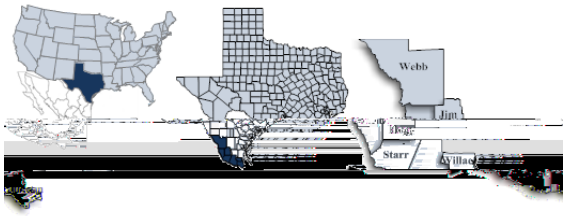
Region One Education Service Center

i3 Development - *Project* ***HEAL²***

A. Significance

(1) The magnitude or severity of the problem to be addressed by the proposed project…



Introduction: In response to the **Absolute Priority 1** – Promoting Diversity, the **Invitational Priority** – Improving student outcomes, and the **Competitive Priority** – Novice, Region One Education Service Center (Region One), a Local Education Agency (LEA), in partnership with Doctor's Hospital at Renaissance (DHR), a renowned medical institution, South Texas College (STC), a highly accredited institution of higher education, and three large south Texas established school districts (LEAs): Pharr-San Juan-Alamo (PSJA) Independent School District (ISD), La Joya ISD and South Texas ISD, will scale-up its innovative – *Project **Health Education and Leadership for ALL (HEAL²)*** to service **200-300** students in **9th** grade – **1st** Year of College over the three years.

Target Area: Region One, located in the remote tip of South Texas along the Texas-Mexico border, chartered by the State in 1965, will serve as the lead and fiscal agent. Region One has developed a reputation for excellence in education and training services, particularly in providing resources, expertise and high-quality services to school districts in meeting the needs of underserved, isolated, at-risk, low-income, minority students and their parents.[1] The target geographic area along the Texas-Mexico border encompasses **seven economically depressed** counties with over **1.5 million** people of which **97%** are Hispanic, and nearly **69%** do not speak English at home.[2] Also, **52%** of the region's working age population does not have a high school diploma; only **13%** of the labor force has a bachelor's degree or higher; and **41%** of the population is under the age of **18**. For decades, this area has experienced the nation's lowest education levels and English language proficiency, highest dropout rates and severest hardships with the highest poverty and unemployment rates in the nation **55%** and **12.4%,** respectively.[3]

Appendix 1 – End Notes/Cited References

The **mission** of Region One is **"Students First."** Region One serves **47** school districts that include **11** rural, **10** charter institutions, **613** K-12 campuses, **38,746** educators and over **417,490** students, of which **407,320** are Hispanic, **354,904** are low- income, **145,652** are English Learners (ELs), **25,808** are migrant and **31,322** are students with disabilities.[4] The target population of Region One remains one of the most unique populations in Texas, leading in the number of Hispanics, English Learners (ELs) and low-income populations. Schools in the Region One area face many challenging circumstances surrounding their schools such as high poverty, low-student achievement, poor nutrition, high illiteracy, etc. (Appendix 2 – Region One/PEIMS).

Target Schools: The student population in PSJA, La Joya and South Texas ISD is mainly Hispanic with a high percentage of low-income youth, who are less likely to graduate from high school or go to college. The total student body of the three LEAs consists of approximately **75,000** youth of which **99.6%** are Hispanic, **89.14%** are economically disadvantaged (free/reduced lunch), **41.50%** are limited English proficient, **75.3%** are at-risk, **19.3%** are English Learners, and **15.3%** are students with disabilities.[5] Overall, Region One serves *economically distressed schools and students categorized as the **hardest to serve in Texas***.

Nursing Workforce: In south Texas, missed opportunities to promote diversity have historically occurred in the health – related field of nursing. According the National Council of State Boards of Nursing (2013), nurses from minority backgrounds represent **17%** of the (RN) workforce. Considering racial/ethnic backgrounds, the nursing population is comprised of **83%** White, **6%** African American, **6%** Asian, **3%** Hispanic, etc.[6] During the past several years, jobs in **Health, and STEM** have blossomed across the target area, especially along the border.[7] These high-growth industries provide better-paying jobs and increased the demand for a better-educated and skilled workforce.[8] The health industry is one of the largest employers in south Texas.[9]

South Texas is home to **24** for-profit hospitals, **9** non-profit hospitals and **7** public hospitals. In a December 2015 survey conducted by South Texas Hospital (Renaissance) Association (lead partner), these hospitals reported 350 **unfilled** registered nursing positions, 65 **unfilled** radiology technologist positions, and 45 **unfilled** licensed practical nurse positions, not to mention the vital need to recruit qualified minority bilingual individuals to occupy these jobs. To help address this initiative, in March 2013, Texas Legislature passed a measure creating a new medical mega-university (UTRGV) with over **30,000** students in the area which further promotes the regional growth of health and STEM fields (Appendix 3 – Announcement).[10] This legislative action has transformed south Texas into a **major regional health education hub**. Many of these "middle skill" healthcare jobs require very specific academic credentials and certifications. For local school districts to succeed in filling the health-related training pipeline, they will need to adopt cutting-edge, innovative Career Technical Education (CTE) programs such as *Project **HEAL²***.

*Project **HEAL²*** was developed to **promote and resolve diversity** by addressing the magnitude of a historic problem in remote south Texas schools. To ensure the target area is successful in preparing students for the upcoming boom in healthcare jobs/careers, innovative measures such *Project **HEAL²*** must be taken to assist every student, beginning in the 9th grade, to develop individualized college and career pathways that include: career objectives, a program of study, degree or certificate objectives, and work-linked learning (Appendix 4-ANA Resource).

(2) Project involves the development of promising new strategies that build on strategies….

Given the above-mentioned challenges, the regional leaders/collaborative partnership formed to take these challenges and turn them into opportunities and piloted (one year) an innovative project that led to the *Project **HEAL²*** model. Over the past year, *the program* is ongoing in one large LEA (PSJA) as a pilot and thus, with the support of i3 resources can be initiated in two additional prominent LEAs (La Joya and South Texas) (Appendix 5 – Program Publication).

Why Health Education? Findings from a study entitled, *Training the Future: Minority student's participation in health science research*, (University of California, 2007), have informed numerous efforts to orient students at an early stage, particularly under-represented minorities, toward Health-integrated/Nursing careers.[11] The study focused on setting high expectations and supporting high school students with innovative programs to ensure their success in the rigorous Health-integrated/Nursing curriculum. Aligned to this research, a demonstration pilot effort occurred with significant results. This effort has been widely acknowledged, and was submitted (*Project **HEAL²***) to the Texas Board of Nursing for approval (Appendix 6). The initial results demonstrated that students not only succeeded, but thrived. From the initial cohort of 22 students met the program pre-requisites on the Associates of Nursing (ADN) and were enrolled in the full ADN coursework. Their cumulative GPAs were over 3.0. The next cohort is now moving through the program and thus, the pilot has grown from just 25 students in 2014 to 136 students in 2016, all graduating with Associate's credentials.

Health-integrated (STEM-design) Nursing: *Project **HEAL²*** brings forward promising new strategies that build upon existing strategies, has been widely acknowledged across the Region and State (Appendix 7 – Nursing Pilot Program). This model has developed unique and promising alternatives to educate students from minority and disadvantaged backgrounds to complete high school and work toward the achievement of post-secondary successful outcomes.

Building on Promising Strategies: Building upon lessons learned from existing implementation of the pilot, Region One, and its partners STC, DHR, and three LEAs will further develop *Project **HEAL²*** to serve a diverse population of **20-25** students in **9th - 12th** grade from **three** (**3**) LEAs **nine (9)** high schools (75 annually) over a three-year period to impact a total of **225-300** students. A project team comprised of the Project Director, a Lead Health Coach, and STC

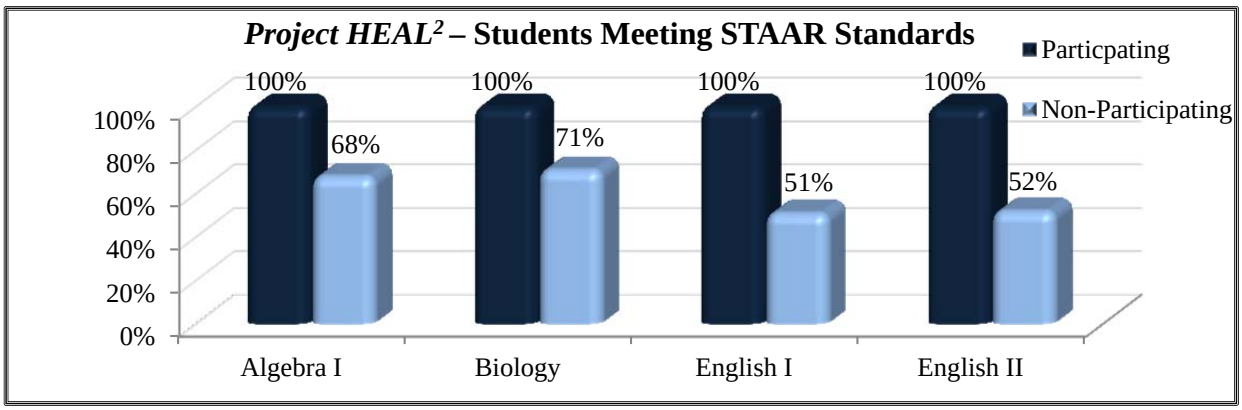
Instructional Nurses along with support from DHR and related organizations (described later) will lead *Project* ***HEAL²*** innovative efforts. STC will train and collaborate with staff, administrators, and teachers in developing a district-wide blueprint for implementing state board certified, Health/ Nursing curricula proven to engage students in hands-on, real-world, 21st century workforce projects. DHR will coordinate hospital-based learning experiences and clinical rotations with experiential, PBL strategies. Students enrolled in high school will be intentionally selected through an application process methodically selected for the project and have a cross-section of students, including low-income, minority, English Learners, etc.

Project ***HEAL²*** will integrate core curriculum inclusive of Mathematics, Science, and Technology disciplines in a real-world setting with project- and problem-based learning (PBL) strategies in Health-integrated (STEM-design) related learning. This will offer educators collaboration, the tools and professional development opportunities necessary to implement outcomes-based, Health Science-integrated STEM lessons in an authentic hospital setting as well as infuse back into the classrooms. This approach will enhance student academic engagement, achievement and college/career readiness by implementing the following **research strategies:**

- Utilize an instructional approach of **Project-and Problem-Based Learning (PBL)** with a strong focus upon Math, Health-Science, as well as engage a diverse group of learners in a program of study that develops skills for success in Health-related industry;[12]
- Incorporate **instruction and assessment** in core subject pedagogy with Health-integrated Nursing (in hospital and clinically based) **student learning opportunities** that enable students to master content while developing 21st century skills (Wood-Johnson, 2014);[13]
- Offer **professional development** and **technical assistance** to educators such as, **Professional Learning Communities (PLCs)** collaboration (internal/external) integrated with Health-Nursing/medical skills strategies within core instructional practices (Hurtado, 2012);[14] and;
- Offer students **rigorous** (Math/Science/Technology) **coursework, mentoring, counseling, and enrichment activities** (Health/Nursing events, college visits, community service learning, etc.) that foster real world learning and college and career readiness (Yeo, 2013).[15]

Lead Capacity: The pilot cohort of students have completed all college-level prerequisites needed to successfully complete this high need, high skill, extremely competitive STC nursing

program. These students will graduate from both high school and college, ready to enter the workforce as a certified nurse. Students in the program conducted research in lab settings, worked in teams, and interacted with nursing faculty in and out of the classroom. Students assisted faculty with research projects which guide the future of the profession, and observed the health industry dynamics first-hand. Through research, students took samples of bacteria and fungi and analyzed the impact of organisms on specimen and studied lab-results and blood-work in scientific laboratory setting. Participating students outperformed non-participating peers in meeting State of Texas Assessment of Academic Readiness (STAAR) standards in Algebra I, English I and II and Biology. The 2014-2015 performance of students meeting STAAR standards in Algebra I was **100%,** compared to non- participating peers at **68%.** The performance of students meeting STAAR standards in English I and II was **100%** and **100%,** respectively compared to non- participating peers at **51%** and **52%**. Lastly, the performance of students meeting STAAR standards in Biology was **100%,** compared to non-participating peers at **71%.** Overall, as a result of *Project* ***HEAL²*** – PSJA ISD during year one significantly exceled in student outcomes as depicted below. See also Appendix 8 – TEA 2015 Accountability.



Sources: Texas Education Agency: Texas Academic Performance Report (TAPR) 2014-2015

In addition, a recent survey, conducted with participating students (N=25) indicated that participation in the pilot enhanced their problem-solving skills (**83%**), core content in Math and

Science knowledge (**85%**) and positive attitude towards postsecondary education (**92%**).

Evidence of Promise: Gathered from research, (Stevens, 2014), *Project **HEAL²*** will focus on closing the social diversity gap (Absolute Priority 1) for first generation (minority, low-income, English Learners and students with disabilities) college students, and enhancing the college experience for youth from low – socioeconomic and diverse backgrounds.[16] Health-integrated (STEM-design) Nursing programs that offer dual-enrollment and increased opportunity for diverse learners will do just that, and are supported by research entities such as the American Association of Community Colleges (AACC) – (Appendix 9).[17] Karp, et. al., (2007), examined the relationship between participation in dual enrollment -and-academics/post-secondary outcomes for diverse populations. The research was conducted across two states Florida and New York in order to examine how a student's involvement in the program during the 9th to 12th grade years related to his/her academic achievement and post-secondary outcomes. Researchers compared outcomes of students involved in the programs that offered simultaneous high school and college credit course-work and the general population not involved in the same activities. The research found that the treatment population of students was more likely to graduate from high school, enroll in, earn a higher GPA, and graduate from college than students not involved.[18] Findings from Struhl, and Vargas (2012),[19] also indicate dual enrollment students are significantly more likely to attend college, persist in college, and complete an Associate's degree. Supported by research, Region One will systemically improve the preparation, capacity building, and development of *Project **HEAL²*** (Appendix D – Evidence).

Hypothesis: The integration of Health-integrated (STEM) Nursing in **9th** grade through **1st Year of College** will not only lead to the development of a culturally diverse Nursing Workforce pipeline (high school-to-college-to-career) of subgroups (Hispanic, minority, low-income,

students with disabilities, etc.) but **will** substantially improve students' interest, engagement, academic achievement levels, graduation rates and post-secondary outcomes. To validate *Project* ***HEAL²'s*** effectiveness over the past year please see Appendix C & 10 – Eligibility/Case Study.

(3) The extent to which the proposed project addresses the absolute priority....

According to an April 2009 report prepared by the National Advisory Council on Nurse Practice, a culturally diverse nursing workforce is essential to meeting the health care needs of the nation.[20] "Today's nurses, have too little resemblance to the diverse populations they serve." In response to the **Absolute Priority 1** and **Invitational Priority**, Region One *Project* ***HEAL²*** will focus upon Health infused in STEM which provides a strong solution for eligible high school students to enroll in college courses while attending high school. This approach will not only address ***promoting diversity*** of inclusion of minority students in the health/STEM industry but also address the shortage of nurses in the health-field. Through *Project* ***HEAL²*** practitioners will embrace principles of the health and science world as a means to invigorate innovation in the educational paradigm. This allows for high school-to-college-to-career to occur seamlessly when all work in unison, giving students a meaningful and relevant connection to lifelong goals.

Region One and partners recognize a strong connection between a culturally diverse nursing workforce and the ability to provide quality, culturally competent high school to college programs in the nursing profession. *Project* ***HEAL²*** will attract students in a high school and college setting from underrepresented groups in nursing – specifically individuals from low-income and minority backgrounds which is a high priority for the nursing profession.[21] *Project* ***HEAL²*** recognizes the need to influence young learners from minority backgrounds to pursue higher levels of nursing education beyond the entry level, creating not only a more diverse nursing pipeline but one that is highly skilled. The collaboration and aforementioned strong partnerships, implemented the following steps to enhance diversity in nursing education: 1) In

2013, initiated the dialogue to foster the aforementioned pilot program to enhance the number of minority nurses completing an Associate's degree (Appendix 11 – Press Conference); 2) successfully recruited and retained an initial diverse student cohort; 3) implemented with fidelity strategies that can be used by others as a comprehensive approach of developing a pipeline of diverse students to the nursing profession; 4) created student tool kits to guide the process of successfully gaining entry and matriculating through nursing Associate's degree programs; and 5) formed an expert advisory council, identified expectations for student nurses completing high school/college degree programs and created resources needed to develop nursing expertise in a culturally competent growing profession. This work directly aligns to the required priorities. *Project **HEAL²*** is driven by a keen focus on advancing strategies to increase the number of healthcare providers from a diverse population and is designed to alleviate a drastic nursing shortage by expanding the pipeline of students from minority backgrounds.

B. Quality of Project Design

(1) The goals, objectives, and outcomes are clearly specified and measurable….

The goal is to increase the Health-integrated (STEM-design) Nursing competencies of low-income and under-represented students, specifically students from minority backgrounds through creativity, innovation, and engagement activities that promote diversity in education by creating a culturally diverse Nursing Workforce pipeline prepared for the 21st century and beyond.

Objective 1: Increase the academic performance and preparation for Associate's Degree Nursing/postsecondary education of *underrepresented students, specifically individuals from minority, Hispanic, low-income and student with disability backgrounds.*
1.1 Each year, increase by **10%** and **12%** over baseline the number of students (9th – 12th grade) passing the state assessment in Reading and Math, respectively, as measured by state assessment. **1.2** Each year, increase by **12%** over baseline the number of students (9th – 12th grade) passing the state standard test in Science, as measured by STAAR assessment. **1.3** Each year, increase by **30%** over baseline the number of students who have completed two years of math beyond Algebra I by the 12th grade, as measured by state assessment (TAPR) data.
Objective 2: Increase the rate of high school graduation including awareness, readiness, and participation in postsecondary education of students.

2.1 Each year, **90%** of high school students will graduate on-time, as defined by the Texas accountability system (schools are currently at 87**%)**. **2.2** Each year, **30%** of students (9th – 12th grade) will receive credit in an Advanced Placement (AP) Math or Science course as measured by state course (TAPR) data. **2.3** Each year, **50%** of students (9th – 12th grade) will receive college credit (e.g. ENGL 1301, BIOL 2401 – Anatomy and Physiology 1, Physiology 2, and RNSG 1209 – Introduction to Nursing, etc.) as measured annually by state course (STC) data. **2.4** Each year, **80%** of students will complete the Texas Success Initiative (TSI), SAT or ACT by the end of 11th grade, as measured by college assessment instrument.
Objective 3: Increase the culturally diverse Nursing Workforce pipeline from high school to college to a career by creating an effective and efficient Nursing Program.
3.1 Each year, **70%** of teachers receiving professional development in Health/Medical strategies (pedagogy), will report improvement in incorporating concepts in core content areas, increasing by **8** percentage points annually or until **95%** show this improvement, as measured by observation rubric and self-assessment tools. **3.2** Each year, **80%** of teachers will report using student data to inform instruction, increasing by **5** percentage points annually or until **90%** report such use, as measured by self-assessment; **3.3** Each year, **75%** of students (9th – 12th grade) will increase their competencies in Health or Medical disciplines, increasing by **5** percentage points annually or until **90%** show such an increase, as measured by validated pre-post instrument. **3.4** Each year, **80%** of graduates will enroll into college pursuing a Nursing, Health or Medical career, increasing by **5** percentage points annually or until **90%** of graduates show such an increase, as measured by Texas graduate accountability system and college enrollment data. **3.5** Each year, **70%** of graduates enrolled into college pursuing a Nursing, Health or Medical career will be placed in College-level Math and **72%** in College-level English without need of remediation courses, increasing by **5** percentage points annually or until **85%** of graduates are enrolled in college level-courses, as measured by Texas college enrollment data. **3.6** By end of Year 3, ***Project HEAL²*** will be scaled-up to **2** more high schools, adding **1** unit per school (**2** units) or until **100** additional students are in the project, as measured by a pre/post tool.

Project- and Problem-based learning (PBL): PBL is grounded in learning theories including situated learning, meta-cognition, self-directed and cooperative learning (Kwan, 2009).[22] PBL will be used by teachers to teach content and build vital 21st century cognitive and non-cognitive skills (such as communication, inquiry, critical thinking, etc.) essential to student success as they progress through high school and into college and careers. Using PBL *Project **HEAL²*** will: 1) provide ongoing engagement of students integrated health/nursing programs in a high school to college; 2) link PBL with health/nursing course content connected to the Texas STAAR-EOC standards; 3) integrate PBL units across all courses to enable students to explore Health-related issues with real-world experiences; 4) connect PBL and digital course content to technology-

enabled instructional practices to impact achievement and engagement of students (Barron, B., & Darling-Hammond, L., 2008);[23] and 5) enable teachers to be facilitators of knowledge via substantive improvements in the way curricula, pedagogy, and assessments are conceptualized and implemented (Asghar et al., 2012).[24] Students will create digital portfolios to document their learning, connect flexibly with peers through learning technologies, and participate in performance-based assessments. It is anticipated the above activities will raise long-term retention of content, help students perform as well or better than traditional learners in high-stakes tests, improve problem-solving and attitudes towards learning (Walker & Leary, 2009).[25] A Lead Health Coach will work with teachers to extend the use of high-quality PBL instruction in academic classes to strengthen Health/related STEM disciplines in curricula. Instruction will be differentiated to meet the range of diverse students' (9-12) needs within each classroom. The process will transition from a school-based setting to a clinical-hospital based setting.

Student Learning: *Project **HEAL²*** will involve a collaborative team-based practice within an interdisciplinary health service environment. In addition to the school-based setting, critical learning from a **clinical-hospital based setting** is an integral nursing component of *Project **HEAL²***. Research from the Journal of Professional nursing suggests that collaborative professional partnerships can address complex needs in health care industry and emphasize accountability for health service to promote diversity.[26] Region One and STC will train and collaborate with staff, administrators, and teachers on the implementation of a (STC) blueprint for a Health/ Nursing curricula proven to engage students in hands-on, real-world 21st century skills. DHR will coordinate student hospital-based learning experiences and clinical rotations with experiential, project-based learning strategies. Additionally, DHR in concert with STC staff will provide academic support with nursing and hospital staff to help students succeed in their

coursework and understand the application of didactic knowledge. DHR will also incorporate a simulation skills laboratory where students engage in real-life hands on learning in an authentic hospital environment. The admission assessment exam is what sets the stage to becoming a successful health professional. STC will work with LEAs to ensure students are prepared to pass the Admission Assessment Exam. Students will be afforded opportunities to practice topics typically found on admission exams, including math, reading, vocabulary, grammar, biology, chemistry, physiology, and physics. Students will be assisted in identifying areas of weakness so they can focus in-and out- of school study time. Personalized, onsite support will be provided by a Health Coach and STC trained nurse educators. Extended assistance as needed will be customized to students needs and focus on the topic areas where students need the most help. Students will also be provided access to nurse mentors who give insight into the roles of the nurse as a member of the health care team. School-Based (DHR) Instructional Nurses will follow students through first year of college and serve as a full-time faculty. DHR will serve as a site for hands-on clinical rotations (Appendix 12-Clinical Rotation).

Professional Development: Professional development (PD) and technical assistance will be provided to participating staff, teachers and educators. Professional growth of all *Project* ***HEAL²*** educators will focus on analyzing, reflecting upon, and improving their teaching practice through **professional learning communities (PLCs),** aided by the Lead Coach along with the following external support. Participants will participate in 35 hours of PD annually (Appendix 13 - PD list).

Table 1. Partner	Roles in Professional Development – Appendix 14 – Roles
SureScore	College2Careers capacity building, coaching, support and online training
Texas Instruments	Train educators and integrate Health/STEM concepts into math curricula
ACT	Guide and train educators on cognitive and non-cognitive skills
College Board	Curriculum alignment, pedagogy, capacity building training and coaching

Project ***HEAL²*** is based on an ongoing capacity building approach that aims at empowerment through knowledge and skills acquisition. Topics will include, but not be limited to: project-and

problem-based learning, high yield strategies, culturally relevant and responsive education, support for English Learners, assessment tools, Texas Essential Knowledge and Skills (TEKS), STAAR standards, and data driven decision-making. Offering educators the tools and professional development opportunities to implement outcomes-based, Health Nursing (STEM) lessons in their classrooms for enhancing student academic engagement, achievement and college/career readiness will be a paramount to *Project **HEAL²***. This approach has proven to be effective in teacher training and building capacity (Barron & Darling-Hammond, 2008)**.**[2]

Rigorous Coursework: To increase the number of students not only graduating from high school on-time but also working toward earning an Associate's degree, *Project **HEAL²*** will increase students' **access to rigorous courses** in **math, and science** through the rigorous Foundation High School (FHS) graduation programs with multiple endorsements and performance acknowledgments (Appendix 15 – FHS). This will begin with the development of a **Pathways of Study (POS)** that is clearly articulated to include a personalized sequence of instructional content and skills development for each student that will lead towards mastery of graduation requirements and college-and career-readiness standards and endorsement (prior to graduation). The POS will follow each student through the project period and be reviewed every six months by a counselor and project staff to assess progress. Each year, students will be concurrently taking coursework toward their Associate's Degree in Nursing (Appendix 16 – Degree Plan) and will be prompted to select rigorous courses aligned to health related college/ career pathways. Year-round emphasis will be on increasing students' access to challenging courses in math, and science through enrollment in pre-Advanced Placement, AP, and dual enrollment courses linked to both academic and Career Technical Education (CTE) courses.

Extended Learning: Participation in PBL enrichment activities, Summer Bridge, internships,

job shadowing, educational study trips, college camps and workshops will allow students to be critical thinkers, develop both cognitive and non-cognitive aptitudes including study and organization skills, and be college-ready through success in advanced courses (Roderick, Nagaoka, & Coca, 2009).[27] These customized activities will supplement core curriculum as well as provide college/career exploration opportunities for students at the appropriate level. Local employers will contribute substantial resources by serving as advisors and providing work-based learning opportunities, advising and mentoring, exposing students to careers, and encouraging them to pursue postsecondary education. Students and parents will also hear from professors, counselors and businesses leaders about different colleges (Appendix 17 – College Night). Additionally, outreach efforts will be made in 9th and 10th grade to include a medical careers conference and information sessions for students and parents.

(2) Adequacy of the management plan to achieve the objectives on time and within budget….

The above activities will be implemented effectively by executing a management plan that utilizes established organizational and operational structures. This will ensure objectives are met.

Management Plan: Region One serving as the fiscal agent, will house *Project **HEAL²*** in the Division of Curriculum and Instruction. Through this division, Region One and partner schools pledges their commitment, facilities, personnel, resources and active participation to ensure *Project **HEAL²*** is an integral part of its daily operations (Appendix G – Letters of Support). As a recipient of multiple federal grants (e.g. GEAR UP $7 million annually) Region One has administrative, programmatic, fiscal, management and evaluation systems in place that meet the highest standards of accountability. Region One will use this experience and knowledge in the management of the project. These administrative systems use the latest organizational managing software (e.g. GrantsMaximizer), communication systems, fiscal appraisals (supplement not supplant), effective staffing plans, customer feedback mechanisms, techniques for organizational

control and continuous quality improvement. Program control utilizes current technology for participant tracking, (Appendix 18 – Youth Connection), monitoring progress, and sharing of resources, assessing accountability, management of information, evaluation, reporting and oversight. Region One will use this management experience for *Project **HEAL²*** to ensure the delivery of effective, quality, and culturally relevant services. **Coordination:** To provide guidance and oversight in implementing *Project **HEAL²*** effectively, an **Advisory Council** (**AC**) will be formed. A representative from each partner, Project Director, principals, counselor, advisors, teachers, evaluators, parents, and community representatives will serve on the **AC**. Facilitated by the Project Director, the **AC** will meet quarterly to assist with planning, coordination, implementation, resource sharing, and evaluation to ensure employment of a sound, sustainable, and scalable program that is inclusive of both federal and non-federal resources. An **Executive Council** (**EC**) will also be formed with authority to make decisions for ongoing improvement. Members include: three Superintendents, Chief Academic Officer and Director of Governmental Relations/Grants at DHR, College President, Region One Executive Director, Deputy Director, Chief Financial Officer and Project Director. The EC will meet quarterly the first year and biannually thereafter to advise the Project Director on operational procedures, budgets, program changes, review of evaluation results and program policy.

Key Personnel: Region One recognizes that effective management of this program requires strong leadership skills, management experience and academic training. Given these aptitudes, Dr. Eduardo Cancino, Deputy Director with over 23 years of educational experience will dedicate 10% of his time and oversee the project at no-cost. Dr. Cancino has served as Superintendent, his credentials include a Doctorate in Education, a Masters in Education and a Masters in Mathematics. Additionally, Dr. Tina Atkins, Administrator of The Center for College,

Career/Life Readiness with over 35 years of educational experience of federal programs, will act as the Principal Investigator and oversee the programs operations and supervise the Project Director. Dr. Atkins credentials include a Doctorate in Organizational Leadership, and Masters in educational Leadership. Dr. Atkins will dedicate 25% of her time to *Project **HEAL²*** at no-cost. Region One, when hiring **key** personnel, will seek professionals who are highly educated and best qualified. The **i3 team** (below) will be comprised of highly-qualified educators. Table 2. notes staffing plan to ensure timely and effective implementation (Appendix 19 & F-Organizational Chart & Resumes/Job Descriptions).

Table 2. Key Personnel (KP) Responsibilities (R) and Qualifications (Q)	
KP	**Project Director (1 FTE) – hire within one month of award**
Q	A Masters in Education and Administration required and/or a Doctorate preferred; Texas Principal or related certification required; Eight years of experience in successfully administering and managing federal programs required; Experience working with diverse partnerships and managing in-kind resources required; Experience in managing sizeable budgets successfully and meeting multiple deadlines and reporting requirements; and Supervisory experience with large grants and a proven track record of success.
R	Oversee the i3 program and be responsible for the overall project implementation and budget management, lead the *Project HEAL²* Team, work with all school personnel, partners, external evaluators, and be the liaison to the USDOE i3 Office.
KP	**Lead Health Coach (1 FTE)**
Q	Master's degree in Education or Nursing required; RN license in Texas required and Texas Teaching Certificate preferred; two years of full-time clinical experience and offering instruction and technical support and coaching required; knowledge and skills in instructional methodology, planning, implementation, and assessment required.
R	Participates in selecting, advising and offering technical support to students, provides coaching in the classroom and clinical setting, and plans, implements, and assesses the nursing program on an ongoing basis.
KP	**Partner Hospital-Based (DHR) Instructional Nurses (4 FTEs)**
Q	Graduate of an accredited school of professional nursing; Bachelors of Science required and/or Masters of Science degree in nursing (MSN) is preferred; RN license and permit from the State of Texas of Nursing required; three years of full-time nursing experience required; Hospital experience required.
R	Are school-based and teaches the course curriculum in compliance with the Texas Board of Nursing in both academic and career areas. Meets with students to develop and implement academic and career goals, provides hands-on instruction in the classroom and clinical setting, and advises students, participates in planning and assessing student performance; creates reports, follows students through first year of college and is a full-time faculty.

Additionally, the management plan is designed to integrate the following elements to achieve the goals, objectives, and outcomes (pg. 9 – 10) of the program on-time and within budget. To maintain accountability and to ensure high-quality products and services are delivered (on-time and within budget), the Director will utilize the Logic Model (Appendix 20) as a guide and work closely with all stakeholders including the external evaluator to ensure full implementation and oversight of program activities. The Director will ensure program effectiveness by maintaining a high-level of open communication among staff, school personnel, community and vendors. The **i3 team** will meet weekly to review program progress, student development, educator progress, cost efficiencies and areas needing improvement. The staff, evaluator, and partners will provide monthly reports to the Director detailing project status, and progress and areas needing immediate attention. The Director will also meet monthly with the finance department to track costs and quarterly with the **AC/EC** to review program status and actual expenditures against proposed costs and milestones to maximize resources.

Instructional support, continuous data monitoring and assessment through face-to-face and online digital platforms will be a priority. Region One and the evaluator will collect ongoing qualitative and quantitative data (students, parents and teachers) and conduct data analyses to determine the growth/decline on each outcome. The timeline below was developed as a tool for managing the attainment of key objectives, milestones, reviewing program progress and cost efficiencies. Each year the **i3 team** will review and update tasks, timelines and milestones for the next year based on educators' development, student academic progress, and parent educational knowledge. Region One anticipates the start date will be January 1, 2017.

Table 3. Administrator-AD; Director-PD; Lead Health Coach - LHC; Partners-P; Educators-E; Evaluator-EV

Activities/Milestone	Responsibility	Timeline	Obj.
Upon Award AC and EC meet and plan	AD, E	Jan '17	1,2,3

Hire Project Director and provide orientation	AD, E	Jan ’17	1,2,3
Hire Lead Health Coach	PD, E	Feb – Mar ’17	1,2,3
i3 team/Evaluators meet, formulate data collection plan, develop database and collect baseline data	PD, EV	Feb ’17 – Ongoing	1,2,3
Identify professional development needs of staff, partners and council members and begin training	AD, PD, E	Mar ’17 – Ongoing	1,2
Engage Partnerships (South Texas College/Doctors Hospital at Renaissance- DHR Instructional Nurse)	PD, LHC, P	Mar ’17 – Ongoing	1,2
Meet with i3 staff, principals and partners to develop Annual Master Schedule	AD, PD, LHC	Mar ’17 – Annually	1,2,3
Set up student selection process 9-12 students	PD, LHC, E	Mar ’17 – ’19	1,2,3
Engage students in *Project **HEAL²*** STEM/Health Science instructional lessons and digital integration	E, LHC, P	Mar ’17 – Ongoing	1,3
Schools design and implement PBL	LHC, E	Apr ’17 – ’19	2
PLCs begin the curriculum design with STEM/Heath Science disciplines with PBL	PD, E, P	Apr ’17 – Weekly	2
Develop, implement and test PBL units within the high schools and hospital setting	PD, LHC, E	Apr ’17 – Ongoing	1
Modify PBL units and provide training on digital STEM/Health Science content integration	AD, PD, E	May ’17 – Annually	1
Assess the fidelity of *Project **HEAL²***, PBL, and PLCs including curricular and site-based integration	EV, AD, PD	May ’17 – Quarterly	1,2
Implement the quasi-experimental design (QED) and student selection	EV, PD, E	May ’17 – When needed	1,3
Develop, test, disseminate and collect surveys (student, educators, parents, partners, etc.) and data	EV, E	May ’17 – Quarterly	1,2,3
Identify at-risk students, assess aptitudes, skills, abilities and interests	LHC, E	May ’17 – Ongoing	3
Engage students in enriched hospital based learning opportunities (after-school, summer, etc.)	E, P, LHC	June ’17 – Ongoing	1,2,3
Implement student Health/Science/STEM CAMPs, educational field trips, and parent engagement	PD, LHC, E, P	June-July ’17 – Ongoing	1,3
Compile, clean, analyze and review student data for program recommendations	EV	Jun ’17 – Annually	1,2,3
Review PBLs content and PLCs personalized practices and strategies	PD, LHC, E, P	July ’17 – Annually	1,2
Assess technology integration within the PBLs and modify, as appropriate	PD, LHC, P	July ’17 – Annually	1
Implement Educator Summer Institutes for program in-service and capacity building	PD, LHC, E, P	Aug ’17 – Annually	1,2,3
New *Project HEAL²* School Year 2018			
Review data, tailor and incorporate data-led student interventions and best practices in new school year	AD, PD, EV, E	Aug-Sept’17 – Biannually	1,2,3
Begin one-on-one teacher classroom advisement, guidance, coaching and mentoring	PD, E, LHC	Sept ’17 – Annually	1,2,3

Attend the i3 Conference/Meeting in WA, D.C.	PD, EV, E, P	Sept '17 – '19	1,2,3
Selection of students and student engagement in *Project* ***HEAL²*** continues	PD, LHC, E	Sept '17 – Annually	1,2,3
Implement PBL units aligned with digital *Project* ***HEAL²*** integration in line with TEKS	AD, LHC, E	Oct '17 – Annually	1
PLCs curriculum with *Project* ***HEAL²*** integration implemented and reviewed during PLCs	PD, LHC, E, P	Oct '17 – Weekly	2
Submit Annual Performance Report to USDOE	EV, PD	Dec '17 – '19	1,2,3
New *Project HEAL²* School Year 2019			
Replicate Year 2 modified data-led student activities and educator (PBL, PLCs) activities and programs	PD, LHC, E, P, EV	Sept '18 – Ongoing	1,2,3
Develop a written sustainability and scalability plan	AD, PD, E, EV	Jan '19	1,2,3
Develop an outreach and replicability campaign	AD, PD, E, EV	June '19	1,2,3
Submit Final Performance Report to USDOE	EV, PD	Mar '19	1,2,3

(3) Adequacy of procedures for ensuring feedback and continuous improvement….

Progress: To ensure effective feedback mechanisms and continuous improvement in project operations, the Project Director will: 1) work with project staff on a daily basis to monitor progress, review benchmarks toward performance measures, and make improvements in project design and delivery; 2) meet with campus teachers, principals, Lead Health Coach and educators monthly to assess program fidelity (PLCs, technology integration, pedagogical strategies, curriculum rigor, data utilization, etc.) to ensure services are effectively being delivered and relevant to participants, as proposed; 3) meet with the AC and EC quarterly to solicit feedback on project status, operation, budget and evaluation for program improvement; 4) assess program through biannual interviews and open-ended monthly, quarterly, and/or annual surveys (educators, students, parents) depending on the user, instrument or activity to determine participant satisfaction levels and to monitor academic progress of students; 5) utilize digital management software daily to track and monitor project status and to assess impact on objectives each month; and 6) review quarterly and annual evaluation results to ensure data is strategically used to provide feedback in efforts to refine and integrate effective program improvements.

Also, the Logic Model (Appendix 20) will be used as a tool to guide implementation,

feedback and evaluation to ensure results-based performance. This management tool will depict the logical relationship between the proposed resources, activities, outputs and outcomes. It will offer timely and authentic feedback and information to the evaluator and stakeholders to make informed decisions related to program delivery for continuous improvement. Overall, this model will chart actual progress versus target on all annual benchmarks and long-term outcomes.

(4) Mechanisms applicant will use to disseminate to support development or replication…

Region One will employ a variety of strategies to disseminate program information, evaluation findings and best practices. As part of its evaluation efforts, Region One will: 1) gather qualitative and quantitative data (including data on challenges, lessons learned and best practices); 2) conduct in-depth analysis of short-and long-term performance measures on students and teachers in the experimental and control groups; and 3) aggregate and analyze measures by grade levels, age, gender of students, teaching experience of teachers, and other characteristics, and triangulate the data to provide a synthesis of program-wide, evidence-based data results and conclusions. These efforts will lead to tangible evaluation interpretations, recommendations, reports and to an electronic implementation manual that will assist in designing effective strategies for not only program improvement and development, but also for local, regional and national dissemination and replication of i3 services in different settings. Based on information learned from evaluation efforts, evaluators will describe the implementation of the project; identify critical issues and realizations during operations; and identify the elements and extent to which the program has been implemented with fidelity. This information will be shared with the Board of Trustees, Superintendent, principals, teachers, and **i3** AC and EC to foster replication of effective activities

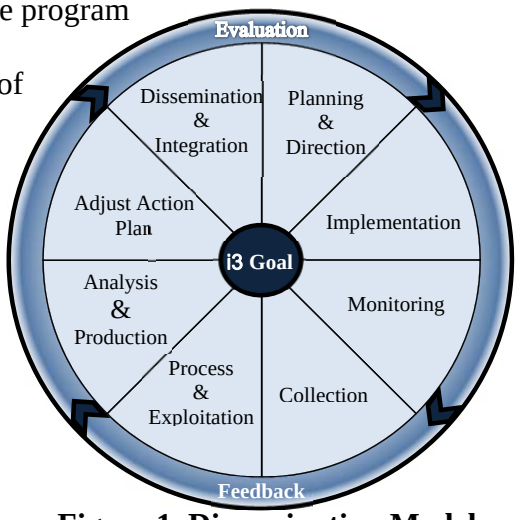


Figure 1. Dissemination Model

in school settings. Dissemination of information will also occur through the **i3** web-based portal to provide access to program toolkits, web-link postings, brochures, data dashboards, as well as through presentations at school board meetings, Texas Education Agency symposiums, educational conferences (local, regional or national), school work sessions, college forums, and project reports. Reports will include quarterly and annual progress, data summaries (district/campus), evaluation reports and final summative reports submitted to the **i3** office. Evaluators will collaborate with **i3** evaluators to disseminate evaluation findings and reports as well as participate with any technical assistance provided. To ensure equitable dissemination, communication will be disseminated in print and digital formats and in English and Spanish.

C. Quality of Project Evaluation

(1) Clarity, importance and method of the key questions to address project evaluation…

The Independent evaluation will be conducted by a highly qualified evaluation firm, EGT Institute, Inc. to assess the impact of *Project **HEAL²*** (Appendix 21 – EGT Portfolio). The evaluation will address four primary questions: 1) What is the impact of *Project **HEAL²*** on the instructional strategies of teachers? 2) What is the impact of *Project **HEAL²*** on the participating educators' ability to implement Health Related/ STEM curricula in the concurrent college/high school setting? 3) What is the impact of *Project **HEAL²*** on the academic achievement levels (**9th through 1st Year of College**), engagement, interest, and behavior (non-cognitive) of students and parents? and 4) What is the impact of *Project **HEAL²*** on students' motivation and preparedness to graduate from high school and STC with an Associates and continue in a Health related field career or higher college degree attainment? To seek answers to the above questions, EGT Institute will implement two methods of evaluation – Formative and Summative (using a quasi-experimental evaluation design). **Formative and Summative Evaluation**: Each year, **formative evaluation** will focus on addressing whether or not the proposed objectives are being

met and activities are being implemented as planned. Driven by the Logic Model (Appendix 20), ongoing findings will be compared to objectives, outcome measures (pg. 9-10), project timeline, and adjustments will be made, as needed. Baseline data will be collected immediately upon award. The **summative evaluation** plan will utilize a rigorous quasi-experimental design to investigate significance and strength of relationships between proposed and actual activities and services on instructional practices, student academic performances, cognitive and non-cognitive skills development, graduation rates, college enrollment, and outcomes. Evaluation will draw on a wide variety of quantitative and qualitative data (Table 4) to investigate and provide substance for the evaluation design that meets the *WWC* evidence standards. Evaluation methods below:

Table 4. Impact Analysis Summary

Impact Analysis	Data Source & Evaluation Study Methods	Obj.
Question 1: What is the impact of the project on the instructional strategies of teachers? ***Analyzed Annually***	Self-assessments and pre-post surveys from teachers, administrators, and students, classroom observation data, professional development session evaluation data, lessons plans, technology use.	1, 2, 3
Question 2: What is the impact of the project on educators' abilities to implement integrated Health Related/STEM curricula in a dual enrolled College-high school setting? ***Analyzed Annually***	TAPR, PEIMS, pre-post student enrollment data, number of trained teachers/administrators, # and type of PBL activities by grade level, professional development assessment data, State/Federal Rating data, # of high quality teachers, review of lessons plans, review of school improvement plans.	2, 3
Question 3: What is the impact of the project on the academic achievement levels of participating 9th – 12th grade students, interests, engagement and behavior (non-cognitive) of students and parents? ***Analyzed Annually***	TAPR, PEIMS, student demographics, pre-post STAAR-EOC data, grades by grade level, GPA, # of students participating in PBL activities by grade level, pre-post parent data, # of students reporting improved understanding of Health Related/STEM concepts, # of students in Pre-AP/AP courses and passing, # of students promoted to next grade level # of students graduating on-time and # of dropouts.	2
Question 4: What is the impact of the project on students' motivation and readiness to graduate from high school and STC with an Associate's degree and continue in Health field or college degree attainment? ***Analyzed Annually***	National Clearing House and Texas Higher Education Coordinating Board data, pre-post surveys of students, parents and educators, # of students admitted to college, # of students enrolled in STC Nursing discipline, # of students pursuing Nursing careers, and # of students continuing beyond *Project* ***HEAL²*** toward higher degree.	3

***Evaluation of student data will be comprised of both the experimental vs. control group**

(2) Methods of evaluation, if well implemented produce evidence of projects effectiveness…

Region One ESC will also utilize a rigorous quasi-experimental design using a multiple-cohort individual-level longitudinal randomized control trial (RCT) approach. Therefore, use of the RCT approach effectively minimizes selection bias and ensures that the treatment and control groups are equitable at baseline in terms of background, demographics, and pre-program factors such as motivation. Quantitative data (e.g. demographics, STAAR results, disciplinary, etc.) will be used in conjunction with ongoing surveys, focus groups (qualitative) and observation data. In addition to the data mentioned above, the following qualitative data (e.g. school improvement plans, curriculum, instructional leadership – educator evaluations, professional development and its effectiveness, student engagement, academic expectations, and student and teacher perceptions) will also be collected to assess fidelity to ensure a rigorous evaluation. The project will serve a diverse population of **20/25** students in **9th to 1st Year of College** from **3** LEAs and **9** high schools (**75** annually) over a three-year period for a total of **225**/**300** students.

Beginning in Year 1, Region One and partners will implement a carefully orchestrated intentional selection through an application process and methodically determine eligible students so that those accepted to the project have a wide cross-section of students, including low-income, minority, students with disabilities, English Learners, gifted and talented, and so on. The selection process will assign eligible participating students to a treatment group of *Project* ***HEAL²*** in 9th grade through 1st Year of College. Additionally, a computer software will be utilized to randomly select students to a non-*Project* ***HEAL²*** control group attending the same campus in a regular school program. The treatment group will consist of **20/25** (9th through 1st Year of College) randomly selected students (selection process) each year of *Project* ***HEAL²*****.** Similarly, a total of **40/50** non-*Project* ***HEAL²*** control group students with like characteristics will also be selected (computerized) and assigned each year. Propensity-score matching using a

1:2 match without replacement will be used to minimize selection bias and ensure that treatment group and control group students are equated on key background and demographic variables, socioeconomic status, age, ethnicity, gender, experience, and free/reduced lunch status. The quasi-experimental rigorous evaluation and sampling design will meet the What Works Clearinghouse (WWC) evidence standards. Student enrollment and achievement data will be contrasted with the treatment and control group students to provide context for student academic outcomes. Baseline measures will be used to derive change in scores and behavior for students within both treatment and control groups. Specifically, the difference from baseline data (course grades, STAAR-EOC, etc.) and performance measures obtained after participation in *Project **HEAL²*** services will be calculated. This method will help guard against selection effects of control students, whereby differences may be found that are due to pre-existing differences between students prior to sampling. Using the above-mentioned data, the evaluator will use statistical significance (t-tests at 95% confidence level), analysis of variance (Anova), and correlation (Pearson) analysis to assess quantitative data and the impact to determine the extent to which objectives and outcome measures are attained. Chi-squared test and other descriptive statistics will be used with qualitative data. Based on the results, the evaluator will provide recommendations to the Director for continuous improvement on an annual basis. Over the 3 year period, data from the treatment and control groups will be pooled to increase statistical power (**Treatment = 200, Control = 400 and N=600**), and between-group aggregated and disaggregated comparisons will be conducted for all students annually at the end of each grade level. The evaluation described above will not only assess implementation, fidelity and outcomes, but will also identify best practices for enhancing cognitive and non-cognitive skills of students. The evaluation methodologies will assist in understanding the effectiveness and context

of **i3** services in accomplishing the anticipated impacts, as listed in the Logic Model (Appendix 20). For example, to what extent do teacher capacity building initiatives result in practices that are aligned with rigor and relevance necessary for student academic and college success? Also, to what extent are certain "thresholds, dosages, combinations, and components" of **i3** services associated with the development of both non-cognitive and cognitive skills of students? Findings such as these will be of promise/evidence for school leaders for developing early intervention and support systems that better assist students' academic preparedness and college readiness.

(3) Project plan includes sufficient resource to carryout project evaluation effectively…

Region One, through *Project* ***HEAL²*** and in collaboration with its external evaluator – EGT Institute, Inc., agreed to allocate **8.7% or $80,000** annually to conduct the rigorous quasi-experimental study. The evaluation budget was carefully prepared to adequately support the well-designed experimental study and to effectively assess the program objectives, outcomes and fidelity as presented. This cost is realistic and reasonable when compared to geographical location economic standards and other similar **i3** funded projects.

Data driven and longitudinal resources (Texas Student Data System – TSDS, Dashboard Data Mart, and Youth Connection) will be used for data and evaluation comparison and analysis (Pearson, Anova) to extract reliable evaluation findings and results. These tools will assist with data driven decision making related to management of curriculum and assessment data for greater student success. Acuity, a state aligned informative assessment tool, will support formative assessment through its unique integration features for classroom-friendly assessments, instructional resources, reporting, and customization opportunities (Appendix 22 – Acuity). With these assessment tools, efficiency reviews of the *Project* ***HEAL²*** will be completed to examine every aspect to help guide school leaders toward increasing school productivity and costs efficiency for maximizing student achievement.