A.1 EDUCATIONAL PHILOSOPHY

This section will discuss how Focus Education Service's (FES) philosophical approach aligns with our plan to provide a learning environment that will improve pupil achievement in our target population. It will also discuss how we will incorporate the principles and concepts fundamental to our proposed program of instruction and provide a clear understanding of what a student who attends our school will experience with respect to educational climate, structure, assessment, and outcomes. The narrative will present rationale for our selected approach supported by research and will be consistent with our mission statement.

FES' educational philosophy can by be summarized by the following statements:

1) Every high school student should graduate with a marketable vocational skill
2) Every high school student should develop life skills that promote personal responsibility and positively impact society

Our educational philosophy stems from our belief that the primary purpose of high school is to develop responsible and productive members of society. We believe Focus High School (FHS) is uniquely qualified to accomplish this task by preparing students for careers in the fast-growing and high-paying fields of computer science and information technology.[1]

VISION AND MISSION

Focus Education's vision is to fill the world with knowledge, achievement, and integrity. We will accomplish this by promoting students' passion for learning with curriculum, content, and educational activities that are engaging and relevant. We will help students take an active role in society and develop moral values that foster a spirit of help and service within their respective communities. Our purpose is to teach students to learn, to act, and to help.

The mission of our schools is to provide motivated students the opportunity to achieve academic excellence and develop life skills in a technology-rich, career-focused, and safe learning environment taught by caring and knowledgeable educators.

The topics below will show how our educational philosophy aligns with our vision and mission and our plan to provide a learning environment that will improve pupil achievement in our target population.

PREPARING FOR COLLEGE AND CAREER READINESS

College is a leading indicator of students' future career success.[2] According to the U.S. Census Bureau, the average lifetime earnings for individuals who have earned a bachelor's degree are more than

[1] Lauren Csorny, "Careers in the growing field of information technology services," *Beyond the Numbers: Employment & Unemployment*, vol. 2, no. 9 (U.S. Bureau of Labor Statistics, April 2013), http://www.bls.gov/opub/btn/volume-2/careers-in-growing-field-of-information-technology-services.htm

[2] SOURCE: U.S. Census Bureau, 2012, Table PINC-03

double those who did not graduate high school. Minority and low-income students bear a disproportionate burden of high school dropouts and students who do not graduate from college.

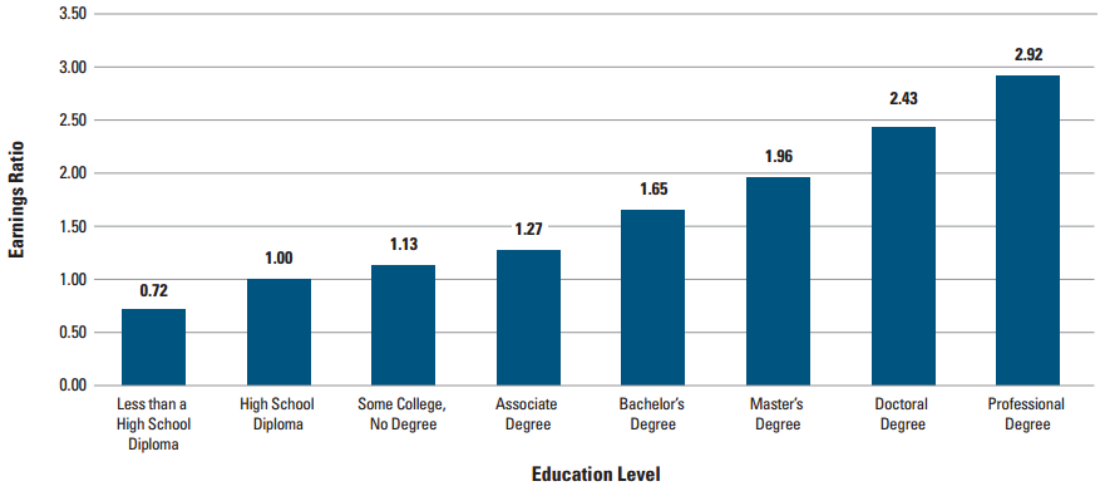

Image A.1.1 – Expected Full-Time Lifetime Earnings Relative to High School Graduates, by Education Level[3]

Nationally, less than one in ten students from underprivileged backgrounds will graduate with a college education.[4] In Arizona, the situation is even worse. Arizona ranks fiftieth of the fifty states in the percentage of high school graduates who end up matriculating to college, in part because of the large percentage of Hispanic students who choose not to attend college.[5] FES' believes high school graduates, especially Hispanic students, should be better prepared for college, career, and adult life.

FOCUSING ON SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH (STEM)

Focusing on the science, technology, engineering, and mathematics (STEM) fields is essential for students to remain competitiveness in Arizona's new, global economy. Research shows that many public schools are failing to adequately prepare students for life beyond high school. This is because traditional academia often responds slowly to adjusting market needs.[6] This is widely evident in the fields of information technology and computer science. According to a federal study by the Committee on STEM Education National Science and Technology Council, computer science (CS) is one of the fastest-growing and most promising industries in our economy, yet "fewer than 10 percent of high schools in the United States offer Computer Science courses."[7] By 2020, 9.2 million new jobs are expected to be created in the

[3] Ibid.
[4] Luhby, T. (2011). College graduation rates: income really matters. CNNMoney. Retrieved from http://money.cnn.com/2011/11/21/news/economy/income_college/index.htm
[5] Teach For America. (2012). Where we work: Phoenix. Retrieved from https://www.teachforamerica.org/where-wework/phoenix. 4 Morrison Institute of P
[6] Computing in the Core (2013). Advocating for K-12 Computer Science Education. Retrieved from: http://www.computinginthecore.org/csea
[7] http://www.whitehouse.gov/sites/default/files/docs/stem_teachers_release_3-18-13_doc.pdf

United States in STEM fields alone; 4.6 million will be in computing and information technology.[8] In spite of this promising growth, the computing workforce pipeline is simply not meeting this growing demand. Only one in five high school graduates who scores in the top quartile in mathematics goes on to become a STEM professional.[9] Fewer than 40 percent of students who enter college intend to major in a STEM field.[10] And women, who represent 50% of the U.S. workforce, hold less than 25% of the U.S. STEM jobs.[11] Early and strategic intervention can help students better prepare for promising careers. Research shows that students exposed to careers and resources in STEM fields before they graduate high school are much more likely to pursue a STEM related career.[12]

FES will increase students' access to technology, career resources, and knowledgeable educators throughout their formative high school years. Unlike many public schools that are ill-prepared in staff, resources, and industry knowledge, Focus High School will be well equipped to meet this demand. Our board members, administrators, and teachers will have extensive background in STEM and IT related fields. Our campuses will offer a 1:1 student to computer ratio. In addition to on-site knowledgeable and caring educators, students will have access to an online learning system that provides customized instruction, strategic support, and relevant learning tools. FES will offer IT elective courses that prepare students to seek professional certificates in industry-relevant IT fields such as networking, database administration, cyber security, multimedia development, programming, and web administration. This STEM focus and vocational training will greatly benefit our target population described below. Our experience, our resources, and our educational philosophy will combine to serve a much needed demand that exists in our economy but is currently missed by our public education system.

PEDAGOGY

The pedagogical approach FES will use to achieve this mission will be rooted in the following instructional methods: direct instruction, discovery learning, and project based learning (learn, act, help). Curriculum content will be delivered using a blended instructional model that incorporates direct instruction, classroom activities, and web-based video lectures and simulations. Students will then develop their knowledge and understanding of the instructional content through discovery learning assignments as well as narrative assessments and Socratic inquiry. Additional project based learning assignments and community outreach projects will be integrated throughout the curriculum as well as opportunities to teach or help others understand newly learned principles.

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[8] National Research Council. (2012). Education for Life and Work: Developing Transferable Knowledge and Skills in the 21st Century. Committee on Defining Deeper Learning and 21st Century Skills

[9] Carnevale, A.P., Smith, Nicole, and Melton, M. STEM. 2011. Georgetown University, Washington, D.C. http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/STEMWEBINAR.pdf

[10] 0 PCAST President's Council of Advisors on Science and Technology. (February 2012). Report to the President: Engage to excel: Producing one-million additional college graduates with degrees in science, technology, 0 PCAST President's Council of Advisors on Science and Technology. (February 2012). Report to the President: Engage to excel: Producing one-million additional college graduates with degrees in science, technology,

[11] Division of Science Resources Statistics. Women, Minorities, and Persons with Disabilities in Science and Engineering: 2011. Special Report NSF 11-309. Arlington, VA.

[12] Tai, R. H., Liu, Q. C., Maltese, A. V., & Fan, X. (2006). Planning early for careers in science. Science. 312, 1143 - 1144.

TARGET POPULATION

Focus High School's target population will be 9-12 grade students residing within a 5 mile radius of Phoenix's Central High School. The target population will include students seeking: flexible schedules, small class sizes, technology-rich instructional methods, and access to STEM-related CTE courses designed to prepare students for college, vocational training, and/or STEM-related careers—particularly in the field of information technology. Based on geographic and demographic data identified in section A.2, the target population will include a range of students who come from low socio-economic status, are at-risk for high school dropout, are English language learners, possess academic skills that are below grade level, and students in need of developing college and career skills.

An estimated 17,000-18,000 high school aged students reside within a 5 mile radius of the target site location. Of these students, a disproportionately high number are Hispanic (41%) compared to the rest of Arizona (30%). Additionally, 47.4% of students designate Spanish as their primary home language.[13] This suggests an increased number of bilingual and English Language Learners (ELL). The median household income is $40,736 per year, which is $932 less per month than the state median income of $51,932. 35% of the target population also lives below the poverty line, nearly double the state average of 18%. This suggests an increased number of financially-challenged students who may lack appropriate technology resources in the home. Children residing in the target site community are also much more likely to be raised in single-parent households compared to the AZ average (53% vs 36%). Families are 23% more likely to rent a home or apartment rather than own compared to the state average suggesting increased mobility among our target population. The data also shows a disproportionately low number of high school graduates residing within the community compared to the rest of Arizona (14% vs 41%) suggesting a community need and an opportunity for focalized intervention.

Seven public district schools operate within a five mile radius of the target site location, many of which are underperforming. Central High, the nearest public district school has a graduation rate of 70%, 8% below the state average and only 39% of students passed the Math portion of the 2014 AIMS exam and only 18% passed the science portion of the same exam.[14] These results are concerting in lieu of the increased market demand for science and technology skills.

All of these factors combine to show a community in need of intervention. Focus believes our unique educational offerings combined with our instructional methods, educational philosophy, and community involvement further described below can greatly benefit the targeted community.

PROPOSED OUTCOMES AND STUDENT EXPERIENCE

FES will increase the high school graduation rate and test scores (AIMS, AzMERIT or comparable state approved examination) of our target population by providing increased focus on Arizona Standards, increased access to individualized and self-paced instruction, and improved access to supplementary resources (See section A.5). FES will offer a rigorous college and career preparatory curriculum facilitated by college level AP courses, summative assessments aligned with College Level Examination Programs

[13] Retrieved from: Retrieved from http://www.phxhs.k12.az.us/Page/106
[14] Data retrieved from https://azreportcards.com/Assessments/AIMS and https://azreportcards.com/AcademicIndicators/Indicators

(CLEP), and elective courses that prepare students for industry leading IT certifications. FES will gauge pupil achievement through implementation of an online learning system that will track student performance throughout the academic year. Additional methods will include monitoring achievement on standardized tests such as AIMS, AzMERIT, or comparable state-approved examination and completion of graduation requirements.

RATIONALE

The rationale for focusing on STEM fields and the development of life skills such as personal financial management for our target population is that these represent growing work-force needs that are currently underserved by many public schools. According to the Bureau of Labor Statistics, network systems and information security professionals can expect job opportunities to grow by 53 percent through 2018.[15] With Millennial unemployment rates on the rise[16], these fields offer valuable employment opportunities for today's high school graduates. In 2011 the unemployment rate for all 18-29 year olds was 10.9%. This grew to 11.5% in 2012 and rose again to 13.1% in 2013.[17] Through a 1 to 1 student to computer ratio, IT elective courses that lead to industry specific certifications and caring professionals qualified to meet these demands, FES will help students better prepare for STEM related careers. In addition to developing work-specific skills, many students are in need of improving basic, everyday life skills. One of these skills is financial management.

The rationale for promoting finance principles throughout the curriculum and requiring students to complete a finance class is to encourage sound financial management skills within our target population. FES believes that one of the most valuable skills a high school graduate should possess is the ability to responsibly manage personal finances. A recent study by ORC international surveyed 505 U.S. High School students to assess their financial acumen. The study found that as a whole, high school-aged students know very little about credit, taxes, interest, investments, and basic money management. 73% admitted to knowing "little to nothing" about how the stock market works. Over half had no savings and 41% of students surveyed think they are entitled to receive all paid taxes back upon filing a federal income tax return, or that they do not need to pay any at all.[18] Students acknowledge they are ignorant on these topics and want to learn more. 83% of high school students believe personal finance should be mandatory to graduate. 63% of students believe it is the responsibility of their parents to teach them about finances, yet only 26% of parents feel up to the task.[19] Focus High believes that sound personal financial management is one of the most valuable skills a young adult can possess. Accordingly, in addition to our core classes and technology-focused electives, we will offer an elective course developed

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[15] http://www.whitehouse.gov/sites/default/files/docs/stem_teachers_release_3-18-13_doc.pdf

[16] Bureau of Labor Statistics, United States Department of Labor, February 1, 2014, Retrieved March 1, 2014, http://www.bls.gov/web/empsit/cpseea 1 3.pdf.

[17] Bureau of Labor Statistics, United States Department of Labor, February 1, 2014, Retrieved March 1, 2014, http://www.bls.gov/web/empsit/cpseea 1 3.pdf.

[18] National Foundation for Credit Counseling, Inc. (2012). Financial Literacy Survey Exposes Significant Gaps In Grasp Of Personal Finance. Skills, April 2012.

[19] DoughMain, (2012). Study Reveals Need for Tools to Help Parents Teach Kids About Savings, February 17, 2012. Retrieved from: http://www.doughmain.com/odmpublic/includes/footer/about/docs/Help%20Parents%20Teach%20Kids%20About%20Savings.

by the National Academy of Science that focuses on personal finance. Much of our math curriculum is also centered on applicable financial principles.

DIFFERENTIATORS AND FOCAL POINTS

Technology-Rich Learning Environment – Consistent with our mission to provide motivated students the opportunity to achieve academic excellence in a technology-rich learning environment, FHS will offer a 1 to 1 student to computer ratio in each classroom. Each computer will grant access to course specific software as well as an online learning system (OLS) where students can access their individual course content, objectives, competencies, learning activities, and assignments. The OLS will offer students self-paced educational resources such as: instructional videos, news articles, text books, audiobooks, simulated learning activities, quizzes, tests, assessments, grades, and group discussion forums. This method of educational delivery will serve as an important medium to supplement in-class activities and discussion that will benefit not only the students but also teachers, parents and administrators by increasing the quality and frequency of relevant feedback to assist with potential intervention and customized teaching strategies.[20]

Small Campuses – While many public high school campuses in AZ serve student populations upward of 3,000 students, our campuses will serve approximately 60-120 students. Studies show high school is a formative stage for students and a difficult time to feel "lost in the crowd."[21] Our small campuses and small classes provide students with more of a voice, more of a chance to be recognized, and more of a chance to receive individual attention.

Increased Focus on College and Career Readiness Standards – Our curriculum allows FHS to increase focus on college and career readiness standards in Math, Reading, and Science. Detailed reporting software (Acellus Smartware) shows teachers, administrators, and parents or guardians exactly where students are in regards to competency and understanding for a particular subject. Additionally, students' strengths and weaknesses are tracked to inform interventionists how to best address relevant problem areas until mastery is achieved. This helps to ensure individual understanding of common core content.

Increased Focus on STEM Specific Training and the Development of Life Skills – Focus places increased emphasis on STEM specific vocational skills particularly in the field of information technology. Focus also places an increased emphasis on developing life skills such as personal and financial management and the development of character-building core values through the implementation of homeroom and career-relevant fieldtrips.

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[20] William D. Muirhead, (2000) "Online education in schools", International Journal of Educational Management, Vol. 14 Iss: 7, pp.315 - 324

[21] Staines, G. L. (2008). The causal generalization paradox: The case of treatment outcome research. Review of General Psychology, 12(3), 236.

Earn College Credits – FES will offer a path for students to complete a full year's worth of college credits (24-30 credits) prior to graduation. The credits can be applied at over 2,900 colleges and universities in the United States, including all Maricopa County Community Colleges and AZ's three public state colleges (ASU, UofA, NAU). FES curriculum and test preparation materials will prepare students to complete 8 College-Level Examination Program® (CLEP) exams in their junior and senior years. Earning college credits while in high school will help students significantly reduce the cost and time needed to earn their college degree.

Increased Community Involvement – FES will regularly incorporate guest speakers from the community during homeroom and class instructional hours. The primary purpose of guests will be to discuss how to actively and successfully apply principles learned in class to career and life situations outside of class. FES will organize quarterly field trips for students to visit successful organizations operating in STEM fields. The primary purpose of these field trips will be to connect principles and concepts discussed in class to real-world applications and to help students prepare and plan for future career opportunities. Additionally, all students will provide 12 hours of community service per year to encourage empathy, awareness, and social responsibility.

Teamwork and Leadership - Focus will encourage Teamwork and Leadership through Group Projects and Learning Activities. Students will develop group learning and conflict resolution skills as they communicate electronically and in person to coordinate and complete their group projects.