New Mexico Early College High Schools (NMECHS):
Opening Doors, Expanding Vistas

Education Innovation and Research Program – Mid-phase Grant
Absolute Priority 1: Moderate Evidence
Absolute Priority 2: Field-initiated Innovations – General

CONTENTS

INTRODUCTION

In New Mexico as in the entire nation, the workplace is changing. Manufacturing and mining are being largely replaced by technology and service industries that together require varying levels of technical, administrative, and workplace skills. Many of these new jobs require some postsecondary credential. Clearly, all students are affected by the demands for more education beyond high school. Some students—notably low-income youth, first-generation college-goers, racially and ethnically diverse students, and others underrepresented in higher education—are far more impacted. To help solve persistent problems with equity and opportunity, the New Mexico Public Education Department (NMPED) is proposing to expand its Early College High School Model as a means to support New Mexico's goal for "equity in education" (NMPED, 2018a).

Since 2008, 21 ECHSs across New Mexico have been approved by the NMPED. A 2016 study of these ECHSs confirmed the effectiveness of the model for the population it serves: (1) 58% to 100% of students received free and reduced lunch; (2) 64% earned the equivalent of two years' college work prior to high-school graduation; 43% earned an industry certification; (3) 79% participated in workforce learning placements; (4) 23% enrolled directly in community college; and (5) , and 67% enrolled in a four-year college or university after graduation. In comparison, just 14% of non-ECHS students in NM completed any workforce learning experiences, and just 14% earned an associate's or applied associate's degree or workforce credential prior to graduation (NMPED, 2018a). Given these outcomes, NMPED proposes to scale up the ECHS model, more than doubling the number of ECHSs across the State.

A. SIGNIFICANCE

ECHSs are an exemplary solution in which students most commonly attend high school on a college campus where they simultaneously earn their high-school diploma and cost-free college credits (WWC, 2017). Upon graduation, ECHS students move more seamlessly from

high school to college to *continue rather than begin* earning a degree or industry-recognized credential (Hughes, Rodriguez, Edwards, & Belfield, 2012). Another major high-school reform, career academies—usually schools-within-schools—have also had success in helping students earn career-focused credentials and some college credits prior to graduation (Kemple & Wilner, 2008; Langford & Maruco, 2018). With this EIR funding, NMPED's proposes to develop ECHSs located in high schools as separate academies (schools-within-a-school). This less frequently seen implementation of the ECHS is expected to continue to afford students the benefits of college work and industry certifications while lowering implementation and operational costs to the State, districts, and schools.

A.1 POTENTIAL CONTRIBUTION

Gradually over the past decade, education, the economy, and workforce readiness have converged to redefine what students require from schools. Zinth (2016) attributes these new high-school demands to multiple factors: (1) more jobs and careers require training and education beyond high school; (2) America's underserved populations have lower probabilities of getting the education and training they need; and (3) traditionally underserved populations constitute a growing proportion of students in US schools. To address this trifecta of educational challenges, the Bill & Melinda Gates Foundation funded the initial ECHS models in 2002 to *improve college readiness and completion rates for students underrepresented in postsecondary education.* Since then the model has proliferated nationwide. The Gates Foundation alone served more than 80,000 students in its first decade (JFF, 2017)

A.1.1 Contributions to a Strong Evidence Base: Absolute Priority 1: Moderate Evidence of Effectiveness

Seminal studies nationwide show exemplary outcomes for ECHS students as compared to similar students in traditional programs: ECHS students are more likely to graduate from high school, more likely to enroll in college, more likely to earn a college degree, and more likely to earn an associate's degree prior to high school graduation (AIR & SRI International, 2009; Berger, Turk-Bicakci, Garet, Song & Knudson, 2013; Berger, Turk-Bicakci, Garet, Knudson &

Hoshen, 2014; College in High School Alliance, 2017; Edmunds, Bernstein, Unlu, & Glennie, 2012; Edmunds, Unlu, Glennie & Bernstein, 2017; Edmunds, Willse, Arshavsky & Dallas, 2013; Mickens, 2014). When outcomes for historically underserved students are reviewed, researchers found compelling results: (1) students of color and students from low-income families who attend ECHSs are far more likely to obtain a college degree than students of color (10 times more likely) and students from low income families (8.5 times more likely) who attend traditional high schools (Berger et al, 2014). And with 94% of early college graduates earning college credit free of tuition, the cost savings is estimated at 30% of tuition costs toward a bachelor's degree or 60% of tuition toward an associate's degree (JFF, 2012).

What Works Clearinghouse: The WWC Intervention Report for dual enrollment programs, including ECHSs, found positive effects on students' high school and college degree attainment, college access and enrollment, and credit accumulation, all with a medium to large extent of evidence. For staying in high school, college readiness, and high-school attendance domains, studies collectively showed positive effects with a small extent of evidence (U.S. Department of Education, 2017).

The WWC reviewed 35 eligible studies of ECHSs (Department of Education, 2017). Five met WWC group design standards—two without reservation. Berger (2014a) and Edmunds (2015) each conducted randomized controlled trials (RCT) to examine ECHS model effects across programs. Statistically significant positive effects were found in two important domains—high-school graduation (Berger, 2014) and college degree attainment (Edwards, 2015), as confirmed by WWC. Three studies of dual enrollment programs, including ECHSs, met WWC group design standards with reservations—An (2013), Giani, Alexander, & Reyes (2014) and Struhl & Vargas (2012). These three all showed statistically significant positive effects in multiple domains, as confirmed by WWC.

For these five studies, statistically significant positive effects were shown on college enrollment and degree attainment (Berger, 2014a, Edmunds, 2015, Giani, 2014, Struhl & Vargas, 2012); credit accumulation (Giani, 2014; Struhl & Vargus, 2012); high-school

completion (Berger, 2014a; Edmunds, 2015); high-school academic achievement (Berger, 2014a; Edmunds, 2015); and staying in school and college readiness (Edmunds, 2015).

Kemple and Snipes (2000) studied career academies in eight urban areas across six states, serving majority minority populations. Benefitting from RCT, as confirmed by WWC's acceptance without reservations, the researchers found significant effects for career academy students staying in school through graduation. A follow-up study (Kemple & Willner, 2008) reported 96% of students enrolled in career academies earned a high-school diploma or GED within eight years of their expected high-school graduation. The effect size (0.27) was substantively important and characterized by WWC as having a potentially positive effect.

A.1.2 Proposed Contributions to Knowledge

The proposed *NMECHS: Opening Doors, Expanding Vistas* project adds to the design components of past research on ECHS to facilitate ongoing replication and scale-up through design modifications in place and structure, and confirmed relevance to local needs:

- **Place and Structure –** The 24 proposed ECHSs in NM will be structured as schools-within-their-own high schools, i.e. college and career-focused academies with college-level courses and instructors. Since the majority of ECHSs nationally (as well as the 21 currently in NM) are located on college campuses, university campuses, or within stand-alone buildings, this proposed ECHS academy design will provide a new set of data on outcomes that can be realized in high-school settings. Locating ECHSs in high schools provides uncharted opportunities for both measuring and determining the effects of cost efficiencies for the State, the creation of a college culture off-campus, and greater interest in enrollment from high-need students who may not be ready to move away from their high schools.
- **Confirmed relevance to local needs:** The ECHS model will incorporate business surveys and sector analyses into its development of the ECHS academies to assure career pathways and courses reflect rising workforce demands in their own communities. This linkage in early development will build in education and business partnerships to support ECHSs from their inception.

A.2 UNMET DEMAND FOR SCALE-UP

In scaling ECHSs in existing high schools, the state will address several areas of improvement identified by NMPED. This includes operational and financial issues such as space, transportation, scheduling; and student equity (recruitment and access). These issues will be addressed through the proposed ECHS academies in 24 high schools. According to a 2004 study for JFF, sponsored by the Gates Foundation (Webb, 2004), locating the ECHSs in high schools will lower development, operational, and sustainability costs and open access to students who may not wish to limit their participation in home-school relationships and activities. In this ECHS scale-up in New Mexico, we will examine to what extent this newly proposed ECHS implementation structure can achieve similarity of outcomes with differences in cost efficiencies.

A.2.1 Potential Barriers

In SY 2018-2019, the 21 ECHSs in 18 school districts are serving 2,969 students—67% on community college or university campuses, 22% in stand-alone buildings, and 11% attached to high schools (NMPED, 2018a). For those ECHSs located away from their home high schools, transportation costs and travel time have posed a potential barrier for recruitment and retention of students. In principal interviews conducted for NMPED[1], respondents reported that students who enrolled in classes on college campuses complained they didn't have the time or flexibility in their schedules to participate in school sports (NMPED, 2018a). The location of the ECHS for this grant has a built-in system to encourage participation among high-need students who may not yet be comfortable as high schoolers on college campuses (Adcox & Moore, 2016).

B. QUALITY OF PROJECT DESIGN

B.1 GOALS, OBJECTIVES, AND OUTCOMES

Project goals derive from key components presented in the research. Following the goal/objective/outcome tables, each objective is described briefly in the narrative.

[1] Conducted by NS4ed, LLC, as part of a principal professional development program.

Goal	Objective	Outcome
1. NMPED provides a purposeful design and plan of action.	1.1 Recruit 24 high schools to implement ECHSs as "school-within-a-school" academies within their schools.	Description of school management includes 9th to 12th grade ECHS academy (ies) in their high-school.
	1.2 Develop ECHS academies relevant to high-demand careers.	Academy pathways will reflect local business needs and workforce opportunities.

Objective 1.1: To date, more than 50 principals and district administrators have expressed interest to NMPED in developing ECHS in their districts. In summer 2019, all interested districts/schools will be provided with written descriptions of the in-school implementation of the ECHS model, including the details for random assignment/lotteries to select students for enrollment. NMPED will post on its website a FAQ link for questions and answers about the initiative. Upon receipt of funding in fall 2019, interested schools will be invited to move forward with applications to the State to become in-school ECHSs.

The goal is to enroll 100 students in 9th grade in ECHS academies at each of the 24 schools. Allowing for schools with smaller populations, additional schools will be added if needed to assure a minimum of 4,000 students for the evaluation. New Mexico is the sixth most rural state in the U.S (Reagan, 2016). Of the 21 current ECHSs, 67% (14) are designated with a locale code of 32, 33, 41, 42, or 43. *Based on this profile, we anticipate more than 50% of the new ECHSs will be classified as rural.*

Objective 1.2. NMPED will conduct a business survey across each community to obtain local information on: (1) skill needs and availability; (2) degree requirements; (3) employers' hiring challenges; (4) perceived skill gaps; and (5) employers' use of degrees and other skill indicators in hiring practices. Findings from the surveys will be incorporated by the schools to establish the content and course curricula for their academies, assuring they are relevant to current and projected job demand in the region. The survey process will also identify employers interested in being ECHS business partners and providing curricular input for ECHS high school and dual credit coursework; and workplace learning (shadowing, mentoring, internships, and apprenticeships) so essential to student success.

Goal	Objective	Outcome
2. NMPED creates partnerships	2.1 Each ECHS academy will have one postsecondary partner.	MOUs with the college will reflect course curricula, staffing, and course delivery to meet a target of 26 credit hours and/or associate's degree earned prior to graduation.
	2.2 NMPED will assure a minimum of one business partnership is in place for each ECHS academy	MOUs with business partner(s) will describe workplace experiences and contributions to course curricula to support completion of a workforce credential prior to graduation.

Objective 2.1. Each ECHS academy will partner with one college or university to provide college courses in the ECHS academies. Postsecondary MOUs will include descriptions of dual credit course offerings for each pathway offered, and evidence of vertical alignment across programs of study. A policy for advising students on the transferability of college credits will be developed jointly. The MOU with the college will also include a joint plan for tracking courses taken and numbers of college credits earned by ECHS students.

Objective 2.2. Workforce partnerships will be identified through the business surveys (Obj. 1.2) to augment existing school/business partnerships. Each MOU with business partners will include a commitment to provide real-life workplace experiences for project-based learning in the academies as well as commitments to develop and provide meaningful work-based learning experiences in alignment with student pathways. NMPED encourages at least one business partner, where possible, is considered an economic leader within the region.

Goal	Objective	Outcome
3. NMPED ensures professionalism and high-quality standards	3.1 NMPED will apply high standards to the approval process for a minimum of 24 schools to start designated ECHS academies.	Each ECHS will successfully complete the NMPED ECHS Designation Rubric.
	3.2 Principals will demonstrate increased ECHS leadership roles within their school, district, and business community.	100% of principals will be required to attend 80% of training programs.
	3.3 NMPED's Technical Resource Center will include ECHS academy model content.	Additional materials will be added to the online resource center.
	3.4 The number of high-school teachers qualified to teach college courses at the academy will increase.	35% of teachers will meet professional qualifications to teach college courses as adjunct faculty for their postsecondary partners.

Objective 3.1 To assure the highest level of quality standards, NMPED developed an Early College High School Designation Rubric for all districts applying to establish ECHSs. The rubric includes descriptions provided by the districts regarding: recruitment; students served;

staffing models; career pathways and their required workforce credentials; MOUs with postsecondary partners (specifying eligible dual credit courses and course requirements) and workforce partners (specifying on and off-site commitments); course catalogues; master schedules; sustainability plans; and tribal council consultations (as applicable). If an applicant does not meet *all* requirements, the State will provide technical assistance to help them through the process. A full copy of the rubric is included in Appendix J. Its use for fidelity implementation over time is described in Section E.

Objective 3.2. Since 2015, NMPED has provided a formal professional development program for ECHS principals and stakeholders. New principal training materials will be designed that focus on principal leadership. The goal of the training will be on how to build new leadership skills in a multi-role, single-site environment, how to foster partnerships, and how to support student pathways to college. Current ECHS principals will co-facilitate training sessions and be available as ECHS coaches. Training will be held monthly, alternating between onsite programs at different locations across the state and online webinars.

Objective 3.3. The NMPED ECHS Technical Resource Center (http://www.echs-nm.com/) was developed to provide support to ECHS principals, educators, and partners with a centralized community of resources. The website includes a NM Educator Toolkit, research reports, and best practices as well as broad resources such as surveys and reports, webinars, podcasts, and news. Over the grant, the site will be augmented with information on new practices in the field, effective principal training materials, videos of best practices, and webinars. Evaluation findings will also be systematically included.

Objective 3.4. To teach a college course in New Mexico, a teacher is required to have a Masters degree or higher. Thus, recruiting teachers who hold a master's degree in a subject area allows the school to offer more early dual credit courses. As part of the grant match, NMPED will provide stipends for interested high-school teachers to earn a Master's Degree to qualify them as dual-credit course instructors.

Additionally, some ECHSs have looked to bring in industry professionals from the

field to teach some of the dual-credit courses. These professionals can apply to NMPED for a vocational teaching license, which allows years of service in the industry to replace educational requirements.

Goal	Objective	Outcome
4. NMPED assures high-need populations are served	4.1 NMPED will assure high-need populations are served in the ECHS academies through targeted recruitment	Focused recruitment will result in ECHSs serving high-risk groups (low-income, Black, American Indian, Hispanic, English Learner, disabilities) in equal proportions (within 5%) to their school district.

Each ECHS will developed its own admissions criteria including grade levels, GPA, attendance, teacher recommendations, writing samples, progress toward graduation, earned credits, and test scores. Recruitment will target 8th grade feeder schools with in-class presentations, parent brochures and open houses, print/broadcast media, and social media outreach. Admissions criteria will assure the pool of applicants for enrollment reflects the district student composition. From those who meet admissions criteria, 100 students at each of 24 high schools will be admitted via lotteries to ECHSs beginning SY 2020/2021. The evaluation will follow this cohort through 12th grade, along with an equal number of students at each high school who applied but did not receive an offer to enroll in the school's ECHS academy.

While the incoming 9th grade treatment cohort is the focus for the evaluation, an additional 100 students per school per year will be enrolled as 9th graders each year. Thus over the five years of funding, the grant will serve 9,600 students across the state.

Goal	Objective	Outcome
5. ECHS academies will provide powerful teaching and learning	5.1 Academies will include career-focused problem-based learning to increase student math skills, and computer science.	Students' math proficiency will increase 10% (PARCC); dual credit computer courses will be offered.
	5.2 Curricula for each ECHS academy will be fully aligned with state standards and support career and college coursework.	Students will show improved academic achievement, completion of high-school and college coursework, as tracked via students' Master Plan, PARCC proficiencies, and end-of-course grades.
	5.3 ECHS academies will work with business partners to develop a minimum of 1 project per year per grade level relevant to local workplace situations.	As learning is introduced in a career context, student engagement will increase as evidenced by improved attitudes and attendance.
	5.4 Students will engage in 12 hours annually of workplace learning experiences established jointed with employers and the ECHS academy.	Students' individual NEXT STEP Plans reflect workplace experiences and hours met per semester.

Objective 5.1. At the high-school and college levels, proficiency in algebra is foundational to learning and prepares students for college and careers. Statewide, just 21.6%, of all NM's students in all grades demonstrated grade-level proficiency in math in 2018 (a 4.2% increase since 2015). High school math proficiency scores were even lower: only 19.1% for 9th graders, 13.9% for 10th graders, and 8.3% for 11th graders. By stark contrast, 50.8% of the subset of 9th graders who took Algebra 1 in 8th grade demonstrated proficiency in 9th grade math (NMPED, 2018b). To accelerate math learning, ECHS academies will build into the curricula a career-focused mathematics course that will teach algebra in the context of industry-specific problem-based learning. Real-life examples using math will be provided by each of the ECHS's business partners. For students who continue to struggle with algebra, the academies will provide in-school tutoring to bring students to grade level.

Computer courses will be offered through the college as dual credit courses reflecting the need for those skills in all workplaces.

Objectives 5.2. ECHS programs will be aligned to the state's core academic standards. College-level coursework will mirror the same rigor and pacing as when delivered on a college campus. Adherence to standards will be confirmed by NMPED during the application process to become an ECHS and in the State's renewal process for continued ECHS designation.

Objective 5.3 and 5.4. The ECHS model requires students to engage in authentic workplace experiences each year. To meet this requirement, ECHS academies will work with their business partner to schedule each student's placement. These placements will strengthen students' engagement with their learning, build their understanding of the importance of college, and affirm their commitment to and interest in their chosen careers. Work-based learning (including mentoring, job shadowing, internships, or full apprenticeships) will also build credits toward industry credentials. All business-developed projects will be posted with the curriculum for approval by the State. Through the Technical Resource Center, the projects will be shared among ECHSs.

Goal	Objective	Outcome
6. In partnership with local colleges, academies provide college and career readiness and accelerated progress	6.1 Establish college course and certification requirements for each academy to provide a minimum of 26 credit hours earned prior to graduation.	Demonstration of vertical alignment of secondary and postsecondary courses leading to a workforce credential and/or an Associate's degree, with 30% of students earning an associate's degree, 80% earning 26 credit hours of college work, and 50% earning an industry certification prior to graduation.
	6.2 Jointly, ECHS academies and colleges will create a college culture in the high school academy with full-day special programs every other month on campus or in the high school.	100% of students will engage in a minimum of 90% of the scheduled college activities, including campus visits and in-school programs.

Objective 6.1. ECHS academies will be required to provide opportunities for students to earn a minimum of 26 college credits prior to graduation; and an associate's degree and/or workforce credential/ technical certifications. The ECHS curriculum will be designed and sequenced to prepare *all* students for success at a postsecondary level, with an appropriate level of challenge to keep students engaged but not discouraged. Working with colleges, the ECHS academies will articulate for students how credits are transferable to other public two- and four-year colleges and universities.

Objective 6.2. ECHSs will be tasked with creating a college culture off-campus and in the high school academies. The academies will work with the colleges to introduce college-sourced activities including in-school visits and presentations from college faculty, administrators, and students; decoration of high-school academy classrooms with college colors and pennants; and two visits a year to the college campus for tours and presentations.

Goal	Objective	Outcome
7. Academies will provide comprehensive student support	7.1 Develop an individualized NEXT STEP Career plan and an individualized student Master Schedule Plan for each student, including scheduled academic, college, and career advisement, with tutoring as appropriate.	100% of student plans will monitor college and career plans, and academy performance to address any barriers to completion that may arise.

Objective 7.1. Students will take their first college class in 9th grade. The ECHS will have a lot of scaffolding around the students so they have success in that first college experience. It takes careful stewarding for the student so that they have repeated successes in the post-secondary environment. To this end, ECHS academies will provide its students with academic advising, parent involvement and communications, tutoring, review sessions, homework guidance,

summer sessions, learning labs, skill development classes, college planning sessions, and college application and funding workshops. Students will engage with ECHS counselors for advisement monthly in 9th grade to assure they: (1) are comfortable with the increased academic rigor; (2) understand the pathways to college and careers; and (3) are motivated to continue. From 10th to 12th grade, students will individually meet with ECHS and college advisors five times a year to create a Master Schedule of progress toward college and careers. In 12th grade, college advisors will provide advisement three times during the year to help students bridge high-school and college seamlessly. Summary notes of these meetings will be included in the students' ECHS Master Plan, including challenges students face that could impact their success in the program.

Each school semester, students' academic progress will be measured by teachers to identify any tutoring needs. At those times, students will be assigned tutors to assure they are accelerating in their courses. The impact of the tutoring will be assessed through improvements in grades for which students are being tutored.

B.2 CONCEPTUAL FRAMEWORK

The following page represents the logic model underlying the change theory for *NMECHS Opening Doors, Expanding Vistas*. As noted above, goals were derived from key components presented in prior rigorous research from Berger (2014a) and Edmunds (2015). Objectives and their measures will be specified below and detailed in Section E.

Vision: With *Opening Doors, Expanding Vistas*, NMPED will scale-up its successful ECHS model by locating 24 new ECHSs as separate academies within existing high schools, providing greater program efficiencies for proven college accelerators.				
			Treatment vs. control benchmarks	
Inputs ➔	***Goals and Activities*** ➔	***Outputs*** ➔	***Short/Intermediate-term Outcomes***	***Long-term Outcomes/ Impact***
*NMPED Leadership *District and school leadership *IHE partners *Business partners *High-school and college instructors *Recruitment materials and selection criteria *Survey and sector analysis consultants *NMPED ECHS Designation Rubric and processes *Student advisors and tutors *Principal coaches *Funding *Course curricula *Program supplies, lab equipment, and technology for academies	**Goal 1: NMPED provides purposeful design** *ECHS built in existing high schools as academies *College/career pathways mirror area high-demand careers **Goal 2: NMPED creates partnerships** *Community college, university, and business partners **Goal 3: NMPED ensures professionalism & high-quality standards** *Designating and vetting ECHS academies *Providing principal leadership training and coaching *Technical Resource Center builds best practices support. *Ensuring professional qualifications for high-school teachers to teach college courses as *adjunct faculty for postsecondary partner.* **Goal 4: NMPED assures high-need populations served** *Population of academies reflects district populations. *Recruitment emphasizes high-need students from feeder schools. **Goal 5: Academies provide powerful teaching and learning** *Work with business partners to develop career-focused project-based learning in students' meta-majors *Align all curricula with state standards and reflect career and college coursework. *Set worksite learning requirements *Accelerate math and introduce computer learning **Goal 6: In partnership with local colleges, academies provide college and career readiness and accelerated progress** *Set college course and certification requirements *Articulate college credits toward associate degree, industry certification, and/or 4-year college transfer. *Infuse college culture through shared college/high-school activities and programs. **Goal 7: Academies provide comprehensive student support** *Individual student Master Schedule Plans. *Continuous academic and college advisement. *Tutoring.	*Consultants complete business survey/sector analysis to help identify each academy focus. *Schools begin change in structure and operation. *Schools complete compliance rubric for NMPED, which awards ECHS designations. *Principal training developed and delivered, with current NM ECHS leadership as mentors. *Evaluation measures 2,400 students in ECHS academies, 50% high need; Program serves 9,600 over 4 years. *Students receive college advisement & assessments for remediation. *Students enroll in courses aligned with program. *Students participate in work-based learning. *Programs developed to maximize college culture in academies. *The NMPED Technical Resource Center developed as an educator community and best practices resource.	*College culture replicated in high-schoolbased academy model. *Percentage of high-risk/high-need students in each ECHS mirrors that host district. *Principals trained to lead for their schools in linking education, the local economy, and workforce needs. *Students show: -Improved attitudes. -Increased attendance -Increased college & work aspirations. -Improved academic achievement, including math proficiency. -Increased completion of high-school and college coursework. -Improved clarity in career plans.	*Increased cost efficiencies of the ECHS academy model. *Increased completion of industry credentials, certificates, and degrees prior to and following high-school graduation. *Increased high-school graduation. *Increased college enrollment. *Improved employment outcomes for students going directly into the workforce from high school.

C. STRATEGY TO SCALE

In 2016, NMPED commissioned a study of central office, school, and community staff to document the primary reasons districts established ECHSs. These included: (1) the need to improve graduation rates; (2) the need to find high-school alternatives that work for disenfranchised students; (3) local communities' inabilities to attract new industry requiring skilled workers; and (4) a reduction in college enrollments due to financial and emotional challenges for students and their families. These issues have all been positively impacted with the NM ECHSs, setting the impetus for scale-up.

C.1 PREVIOUS BARRIERS TO SCALE

In the proposed *Opening Doors, Expanding Vistas* project, we will replicate the evidence-based ECHS model across New Mexico, building on rigorous studies of the program nationwide, the commitment of the Governor of New Mexico and the Public Education Department, and the experience of the current 21 ECHSs currently operational across the state.

We will add to the evidence base a sample that includes students from both more populous and more rural areas. We will determine the added efficiencies of implementing the ECHS model in home high schools rather than on college campuses or separated stand-alone buildings. Thus, the proposed project is making substantial modifications to *how the model will be implemented* while preserving the key components of ECHSs nationwide.

The expansion of the ECHS model in NM along with the proposed creation of new ECHSs in students' home high schools will focus on two areas of improvement: equity and cost.

C.2 INCREASED EFFICIENCY TO IMPROVE RESULTS AND PRODUCTIVITY

Existing ECHSs in New Mexico have been so positive for students that NMPED proposes to expand these opportunities for more students across the State. In scaling ECHSs as academies in existing high schools, NMPED is addressing two areas of improvement it identified: equity and cost. Currently, existing ECHSs require students to be transported to

college campuses. In NMPED's two-year study of its ECHSs (2018a), several principals stated that while ECHSs provided many advantages to high-need students, many who would also benefit were reluctant to leave their own high schools or decided to return and did not, therefore, complete the ECHS program. Locating ECHSs in academies in home high schools will cause less disruption for those students who may be reluctant to leave their friends and those who want to continue to participate in their own high school's afterschool programs and sports teams (often center points for small town social and cultural activities).

C.2.1 Cost Efficiencies

NMPED has also been concerned about the costs associated with opening new stand-alone schools or schools on college campuses. A 2004 study through Jobs for The Future (Webb, 2004) examined those costs for ECHSs implemented on college or university campuses, as charter ECHSs, and in the high school. Across all categories, costs were lowest for ECHSs implemented in high schools—lowest for pre-implementation, personnel costs, operating costs, capital costs, and college costs. While personnel costs and college course costs are generally equally shared across all ECHS locations, operating costs fall primarily to the school district (Webb, 2004) and result in savings when the ECHS locates in extant schools. By locating their ECHSs in high schools, NMPED will reduce costs of scaling their successful ECHS model.

Other cost efficiencies of the ECHS model, of course, accrue to students and their families. Students beginning college early are realizing significant cost savings in their college education—up to 60% as reported nationally and confirmed in New Mexico (JFF, 2012). And, with the ECHS model we are getting more *underserved* students into college and preparing them for the workplace at far lower costs.

C.2.2 New Mexico Leadership Improves Results

As noted in Section B 1, NMPED maintains high-quality standards and professionalism in its vetting of new ECHSs and its oversight to those schools. The State's primary tool for maintaining high-quality is the NMPED Designation Rubric (Appendix J) and its fidelity matrix based on the rubric—measuring to what extent schools meet high standards required of ECHSs.

NMPED's designation and compliance processes help schools to better envision the structured and connected education and workforce credentials that underlie: (1) the development of each ECHS; (2) the outreach and recruitment processes to assure equity for underserved student populations; (3) the partnerships; and (4) the financial sustainability planning.

Because New Mexico's ECHS requirements are clearly specified and leadership for establishing ECHSs is *filtered through the State,* NMPED provides an *ease of replication and scale-up* statewide.

C.2.3 Continuous Improvement for Scale-Up

Clearly, as programs increase in size, per-student costs decrease. Thus, NMPED will pay attention to the often small size of an existing rural school and the potential need for a critical mass of students required for cost effectiveness of ECHSs. These smaller, often rural, schools draw their student bodies from extensive distances. ECHSs in those schools may not achieve the same level of rigor, college exposure, and support services that students in current college-based ECHS programs receive. These considerations will be weighed against the measured distances in rural areas as part of the evaluation to determine any scale-up modifications for the ongoing statewide implementation design and additions to best practices derived from this grant.

D. MANAGEMENT PLAN AND RESOURCES

D.1 ADEQUACY OF MANAGEMENT PLAN

NMPED will direct the implementation of *Expanding Vistas*; the Rand Corporation will evaluate the project. The logic model and drafted objectives will be used to guide planning, implementation, communication and evaluation to ensure results-based performance. Depicting the logical relationship between proposed resources, activities, outputs and outcomes, these tools will offer timely and authentic feedback and information, charting actual progress versus targets, so the evaluator and stakeholders can make informed decisions related to program delivery for continuous improvement.

Utilizing existing organizational and operational structures, NMPED will ensure the goals and objectives they established can be achieved in the five-year grant timeline with efficacy, efficiency and sustainability.

NMPED will serve as the fiscal agent, coordinating efficiently with its districts and schools. NMPED will commit the personnel, resources and active participation required for success of this scale-up. The table on the following page illustrates the management plan to achieve the project objectives.

Implementation of 24 ECHS academies is projected for SY 2020-2021, which provides 9 months' planning from the notification of funding October 1, 2019. An additional four months planning will be included as NMPED, and its ECHS staff and consultants will begin working with interested districts and schools principals (May-August 2019), prior to notification of funding to help them begin to address operational details for the ECHS academies.

D.2 CAPACITY TO BRING TO SCALE

NMPED will put together a Project Advisory Team (PAT) to oversee all ECHS protocols and implementation. The PAT will comprise representatives from NMPED; the ECHS Principals Council; NM Higher Education Department (NMHED); and business. Led by the NMPED Director and NMPED Project Coordinator, PAT will meet monthly in Year 1 (and bi-monthly in subsequent years) to develop and implement effective strategies related to program implementation, evaluation, networking and publicity, replication, and sustainability. The PAT will further refine partners' roles and responsibilities, monitor implementation, respond to challenges, manage financial and other resources, support data collection and analysis, and promote the sustainability of ECHS academies in each participating school. The PAT will have the lead responsibility for executing the project according to the timeline and ensuring annual performance targets are met. Because of the large distances in NM, monthly meetings in Year 1 will be virtual.

D.2.1 Timeline (see following page)

			Year 1				Year 2				Year 3				Year 4	Year 5
Activity	**Responsibility**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1-4**	**Q1-4**
Grant awarded	USDOE	X														
Staff hiring, management meetings	NMPED	X	X			X	X				X	X			X	X
Recruitment of 24 or more schools	NMPED, Project Director	X	X			X	X									
State designation of ECHS academies	NMPED, Project Director	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Business surveys	Economic Industry Specialist-Contractual	X	X	X												
College partnership	NMPED, Project Director	X	X	X			X	X			X				X	X
Business partnership	NMPED, Project Director		X	X			X	X	X		X	X	X		X	X
Curricular development	Technical Resource Support Center		X	X	X	X	X	X								
Leadership training	Technical Resource Support Center			X	X	X	X		X		X		X		X	X
ECHS development	Technical Resource Support Center		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Recruitment of 8th grade students for C1	ECHS		X	X			X	X			X	X			X	X
Randomization	RAND			X	X		X	X								
C1 students enroll in ECHS	RAND				X											
C2 students enroll in ECHS	RAND							X								

D.2.2 Qualified Personnel

Dr. Elaine Perea is the Director of the NM Public Education Department. In addition to representing the State externally to professional and community constituencies, she directs and develops statewide college and career readiness initiatives. Dr. Perea also develops and administers annual budgets, performs periodic cost and productivity analyses, and negotiates high-end contracts. She retains the oversight responsibility for monitoring performance of all grants; and oversees the recruitment, training, supervision, and evaluations of NMPED staff.

Dr. Porter Cutrell, completed his Doctorate in Leadership, focused on ECHS implementations. He served as principal of the blue ribbon ECHS in Roswell, NM, and will serve as the **Project Coordinator** for the duration of the grant.

Dr. Joseph Goins is the President of NS4ed, an action-based research company that works closely with companies, schools, teachers, and educators alike to understand how to apply best practices and research into practice. He works with states and districts across the country helping them to identify the best solutions for student success. Since 2015, Dr. Goins has worked with the NMPED to support its ECHS initiative through research, surveys, development of an online platform, and principal development activities. He will continue in as an **ECHS Consultant** for NMPED for this grant.

Dr. Robert Hunter, CEO, oversees the Middle College High School, operated in partnership with the University of New Mexico-Gallup and serving a primarily Native American population. Dr. Hunter strongly supports the ECHS academy model, particularly for schools whose higher education partner is a distance from the school. Dr. Hunter will serve as a current **ECHS principal representative** on PAT.

The evaluation will be led by **Drs. Fatih Unlu (Principal Investigator)** and **Lindsay Daugherty (Co-Principal Investigator)**. Dr. Unlu is a Senior Economist at RAND and he has close to 15 years of experience with conducting rigorous evaluations of education programs. He has led the design and quantitative analyses of the longitudinal experimental evaluation of ECHSs in North Carolina and provided technical assistance to eight Investing in Innovation

grants. Dr. Daugherty is a Senior Policy Researcher at RAND with expertise on issues related to postsecondary access and success. Her work includes research on the impact and implementation of dual credit programs in Texas. Dr. Daugherty is currently leading several IES projects examining developmental education reforms, and has previously led an EIR evaluation.

Role and responsibilities for all key staff are shown on the following chart:

Key Personnel	
Dr. Elaine Perea, Project Director (PD)	Oversee all aspects of the project; facilitates team meetings;
Dr. Porter Cutrell, ECHS Academy Program Coordinator	Liaison with NMPED and ECHS academies; work with Dr. Perea to recruit and designate schools; provide technical assistance during school planning, development, and implementation; work with districts and schools to prepare recruitment materials and strategies to assure equity; coordinate and schedule principal training; coordinate external communications and prepares reports.
NMHED, NMPED, Program Coordinator	Oversees postsecondary partnerships, working with schools and partners.
ECHS principals and district directors	Develop materials for NMPED Designation Rubric; engage in and lead all planning, development, and implementation of the academies in their district/school; establish postsecondary and business partnerships and MOUs; develop ECHS in-school team to include principal, teachers, and school support staff; schedule weekly team meetings to assure successful implementation; schedule team meetings with college partner to identify college courses for each academy; meet with business partner to develop authentic assignments for each academy, and to schedule onsite work experiences; oversee recruitment with Project Coordinator; conduct orientation for enrolled students.
NMPED Director of Curriculum, TBD	Provide curriculum support to ECHS academies; work with NMPED and NMHED to coordinate dual-courses provided for each academy.
Joseph Goins, President, NS4ed, NMPED ECHS consultant	Develops and conducts business surveys and analyzes and reports results; develops new training materials for ECHS academy principals; co-facilitates training with ECHS principal council members; prepares training webinars; oversees the ECHS Technical Resource Center, including additions to the site.
Dr. Robert Hunter, ECHS Principal Council	Coordinates input and support from the 21 current ECHS leadership; co-facilitates with other principal members the ECHS academy principal training, coordinates ECHS academy coaching.
ECHS Academy Support Coordinator (one per school)	Work with school and college guidance counselors and advisors to plan student support pathways, including ongoing assessment of needs; coordinate all support services; review student Master Plans to assure documentation of services.
Drs. Fatih Unlu and Lindsay Daugherty, independent evaluators at RAND Corporation.	Conduct evaluation (as described in Section E).

D.2.3 Financial and Management Resources to Bring Project to Scale

The NMPED employs 13 professionals, working continuously with its schools and legislatures on behalf of children's education. Through the governor's initiative, support from ESSA, and the NMPED, financial and management resources will be made available to bring the project to scale in the future.

The professional development component of this grant will also be important in continuing to bring the project to scale. Developed by NS4ed and NMPED, and co-facilitated by ECHS principals in New Mexico, the professional development will include a "community of practice" for ECHSs, districts, colleges, and business partners that will facilitate knowledge-sharing within and across districts and regions. This community will also build upon New Mexico's current Technical Resource Center platform to disseminate resources that spur and support further expansion nationally.

D.3 CONTINUED SUPPORT

NMPED has received Letters of Support from each of the 9 *exemplary* ECHS in New Mexico to provide ongoing mentoring and coaching support for emerging ECHSs in the State. NMPED is committed to continue its support for the ECHS model across all of the State. NMPED supports equity, college persistence, and high rigorous standards to meet the needs to assure its students have the education and skills required for the business and industry sector of local communities and the State.

D.4 COSTS ARE REASONABLE

Webb (2004) in his study for JFF found the ECHS model with the lowest per pupil costs upon full implementation is the ECHS in the high school, while the model with the highest costs was the ECHS on a university campus. One of the perceived benefits of the ECHS is the power of place—that is, the influence on a students' senses of themselves as college-bound. The budget includes funds to bring students into contact with a college environment and build a college culture as part of the funds to each high school.

With the budget request for this mid-phase EIR grant at $7,979,398[2], and an estimated 9,600 students enrolled in the ECHS academies over four years of the grant (estimated 2,400 per year, the average student cost for the ECHS academies is $831. When an estimated $837,500 of in-kind contributions are added to this average per student cost, it rises to $918 per student. This cost is reasonable for this mid-phase scale-up and replication. As much of the cost is associated with start-up, sustainability costs become even more reasonable. These costs efficiencies do not include the cost savings of students and their families on college tuitions when students move from high school to college to further their education.

E. QUALITY OF THE EVALUATION

NMPED will contract with the RAND Corporation to conduct an independent evaluation that includes: (1) an in-depth implementation study that documents the extent to which key program components have been **implemented with fidelity** and facilitators of and barriers to **high fidelity implementation to inform replication;** and (2) a randomized controlled trial (RCT) that will use **valid and reliable outcome measures** and yield evidence that **meets WWC Evidence Standards without Reservations**. RAND will also examine the **mediators** through which the ECHS academies produce effects and provide NMPED with timely feedback to support continuous program improvement. The following research questions will guide the evaluation.

1. To what degree were the key components of ECHS Academies implemented with fidelity?
2. What are the facilitators of and barriers to successful implementation?
3. What is the impact of ECHS Academies on short-term and medium-term student outcomes?
4. To what extent the impact of ECHS Academies on medium-term student outcomes are mediated by impacts on short-term outcomes?

[2] The costs for evaluation have been removed from this total.

E.1. WELL-DESIGNED IMPACT STUDY THAT WILL MEET WWC STANDARDS WITHOUT RESERVATIONS

The study sample will include approximately 4,800 eligible applicants across the 24 ECHS Academies. Each academy will target recruitment of an average of 200 applicants who are eligible for enrollment in an ECHS according to state and local criteria. Approximately 2,400 applicants (an average of 100 per school) will be randomly selected to receive an offer to enroll in the ECHS Academies (treatment group) and the remaining students will not receive this offer and are expected to enroll in the home high school or other high schools (control group). Admission lotteries will be conducted by RAND using the lists of eligible applicants submitted by each academy in spring 2020. RAND will provide randomly ordered lists to schools that will be used to invite students to enroll in the ECHS Academies. The RCT will be adapted to prioritize the enrollment of students with specific characteristics (e.g., first generation, underrepresented minority, or low income). The sample of 4.800 students (treatment plus control groups) is sufficient to detect effects of 7 percentage points or 0.18 standard deviations.[3] These are in generally in line with expected effects of this program and the estimated effects of ECHSs in prior research (Edmunds et al., 2015; Berger et al., 2014a).

E.2 VALID AND RELIABLE PERFORMANCE DATA ON RELEVANT OUTCOMES

When ECHS Academies are implemented successfully, the logic model suggests impacts on a number of short-term outcome measures (mediators) and medium-term outcome measures.

[3] This calculation is based on using the HLM specified in Equation 1; statistical power=80%; significance-level=0.05; and school-level ICC of 0.08 and school and student-level R^2 values of 0.75 and 0.5 respectively (from Edmunds et al., 2017; 2019). For a binary outcome (e.g., passing a computer science course), the control group mean is assumed to be 0.75.

Planned outcome measures are described in Table E1[4] below. Data from the administrative sources (achievement, attendance, credit attainment) are standardized and will meet WWC's outcome standards (validity, reliability, not over-aligned with the intervention, and collected in the same manner for the treatment and control group; WWC, 2017). Survey items will be drawn from surveys used for a prior study of ECHSs with established reliability and validity (Edmunds et al., 2013). In addition, RAND will examine the cost and cost-effectiveness of the program using program and administrative data and the principles of the "ingredients method" that moves beyond simply analyzing budgets toward accurately capturing the varied and nuanced costs associated with program implementation (Levin & Belfield, 2015).

Table E1. Measures of Mediators and Medium-Term Outcome Measures

Short-term Outcome Measures (Mediators)	Data Sources	When Collected
Student participation in work-based learning	Student survey	Spring 2022
Student participation in college-related activities (e.g., visits to the college campus, college-related events held at the high school, use of college services, completion of college application/ preparation requirements, and interaction with college-going peers)	Student survey	Spring 2022
Student completion of a career plan	Student survey	Spring 2022
Student advisement: Self-reported number of interactions with advisors; satisfaction with advising experiences	Student survey	Spring 2022
Student participation in tutoring: Self-reported number of tutoring visits and satisfaction with tutoring visits	Student survey	Spring 2022
Medium-term Outcome Measures	Data Sources	
Improved student attitudes	Student survey	Spring 2022
College aspirations	Student survey	Spring 2022
Clarity of career plans	Student survey	Spring 2022
Annual attendance rate	State K-12 data	2020-21 thru 2022-23
Achievement: Successful completion of end-of-course exams in math, computer science, and ELA	State K-12 data	2020-21 thru 2022-23
College credits attempted and earned by the end of 9th, 10th, and 11th grade	Postsecondary data	2020-21 thru 2022-23

[4] The evaluation will be unable to examine long term outcomes such high school graduation and enrollment in postsecondary institutions given the five-year length of the grant.

E.3 QUANTITATIVE ANALYSIS METHODS FOR THE IMPACT STUDY

The impact of the ECHS Academies on outcomes will be estimated using hierarchical linear models that control for lottery fixed effects, clustering of students within schools and academies, and student baseline characteristics; consistent with the WWC standards. We expect the attrition rates be well within WWC's accepted thresholds and the estimated effects meet WWC Standards Without Reservations[5]. The prototypical regression model is as follows:

(1) $Y_{ij} = \beta_0 + \beta_1 Trt_{ij} + \boldsymbol{X_{ij}}'\boldsymbol{\beta_2} + \mu_j + \varepsilon_{ij}$

where *i* denotes students; *j* denotes clusters (ECHS academy or regular high school or other sub-clusters within schools defined based on the outcome); Y_{ij} is the outcome; Trt_{ij} is the original random assignment status of students; $\boldsymbol{X_{ij}}$ is a vector of student baseline covariates (e.g., demographics; 8th grade attendance, ELA, math test scores; and indicator variables for the specific lotteries that students participated); μ_j is the cluster-level error term; and ε_{ij} is the student-level residual. Mediation analyses will be conducted using structural equation modeling, which will decompose program effects into direct and indirect components (the latter being realized through the mediators; Baron & Kenny, 1986; Imai, Keele, & Yamamoto, 2010).

E.4 IMPLEMENTATION STUDY THAT ARTICULATES KEY COMPONENTS AND MEASURABLE THRESHOLDS FOR ACCEPTABLE IMPLEMENTATION

Table E.2 provides the fidelity measures for the 7 key components in the logic model in Section B of this proposal. The primary data used to calculate these measures will come from NMPED's existing designation process, whereby ECHSs are required to submit a package of materials on the design and implementation of the ECHS, including: (1) MOUs with colleges and businesses; (2) recruitment materials; (3) Next Step Plans, which describe the pathways and how they lead to credentials; (4) a Master Schedule and course catalog to describe coursework

[5] Administrative databases will allow us to follow students even if they leave the original schools as long as they stay in the state. For survey-based measures, we allocated sufficient resources to frequently follow up with non-responders until we reach our target response rate of 80%.

embedded in the pathways; (5) a staffing plan; and (6) data on students served.[6] All study schools will be required to submit their materials for designation and fidelity analysis by November 2020. The rubric does not currently cover key student services and use of core instructional practices, so new measures have been created to supplement the current rubric measures. RAND will also draw from administrative data to validate fidelity for the student representation measure, and use principal training and coaching records collected by NMPED to assess fidelity for this measure.

Table E2. Key Components of ECHS Academies and Fidelity Measures

Key Components	Sub-Components	Fidelity Data	Fidelity Measures/Thresholds
Purposeful design (Values=0-3, threshold=3)	ECHSs are built into existing high schools as academies	Description of school management	Description of ECHS Academy organization describes an ECHS situated within an existing high school (0/1)
	Pathways reflect high-demand careers	Results of business analysis	Business survey/sector analysis completed (0/1) Pathways aligned with business analysis (0/1)
Partnerships (Values=0-2, threshold=2)	Partnership with college(s)	MOU with college(s)	Written agreement with at least one college partner(s) for each pathway offered. (0/1)
	Partnership with businesses	MOU with businesses	Written agreement with at least one workforce partner(s) for each pathway offered. (0/1)
Professionalism and high quality standards (Values=0-3, threshold=3)	NMPED vetting and designation process	Completed rubric	Record of participation in the designation process (0/1)
	Principal leadership training/coaching	Principal training records	Principal participated in at least 80% of the required hours of training and ongoing coaching (0/1)
	Appropriate quals for teachers	Staffing plan,	Staffing model and plan for ensuring licensure and qualifications provided (0/1)

[6] Using a rubric, the state grants each ECHS a designation of "Conditional," "Designated" or "Exemplary." The measures and thresholds drawn from the rubric for acceptable implementation are those associated with a "Designated" or "Exemplary" rating.

Key Components	Sub-Components	Fidelity Data	Fidelity Measures/Thresholds
Populations served (Values=0-8, threshold=6)	Admissions preferences for low-income students	Admissions process documentation	Use of performance-blind, open-access lottery to enroll students, with low-income students encouraged to apply and obtain admissions. (0/1)
	Targeted recruiting of for low-income students	Recruitment policy documentation	Focused recruiting efforts encourage applicants from underrepresented populations to enroll in ECHS (0/1)
	Population of academies reflect district population	Administrative data	Number of high-risk groups (e.g., econ dis) for which percentage in ECHS is within 5 percentage points of the district percentage (0-6)
Powerful teaching and learning (Values=0-6, threshold=6)	Accelerated math and computer learning	Master Schedule	Evidence that core math and computer learning courses have been shortened to one semester to allow for accelerated progression. (0/1)
	Career-focused project-based learning	Master Schedule and Curriculum Samples	Indicates that courses are designed to explicitly build in project-based learning related to the pathway (0/1)
	Curricula aligned with state standards	Master Schedule, Next Step Plan	Indicates STARS course names and college course IDs for all courses (0/1); Demonstrates curriculum alignment with postsecondary partners (0/1)
	Work-based learning experiences	MOU with business partner	Describes meaningful work-based learning experiences (0/1); Describes how work-based learning experiences will be tracked (0/1)
College and Career Readiness and Progress (Value=0-3, threshold=3)	Clear articulation of credits in pathway to a workforce credential	Next Step Plan, Master Schedule	Demonstrates vertical alignment of secondary and postsecondary courses to credential (0/1)
	Completion of a credential and high school graduation	Next Step Plan, Master Schedule	Demonstrates how students will obtain a credential while fulfilling NM grad reqs in four years (0/1)
	Shared college/high-school activities and programs	MOU with college(s)	Describes plan for how the school and college partner will coordinate on required activities (0/1)
Comprehensive Student Supports (Value=0/3, threshold=3)	Individual career plans	Next Step Plan	Outlines a clear process for students to complete individual career plan by the end of 9th grade. (0/1)
	Continuous advisement	Plan for Student Supports	Describes a plan for ensuring that students engage in continuous advising opportunities (0/1)
	Tutoring	Plan for Student Supports, MOU	Demonstrates how students will have access to advising on the HS and college campuses (0/1)

Fidelity will be analyzed during the first year of operation (Year 2) to assess whether schools met the threshold for acceptable implementation. RAND researchers will use the rubric measures from Table E.2 to construct fidelity values. RAND raters will be trained using prior applications and NMPED ratings on the rubric to assess inter-rater reliability and calibration to the state's standards for acceptable evidence to determine each measure has been met. RAND will also obtain principal training and coaching records and administrative data on enrollees at the end of the first year and use this data to calculate the additional fidelity metrics.

E.5 IMPLEMENTATION DATA AND ANALYSIS TO INFORM EFFECTIVE STRATEGIES FOR REPLICATION AND TESTING IN OTHER SETTINGS

To ensure successful replication of the ECHS Academy model, it is important to clearly describe how ECHS Academies were rolled out, and to assess facilitators and barriers to successful implementation. To assess these aspects of implementation, RAND will conduct site visits with a sample of 8 colleges in the first and second years of implementation. These one-day site visits will include interviews with the principal and other administrators, focus groups with teachers, and interviews or focus groups with key support staff. Qualitative data from site visits will be coded using NVivo and a systematic three-step process often referred to as grounded-theory analysis, an iterative process in which the analyst becomes increasingly "grounded" in the data and develops increasingly rich concepts and models, rather than looking for patterns that support or test a preexisting hypothesis. Student surveys will also provide information on student perceptions of the implementation of ECHS Academies.

E.6 TIMELINE

The following chart presents the evaluation timeline.

		2020				2021				2022				2023				2024		
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Recruit students	X	X	X																	
Randomization			X																	
Instruments and measures finalized			X	X																
Schools submit program documents				X	X															
Site visits					X				X											
Student survey fielded											X									
Administrative data transferred													X				X			
Implementation analysis					X	X	X	X	X	X	X	X								
Impact analysis												X	X	X	X	X	X	X		
Dissemination												B	R		B				B	R

Notes: B represents a briefing, R represents a report.

Students will be recruited and randomized in the first 9 months of the study, and students will enroll in the ECHS Academies in fall 2020. Schools will submit their documentation for the designation process and fidelity analysis in fall 2020, and site visits will be conducted in fall 2020 and fall 2021, the first two years of enrollment for the study cohorts. The student survey will be fielded in spring 2022. Implementation analysis will take place between fall of 2020 and summer 2022, with results presented to NMPED in late 2022 through an internal briefing and an interim report. RAND will secure statewide administrative data in fall 2022 and fall 2023, and will conduct analysis of impacts and contrasts in mediators between summer 2022 and early 2024. Interim impact findings will be reported through an internal briefing in spring 2023, and a final briefing and public report will be produced in the final six months of the grant.

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