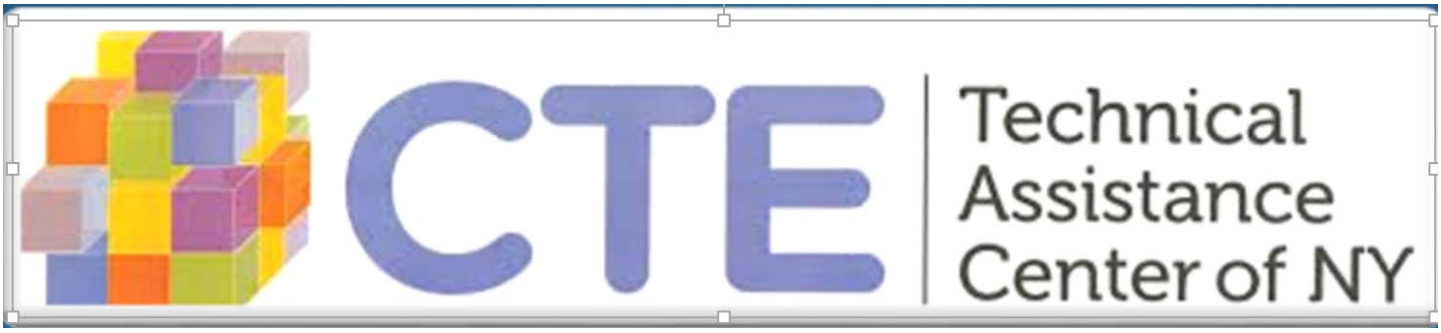

Brighton Central School District 3-12 Career and Technology Education Program Evaluation

May 2018

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Committee Membership

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Introduction

Program evaluation plays a key role in school performance. As a learning community concerned with continued improvement, Brighton Central School District utilizes a program evaluation process to access information about student achievement and how current curriculum, instruction and assessment practices effectively support that achievement. More than an audit, the evaluation uses pertinent data to assess the ongoing efforts to improve student learning. Every five years educators evaluate each content area in grades K-12 to gain a comprehensive view of the district-wide scholastic program. Along with annual reviews of individual grade levels, this study helps the district in its continued efforts to improve instruction. The data used in this evaluative process reveal areas of success and identify areas in need of attention.

The current Career and Technology Education[1] (CTE) program evaluation was initiated in the summer of 2017 and began with a review of the evaluation that was conducted during the 2013-2014 school year. Committee members felt that reviewing this previous work and updating the goals for the CTE program to meet current standards and expectations would result in the most comprehensive evaluation but still represent the work that was done previously. As with most evaluations, two separate dimensions were reviewed; the expectations for student achievement and the capacity of the organization to support the teachers who are members of this department.

Evaluation Design

Evaluating Student Achievement

As stated previously, the evaluation design was created with two objectives:

1.) To evaluate the extent to which Brighton students achieve the goals of the 3-12 CTE program based on New York State and national standards.

2.) To evaluate the extent to which the district supports student achievement through curriculum development, instructional practices and assessment alignment.

During its initial meeting the committee focused on defining the overall goals for student learning across all three types of CTE courses. These goals were thought to be universal to not only the different disciplines making up the 3-12 CTE program (technology education, business, and family and consumer science), but across the various courses found within each discipline.

What are our goals for students in CTE courses?

- **Students will be able to:**
  - Use appropriate technological tools

[1] **Career and technical education** is a term applied to schools, institutions, and educational programs that specialize in the skilled trades, applied sciences, modern technologies, and **career** preparation.

- Apply knowledge, values and skills to be a contributing citizen in a global community
- Develop appropriate “soft skills” (such as leadership, communication, flexibility/adaptability, teamwork, problem solving, work ethic, etc)

- **Students should be confident to challenge themselves in a wide range of courses. Students should not feel pressured to take AP courses.**

- **Students should be knowledgeable about career opportunities and requirements for a variety of careers. They should be able to find and utilize resources for a variety of careers.**

- **Students will be able to:**
  - Think critically and creatively, brainstorm, research, select and apply problem solving methods in rehearsed and unrehearsed situations
  - Use multiple media to develop, produce, and communicate solutions
  - Practice the allocation of resources with an emphasis in time management and self-direction
  - Recognize the interrelationships of the disciplines and apply knowledge of core subjects and 21st century themes to solve problems
  - Gain proficiency on "the process"
  - Take responsible risks, remaining open to continuous learning

Evaluating the Work of the Organization

The second construct for this evaluation focused on organizational supports. The purpose of this examination was to determine the extent to which organizational conditions align to established principles and indicators of high performing systems. Multiple surveys, focus groups, and audits of curriculum maps were used to measure these organizational structures. Areas of inquiry which were determined to be appropriate for evaluation included:

1. Curriculum- Are there systems in place for developing, implementing and renewing curriculum? Is the curriculum aligned across the grade levels? Do the courses offered and/or units of study reflect current trends in CTE education and allow students to meet the academic goals identified previously.

2. Instruction- Is instruction aligned with curricular goals? Is it data driven? Does it actively engage students?

3. Demographic makeup of courses – Do our classrooms reflect our population?

4. Space: Will our facilities support the development of new learning opportunities?

Multiple data types were used to evaluate these constructs including:

1. Focus groups of middle and high school aged students
2. Counselor focus groups
3. Site visitations
4. State conference attendance
5. TCMS and BHS curriculum maps
6. Programs of study from high schools around the region
7. Historical demographic breakdowns of all courses

Unique to this program evaluation was the collection of benchmark data from around the state. During the course of this work, committee members attended the New York State Technology Education conference, thought to be the single best means of learning about the most up to date trends in technology education, and visited several high schools in the region to study their business departments as well as the Eastern Monroe Career Center (EMCC), our district's vocational high school. Results of the analysis of the data for both constructs, Student Achievement and Work of the Organization, follow.

Results

Goal 1: Students will be able to:

- **Use appropriate technological tools**
- **Apply knowledge, values and skills to be a contributing citizen in a global community**
- **Develop appropriate "soft skills" (such as leadership, communication, flexibility/adaptability, teamwork, problem solving, work ethic, etc)**

Analyses of the data indicate the following:

- Students understand soft skills and are able to use our technology offerings although it appears that we need to teach explicitly at the elementary level.
- We offer a variety of up-to-date software applications that provide students with problem solving situations
- All FACS, Business, and Tech classes involve guest speakers and real-life examples that students can apply to their career interests
- FACS, Business, and Tech all have projects / clubs that assist students in developing leadership skills
- MS students can recall information learned
- MS kids really remember what they did in 7/8 grade
- Students getting computer skills (via tablets) in 8th grade result in an increase in their personal productivity

Goal 2: Students should be confident to challenge themselves in a wide range of courses. Students should not feel pressured to take AP courses.

Data analysis resulted in the following conclusions:

- There should be more communication to 8th graders about the availability and variety of CTE courses offered. While a video describing potential electives is available to students, its effectiveness is unclear.
- We need to celebrate or acknowledge students for making non-college choices (i.e. They are career ready because of our courses.)
- Need better communication to all students, parents and counselors about the rigor inherent in all CTE courses. All course projects are open ended with different solutions. Student can go in depth as far as they want or are directed. In addition, students deal with real-life situations that provide experience to help them upon entering the workforce.

Goal 3: Students should be knowledgeable about career opportunities and requirements for a variety of careers. Students should be able to find and utilize resources for a variety of careers.

Data analysis resulted in the following conclusions:

- Students do not routinely connect the content that they are learning in their courses, both core and electives, to any real careers.
- There are a few clubs that make the career connection for students: DECA , Robotics. Should we offer Junior Achievement or other entrepreneurial clubs?
- Students should be made aware of the programs offered through EMCC at an early age (i.e. middle school).
- There has been an increase in the number and types of Internships offered to high school students this year.
- Students should be more knowledgeable about their passions and interests and the connection to possible careers. This communication to students and parents should start at the elementary level.
- Counselors and parents do not have adequate knowledge about the connection between coursework and careers.
- Students don't know what's in the program of studies. They are informed by friends rather than what's actually happening.
- The Future Fridays program started at the high school this year. Can there be a connection between those sessions and CTE courses? Idea: Could we have a career day at the HS? - Part of freshman seminar? Include trades as careers.
- Because college preparedness is the primary goal of the Brighton program, we wonder if we offer enough programming and content for students who are not going to college.

Goal 4: Students will be able to:

- **Think critically and creatively, brainstorm, research, select and apply problem solving methods in rehearsed and unrehearsed situations**
- **Use multiple media to develop, produce, and communicate solutions**
- **Practice the allocation of resources with an emphasis in time management and self-**

direction

- **Recognize the interrelationships of the disciplines and apply knowledge of core subjects and 21st century themes to solve problems**
- **Gain proficiency on "the problem solving process"**
- **Take responsible risks, remaining open to continuous learning**

Results of the data analysis revealed the following:

- There is a lack of understanding among most students about the content and skills taught in CTE level courses. This deficit results in many students not enrolling in these courses.
- By using Microsoft Office applications, as well as a variety of class-specific software (CAD, VB, etc..), students are often finding solutions to problems.
- Many CTE courses use specialized software to develop skills that are transferable to other disciplines. They can apply what they are learning with software to their core courses.
- All CTE courses put students in situations where they need to think creatively and critically.
- Students learn to work interdependently but there is a need to explicitly teach time management.

Goal Area 5: The final goal area that was explored involved reviewing the organizational conditions that are in place to support the CTE program. Areas for this inquiry included the following:

1. Curriculum- Are there systems in place for developing, implementing and renewing curriculum? Is the curriculum aligned across the grade levels? Do the courses offered and/or units of study reflect current trends in CTE education and allow students to meet the academic goals identified previously.
2. Instruction- Is instruction aligned with curricular goals? Is it data driven? Does it actively engage students?
3. Demographic makeup of courses – Do our classrooms reflect our population?
4. Space: Will our facilities support the development of new learning opportunities?

Data analysis of both the qualitative and quantitative data sets allowed committee members to draw the following conclusions:

- There have been a number of new courses introduced in the past few years at the high school in order to keep the curriculum relevant. These include: Video Gaming, Energy & Sustainability, Virtual Enterprise, International Business, and Understanding Design. These additions were a direct result of a responsive CTE staff.
- Units of study at the middle school need to be reviewed for redundancies. There may be opportunities for restructuring the technology education program through a schedule change.
- Business classes at the high school have nearly equal male and female enrollment numbers. However, high school technology classes are typically skewed male.
- The high school business department offers a New York State CTE endorsement for Brighton graduates.

- Not a lot of AP kids are taking technology education or business electives. Students can take tech classes to fulfill a math/science credit. We need to investigate opportunities for using tech-type courses for art credit.
- We currently default courses as students move up through the buildings meaning that students are automatically scheduled into music courses. There are also multiple steps to take to drop students from a certain course. This may inhibit their opportunity to register for CTE classes.
- The district's capital project will affect space. Are there opportunities for excised computer labs to be repurposed into a Family and Consumer Science elective at the high school or an authentic "business-like" setting?
- Lack of awareness of CTE courses by students needs to be addressed. Should we identify a number of "core" classes that can be marketed to students and parents? These should be aligned to specific careers.
- Educate counselors, students and parents on the option to pursue a tech/business strand in lieu of a foreign language.
- As new courses and units of study are developed, there may need to be safety and equipment upgrades.

Discussion and Recommendations

The purpose of this program evaluation was to determine the degree to which Brighton students are learning the skills they need to think critically, solve problems, develop an awareness of career options as well as be prepared to function in their chosen path following their formal Brighton education. This involves developing both the explicit knowledge and skills defined for each discipline within the CTE framework as well as those softer, dispositional skills that will lead to eventual success, regardless of their chosen path. The evaluation design as well as subsequent data analyses led to the conclusion that overall students who continue to participate in Brighton CTE courses achieve the goals defined by the department. Students are offered a wide variety of relevant courses and those that enroll acknowledge the value of the rich content that is a part of each. The problem however is that many students do not participate in these courses during their high school careers. Because of institutional barriers, lack of communication and overall lack of understanding by students, parents and at times, faculty, it was felt by the committee members that the inherent value of an education which included coursework from CTE fields was realized by a minority of students. Based on the overall review, the following recommendations are being made:

1. Develop a better communication plan to assist students, parents and counselors in knowing what courses are taught and what they include. Include identified possible pathways that align to potential careers.
2. Create and execute a career day at the elementary, middle school and high school levels.
3. Explore connecting careers to Festival of Ideas sessions.
4. Incorporate more CTE topics in freshman seminar.

5. Explore and increase the use of Naviance[2] to include parents' access and information dissemination.
6. Update curriculum maps and align to a specific set of standards.
7. Embed deliberate instruction in time management and social skills.
8. Create a "Life 101/personal finance" course and make it a requirement for graduation.
9. If possible, move 6th grade tech requirement into 7th grade (in conjunction w/scheduling committee). This would open up possibility for comp literacy course.

[2] **Naviance** is a comprehensive K-12 college and career readiness solution that helps districts and schools align student strengths and interests to postsecondary goals, improving student outcomes and connecting learning to life.