick-Will, J. (2017). School segregation and disparities in urban, suburban, and rural areas. *The ANNALS of the American Academy of Political and Social Science*, 674(1), 199–216. doi:10.1177/0002716217733936
- Merrell, K. W. (1993). Using behavior rating scales to assess social skills and antisocial behavior in school settings: Development of the School Social Behavior Scales. *School Psychology Review*, 22(1), 115–133. <https://doi.org/10.1080/02796015.1993.12085641>
- Merrell, K. W. (2002). *School Social Behavior Scales (SSBS-2)* (2nd Ed). Brooks Publishing.
- Reyhner, J. (2006). American Indian Education: An overview. *American Indian/Alaska Native Education*. https://jan.ucc.nau.edu/~jar/AIE/Ind_Ed.html

- Rowlands, D. W. & Love, H. (2021, September 28). *Mapping rural America's diversity and demographic change*. Brookings Institute. <https://www.brookings.edu>
- Running Bear, C., Terrill, W. P. A., Frates, A., Peterson, P., & Ulrich, J. (2021). Challenges for Rural Native American Students with Disabilities During COVID-19. *Rural Special Education Quarterly*, 40(2), 60–69. doi:10.1177/8756870520982294
- School Superintendents Association (AASA). (2017). Leveling the playing field for rural students. *Rural School and Community Trust*.
- Showalter, D., Hartman, S. L., Johnson, J., & Klein, B. (2019). *Why rural matters 2018-2019: The time is now. A report of the rural school and community trust*. Rural School and Community Trust. <https://files.eric.ed.gov/fulltext/ED604580.pdf>
- Skinner, E. A., Kindermann, T. A., & Furrer, C. J. (2009). A motivational perspective on engagement and disaffection: Conceptualization and assessment of children's behavioral and emotional participation in academic activities in the classroom. *Educational and Psychological Measurement*, 69(3), 493-525.
- Tieken, M. C. & Montgomery, M. K. (2021). Challenges facing schools in rural America. *State Education Standard*, 21(1), 6-11.
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783-805.
- U.S. Department of Education. National Center for Education Statistics, Common Core of Data (CCD). (2017). *Public elementary and secondary school enrollment, number of schools, and other selected characteristics, by locale: Fall 2012 through fall 2015* [Table]. https://nces.ed.gov/programs/digest/d17/tables/dt17_214.40.asp

Walker, H. M., Sevenson, H. H., & Feil, E. G. (2014). Systematic screening for behavior disorders (SSBD): Administrator's guide. Universal screening for PreK-9.

What Works Clearinghouse (WWC). (2022). <https://ies.ed.gov/ncee/wwc/>.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]