

ANALYSIS OF CAREER TECH CHARTER HIGH SCHOOL APPLICATION

Scope of Study

Review of the Charter School application, specifically the Career Tech Charter, specifically the High School portion of the proposal received by the District and the charter's proposed model, curriculum, program focus and offerings. Identify strengths and weaknesses of the application and its compliance with Chapter 339 of School Code and workforce development needs and priorities in the Pittsburgh area. Compare charter application curriculum themes, courses and programs to the Pittsburgh's CTE Program in order to identify if/how the charter outlines innovations and if there is any duplication of efforts between the charter school application and the Pittsburgh Public School's career and technical education (CTE) programs. Collaborate with District staff and prepare a report for the District of findings.

Work Plan

- Review and analyze charter school application, high school component, and its proposed CTE curriculum and programs, identify strengths and weaknesses, analyze identified innovations, compliance with state PDE requirements (Chapter 339), and local workforce development priorities.
- Conduct conference calls with district personnel to discuss application elements and findings, charter application review protocols, obtain data/information, in order to product a report aligned with the District's expectations.
- Review District CTE data, including but not limited to CTE courses and program materials, graduation and placement data, program offerings/CIP codes, NOCTI scores, industry certifications, Perkins measures, CTE enrollments, program capacity, etc.
- Review and analyze Pittsburgh Labor Market, High Priority Occupations, critical industry sectors and workforce needs.
- Conduct research on the various methods and best practices cited in the charter application.
- Prepare a written report of findings.

Analysis

Mission, Purpose, Needs

The application does not provide adequate rationale for the school. The application lacks sufficient supporting evidence of data and research-based practices.

1. The applicant describes an inaccurate view of the current education system and specifically the educational model provided by the Pittsburgh Public Schools. Cited research does not support the applicant's theory or conclusions.

Statements, such as the ones below, are located in the application and state the applicant's beliefs:

"Traditional schools and school district have a hierarchical structure that provides for cohesiveness, stability, and standardization. The design of these schools still utilizes the factory model made popular during the industrial revolution. Students are identified as the raw material which enters the system of the school, and through the process of public education, society receives the output of work-ready graduates" (p.8).

"The current system of education, operating on an education model created during the era of the Industrial Revolution, does not provide student with the range, depth, and style of learning and skills that are compatible with our country's rapidly evolving workplace" (p.10).

The applicant cites Barry (2016) for the above statement but upon review of the publication, Barry did not make this claim. The cited publication is about the high cost of remedial courses on college campuses for all social classes with a focus on to costs to middle and upper income families. There is no connection in the article to an outdated, industrial age educational model as cited by the applicant.

The applicant provides a rationale for their "new model of education" called the "Whole Person" Model of Education because, "The current model of education is one based on the factory model, with inputs, and functions assigned to modify those inputs in order to product outputs deemed desirable by outside sources. This model does not work for student of the 21st century" (p.18 & 43). Other references within the application to the current model of education being based on a factory model of educational are located on pages 43 and 148.

If fact, the Pittsburgh Public School District does not employ an educational model based on a "factory" model which is unresponsive to educational best practices and an unchanged model since the Industrial Revolution from over a century ago. Pittsburgh Public Schools offers a wide variety of educational options and offerings for its diverse student body and aims to provide options that not only match our students' passions and unique needs, but also help to prepare them for the real word through diverse experiences. Students attending PPS have the option to attend a K-12 Neighborhood School, K-12 Magnet School, Career & Technology Education Program, or Online Academy.

The applicant also cites instructional strategies, such as problem based learning, project based learning, civic engagement, and restorative practices as innovative strategies under "Best Practices and Habits of Practice for the Comprehensive Project Based Learning," (pp.57-66). These strategies have been common practice in Pittsburg Public Schools for at least a decade. The claim that these practices are new and innovative and will only be found in the Career Tech Charter School is inaccurate.

2. The applicant states that an innovative practice of the school will center on the “Whole Person” Model of Education, developed by Angela Musto. In this model “outcomes are determined by the student, parents, educators, and community ...these outcomes fall into the six overarching categories of Physical and Mental Health, Base Skills and Knowledge, Decision Making and Goal Accomplishment, Healthy Relationships, Financial Literacy, and Civic Engagement (p.43)”. Additionally, the applicant also states the development of this model occurred through focus groups where the applicant states, “Focus groups that included young people of high school age, as well as individuals ages 18-27 who are in the world-of-work but are not too far removed from the high school experience provided “student voice” to the design of the school model and educational framework” (p.58).

As a Habit of Practice outlined within the PPS Charter School Application Guidelines, the educational model of a charter school is to “Build upon nationally successful, research-based education practices” (p.4 of Guidelines). The charter applicant makes no citations within the application related to Angela Musto and the educational model. After researching Angela Musto and “The Whole Person Model”, there does not appear to be any peer-reviewed, research-based study nor scholarly publication(s) on the model nor any peer reviewed articles based on the model proposed by Angela Musto. Within the Charter application, there is reference this model being “new” and the founders having more than a decade of experience working at City Charter High School. There is also reference to Angela Musto within the application as being on the staff at City Charter High School and as one of the key stakeholders for this Charter application. Therefore, the validity of the “Whole Person” Model of Education being both research-based and nationally successful is not evidenced.

3. The applicant fails to connect their curriculum model to the cited “Focus Fields” (p. 25 and a component of the Charter’s Mission & Vision). The provided curriculum refers to students’ self-direction and self-discovery which may or may not connect focus fields to students’ projects. There is no clear curriculum or instruction identified within the application to ensure students have basic knowledge and understanding of the technical fields cited under Focus Fields (p. 25). For example, the provided curriculum does not specifically address instruction for the career fields, such as engineering, robotics, mechatronics, architecture, electrical, welding, etc. If one of the focus fields is connected to a student project, it is unclear how, when, what, and where a students will receive curriculum and instruction with clear objectives, assessments and learning outcomes.
4. The applicant fails to connect cited research to justify their educational model. Citations are often contradictory, misleading, inaccurate, marginally referring to the topic, and often include sources that are not scholarly publications or research based. Some examples include:

- a. Applicant misrepresents cited research for the industry demand and states in the application “**Nationally**, by 2019, there will be a demand for 6 million cybersecurity professional” (p. 10 & p.27). In fact, Morgan (2015) states, “The demand for cybersecurity workforce is expected to rise to 6 million **globally**” (not nationally) by 2019.
- b. The Whole Person Model of Education is a product of Ms. Musto’s and colleagues’ unproven premise based on anecdotal evidence at best, and it is not supported by scholarly research. There are no scholarly citations anywhere within the application that support the model’s conclusions.
- c. Looping is discussed as a key strategy within the applicant’s Whole Person Model of Education. The applicant has failed to use reliable, peer reviewed, academic resources to support this model. Of the ten cited articles, only one directly discusses looping and the provided City Charter High School brief on Looping is not supported, through citations, by research.
- d. The applicant justifies its 4-day, year round school calendar stating “Additionally, the standard school calendar still upholds the needs of our heavily agrarian past, but that is no longer a primary industry, especially in Pittsburgh, and does not best serve the students” (p. 8) yet spends the greatest amount of time, 1 quarter each year for 3 years on “agrarian” curriculum where students will be engaged with a community garden.

Strategic Planning

The applicant identifies various strategies within their educational model which are inaccurate, unclear, lack substance, and/or fails to adequately cite strategies which are based on research. Examples include:

1. STAR Assessment: Applicant states STAR assessment tool will be “utilized to determine students’ mastery of the PA State Standards in math, reading, writing, science and history” (p.41). This is not accurate. The STAR Assessment evaluates (1) Early Literacy, (2) Reading, and (3) Math (Appendix K, p. 384), and does not assess science and history.
2. The Whole Person Model of Education, identified as the Charter’s Best Practice and Habits of Practice, is not a researched based educational best practice.
3. The applicant states “Students will log all instructional hours” (p.47) yet the applicant does not cite accountability standards for the school accepting student-generated instructional time records nor does the applicant cite this practice as research-based to support this practice.
4. The applicant states the educators’ time who work at the Charter will be non-traditional and will “serve the purpose of having the educators actively model the tenants of the Whole Person Model of Education” (p.51). The applicant further states all educators will have two Monday’s per month to use as flex time that can be used to “meet with the

team and plan, participate with students in activities, spend time with their families or go to an appointment” (p. 52). Also, the applicant states, “How educators choose to use their time is up to them, so long as it is optimally moving them toward the goal of educating students as whole people. Educators will be encouraged to plan as a team, whenever and wherever works best for them” (p.52). The applicant does not cite relevant data nor research-based sources to support this component as a best practice of their educational model. There are citations related to mental health but no evidence that a four day school week will result in any academic gains.

5. Looping is discussed as a key strategy within the applicant’s Whole Person Model of Education. The applicant has failed to use reliable, peer reviewed, academic resources to support this model. Of the ten cited articles on page 56-57, only one directly discusses looping. Additionally, within the application, (Attachment F - Educational Best Practice - Looping (p. 311)), the applicant provides a self-published 10 page document on the looping model used at City Charter High School. The brief includes anecdotal evidence provided by teachers and students at City Charter School of the looping model. Nowhere within the brief is there a citation to any academic resources to support this model. On page 8 of the brief there is an attempt to correlate higher graduation and attendance rates to looping, yet the brief admits, "Obviously, it is not possible to make a direct causal connection between looping and these measures (p.8 of brief).

Education Plan

The educational plan submitted by the applicant is incomplete.

1. The proposed educational plan is a patchwork of descriptions of projects delivered in vague outlines, incompletely formatted templates, and hypothetical “examples” of student work. Since the applicant’s model is entirely reliant on individual project based learning it is impossible to assess how or if each individual student will meet any, some, or all of the standards. There is no timeline. PA Academic Standards are listed at the end of each unit but there is no mention of how those standards will be delivered, taught, assessed or mastered.
2. The provided curriculum is not complete. There are three years of a curriculum framework submitted for grades 9, 10, & 11. No curriculum plan for grade 12 was submitted. Computer programming, coding, cyber security are repeatedly referenced in the application (p. 60) as a priority of the charter yet there is little to no information included in the submitted curriculum materials or scope and sequence that supports these claims. The applicant states that cyber security curriculum will be delivered by a “Cyber-security program created in coordination with an international expert (p. 64)”. The applicant refers to Appendix H where there is not specific information on this curriculum, delivery, or assessment. Appendix H instead is a page of broadly stated goals and a hypothetical scenario.

3. Not provided in the application are specific curriculum details, such as what, how, when, and where the curriculum would be offered. Subject areas are alluded to but there are no details on how students would be assessed to ensure students meet their educational goals or state requirements. There is little to no academic accountability associated with Mondays. The activities include options for “family or screen time (p. 51)”. It is not possible to assess as academic work or see any alignment with Pennsylvania Academic Standards. Also, Mondays are set aside for visits and community service but little detail is provided. Logistics for placing and transporting hundreds of students will be difficult. How long will students be with the mentor or organization? What will be their role? How will students be held accountable? What will elementary and mid-level students do on this day? Who will ensure all participants have criminal background checks?
4. The applicant fails to provide an educational plan for the 12th grade year. The applicant states the “goal is that all students will be able to pass the Community College of Allegheny County’s entrance exam at the end of their Third Year and be able to go directly into the Certificate or Associate’s program of their Choice” (p. 162) yet, the applicant fails to provide educational plans for students who do not pass the College’s Accuplacer exam or do not want to matriculate to the college. Additionally, the applicant provides contradictory student goals stating, “The ultimate goal is that students complete not only the requirements for high school graduation but also those of their chosen training/apprenticeship, certificate, or associate’s degree program” (p. 70). There is no details provided by the applicant for training/apprenticeship. Finally, there is contradictory information where the applicant states the Accuplacer exam will be administered to students at the end of year 2 (p. 70) versus students taking the Accuplacer exam at the end of year 3 (p. 162).
5. All adaptations and accommodations for ELL, IEP or other students that fall behind are left to Allegheny I.U. #3. There is no reference to accommodations or adaptations being used by the charter school in the curriculum documents.
6. Applicant fails to provide formative and summative assessments. STAR testing does not assess science and history. (Applicant misrepresents STAR) College entrance exams are also listed but no other assessments are provided. There is no plan for delivery or assessment of PA standards. Additional rubrics are provided for some communication arts activities but none are provided for math or the sciences and very little on social studies. There are rubrics provided for projects and they have some validity to assess progress and quality of the project. These rubrics may be appropriate for the project but are not appropriate for determining what curriculum was covered or how it will be assessed for PA Standards.
7. Extra-curricular activities are described in equally vague terms (p. 200). “As of this date there have been no agreements entered into with any school districts.” The proposed school day includes Mondays off and a school day ending at 4:00 p.m. This schedule will

conflict with athletic practice times and games. On Mondays students will not attend school and must get to the sport or activity on their own.

8. The documents related to curriculum, scope and sequence, pedagogical practices, student assessment, accommodations and alignment to PA Academic Standards are vague, lack key elements, and are built on assumptions. All curriculum and assessment will be based solely on a single method; a project based, “whole person” approach. Curriculum delivery, teaching and learning are based on a single model and can result in large gaps and the possibility of no coverage of entire subject areas. Details on curriculum and instruction in the sciences and math are particularly vague. For a school that states in its mission to be STEM focused (p. 17) this is not evident in the sections related to curriculum. Details on how and what background information will be acquired or required to support these projects is lacking. Stating broad vague questions to be explored and leaving everything up to the students making informed, insightful decisions related to the educational requirements based on a project or investigation is a formula for confusion and lacks any accountability for academic rigor. The applicant failed to provide any valid research based studies that conclude that the project based, whole person model will result in improved student achievement or will provide a challenging rigorous curriculum to all students.
9. It is impossible to assess a curriculum and scope and sequence that is so vague and open ended. The applicant provides an extensive list of Pa. Standards in every section related to curriculum but in no section is the project or individual directly connected to the standards. No individual is held accountable for learning, there are no assessments beyond the projects and activities. STAR testing does not cover all curriculum required at the secondary level. The teacher’s only role is that of coach. There is no reference to teachers actually instructing any of the curriculum. Given the limitations of using a single model to fit all teaching and learning and the vague outlines provided by the applicant it must be concluded that the information provided is insufficient. Lack of research from peer reviewed academic publications that support the whole person model’s claims is troublesome. The applicant failed to provide an adequate education plan as described by the Charter School Application Comprehensive Scoring Rubric.
10. The following are further analysis of each section provided and includes excerpts from each section of the application. Each excerpt is representative of the entire section, not an anomaly.

Overarching Framework of Inquiry (p. 426)

- a. Framework consists of vague statements, such as “students can better discuss those things they are passionate about” or a driving question for year 1, quarter 3 asks “What is the purpose of education?”
- b. This section is followed by a “Framework for Inquiry” on pages 430 to 451. Again this section provides vague descriptions of activities and projects. No goals, learning objectives or assessments are provided.

- c. There is no effort to align activities to PA Academic Standards. There is no timeline for any of the activities or projects, just year and quarter. (Refer to any section in the Framework of Inquiry)
- d. An example of the vague nature of this section is found on page 432 under benchmarking activities d. 2: “Work Hard Pittsburg begins collaboration to teach students programming.” There is no explanation beyond that statement, when in the quarter will instruction occur? How and what instruction will be delivered? When will instruction occur and for how long? How will students be assessed? How do you know every student has mastered the material? What accommodations be provided? None of the answers to these questions are provided. This is just one example of many that could be made to demonstrate the lack of detail in the section “Framework for Inquiry.”
- e. As the Framework continues into year 2 and 3 the details and supporting resources become even more sparse, broad and vague. See Year 3 quarter 4, “Collaborate with year 1 and 2 on Community Garden Project. (p. 450). No resources are provided for projects and activities. A quarter of every school year is devoted to agriculture, the applicants own assessment states that there is little demand for jobs in agricultural production and it is not relevant to their students yet devotes one quarter of every academic year to this topic.

Mastery Projects

Year 1, Quarter 2 (p. 436).

- a. Reference materials for the Career Map project are not appropriate for the grade level. The books listed as resources; Get it Together... You Majored in What,” Mapping Your Path from Chaos to Career,” and “Job U Developing skills Companies Actually Need,” are all targeted to college graduates involved in a job search or searching for direction after college. Reading level, content and purpose of these books are not relevant to high school freshman.

Year 1, Quarter 4, Area of Exploration, 3 a and b (p. 438)

- a. “Soil- chemical composition, fertilizers, contaminates” “Pest management-Natural and chemical deterrents & pesticides.” Nowhere in the submitted curriculum materials does it state how or when students will acquire knowledge of chemistry. These are freshman and may not know the difference between an element and a compound. Again, there is no curriculum, assessment, accommodations or alignment to Pa Standards for chemistry.

Project Overview (This section is not paginated)

- a. This section provides limited information on a generic template provided by Buck Institute for Education. This section covers approximately 84 pages of the applicant’s projects related to each grade level and quarter. This section adds little detail to the information already provided.
- b. Half of the template is left blank and details provided in the templates diminish as the years progress.
- c. The section of “Project Design: Student Learning Guide,” that includes critical information like learning outcomes, formative assessments and instructional

strategies are left blank in **all** overviews. Much of the accountability is based on Student Inquiry, student teacher meetings, reflection and portfolios.

- d. PA Academic Standards are listed but there is little to no attempt to align teaching and learning or student's work or reflections on the project to those standards.

Hypothetical Scenarios/Examples

- a. The applicant has submitted a sections of hypothetical scenarios of a student completing projects for a quarter or as the project progresses from quarter to quarter. (Tori's Marketing Notes, Bikash, and Curriculum Example: Social Responsibility) All of these scenarios assume students will be self-motivated and will complete the task at a high level. That assumption is at best naive and at worst dangerous. What if the students do not or cannot meet the requirements in the project's rubric? How will the project align with all the PA Standards listed?
- b. These are hypothetical and not based on actual student work or outcomes. It is not possible to assess the hypothetical but some questions still arise.
- c. What if the student does not "buy in" to the project? Where are the resources? Where did the books with esoteric titles on shoes come from? Are they in your library? Will specific resources for all students' interests be available? How? Where?

It is the conclusion of this evaluation that the application is lacking in several areas. There is a pattern by the applicant to propose educational models which are insufficiently supported by academic research. Little research-based, nationally recognized evidence was provided that support the Whole Person Model of Education or its conclusions. Evidence specific to looping is also not cited by the applicant. Application materials are incomplete specific to the educational plan. Citations and supporting evidence lack validity, relevance, or are not provided. There is no plan for grade 12 and the provided framework and scope and sequence is unclear, lacks detail, and does not clearly address PA Academic Standards or how these standards will be met. The applicant failed to provide information on formative and summative assessments. The STAR assessment was identified improperly by the applicant as a measure of literacy, math, reading, science and social students yet STAR does not assess social studies and science. Also, the applicant does not adequately differentiate its model and innovative practices from current educational programming options offered at Pittsburgh Public Schools. Finally, based on the educational models and supporting attachments, it appears the applicant may be replicating the educational strategies and models already employed at City Charter High School.