

Virginia Board of Education Agenda Item



Agenda Item: B

Date: June 28, 2018

Title: First Review of a Request for Increased Graduation Requirements from Buena Vista City Public Schools

Presenter: Mr. Zachary Robbins, Director of Policy

Dr. John R. Keeler, Ed.D, Division Superintendent, Buena Vista City Public Schools

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Purpose of Presentation:

Action required by state or federal law or regulation.

Executive Summary:

Buena Vista City Public Schools (BVCPS) requests Board of Education approval of an additional local graduation requirement, to require all freshmen to take the Information Technology Fundamentals (IT Fundamentals) course beginning in the 2019-2020 school year.

BVCPS proposes requiring all ninth-graders to take this career and technical education (CTE) course to support implementation of the *Profile of a Virginia Graduate* and the 2017 Computer Science Standards of Learning (SOL), unless an Individualized Education Program (IEP) team determines otherwise. Through discussions and surveys with local industries and students, BVCPS identified that students were not developing adequate technology skills that are needed for the workplace, such as problem solving, communication, and collaboration. BVCPS proposes this graduation requirement to address the need for these skills by providing all students with computer literacy skills needed for academic and career success.

This request supports several of the goals identified in the Board of Education’s *Comprehensive Plan*, including the promotion of educational equity for all students, and successful implementation of the *Profile of a Virginia Graduate*. Specifically, the *Plan* guides the Board to “[a]dvance policies that expand equitable learning opportunities” and “reduce barriers to technology access.” The *Plan* also directs the Board to “[e]nsure rigorous standards to promote college, career, and civic readiness” and to “[r]eview and identify best practices, and promising approaches that would benefit local school divisions.” BVCPS suggests in its proposal that the additional graduation requirement will “level the digital playing field for all students” and further a “student culture of equality and inclusion.”

Additionally, the request is consistent with relevant state law and Board of Education regulations and guidance.

Action Requested:

Action will be requested at a future meeting. Specify anticipated date below:

July 26, 2018

Superintendent’s Recommendation:

The Superintendent of Public Instruction recommends the Board of Education receive this request for first review.

Previous Review or Action:

No previous review or action.

Background Information and Statutory Authority:

Section 22.1-253.13:4 of the *Code* (Standard Two of the *SOQ*), authorizes the Board of Education to prescribe graduation requirements and to approve any other graduation requirements prescribed by local school boards:

A. Each local school board shall award diplomas to all secondary school students, including students who transfer from nonpublic schools or from home instruction, who meet the requirements prescribed by the Board of Education and meet such other requirements as may be prescribed by the local school board and approved by the Board of Education...

The *Regulations Establishing Standards for Accrediting Public Schools in Virginia*, or *Standards of Accreditation (SOA)*, in 8 VAC20-131-50, include a provision that requires Board of Education approval of all additional graduation requirements above those prescribed in the standards.

A. The requirements for a student to earn a diploma and graduate from a Virginia high school shall be those in effect when that student enters the ninth grade for the first time. Students shall be awarded a diploma upon graduation from a Virginia high school...

The following requirements shall be the only requirements for a diploma, unless a local school board has prescribed additional requirements that have been approved by the Board of Education. All additional requirements prescribed by local school boards that have been approved by the Board of Education remain in effect until such time as the local school board submits a request to the board to amend or discontinue them...

On October 26, 2006, the Board adopted *Guidelines Governing Certain Provisions of the Regulations Establishing Standards for Accrediting Public Schools in Virginia*, which includes guidance about additional graduation requirements prescribed by local school boards, including the following guidance:

Standard Diploma: Generally, the Board will approve requests from local school divisions to require up to two additional local credits to obtain the Standard Diploma, up to a maximum of 24 required credits.

Generally, the Board will approve local requests for additional graduation credit requirements in the core discipline areas of the Standards of Learning (English, mathematics, science or history/social science). For example, a local request to add one additional credit requirement in history and one in science would generally be approved, because that would not exceed a total graduation credit requirement of 24 and those credits are in the core disciplines.

Requests for additional local credits in disciplines outside the core discipline areas will be considered on a case-by-case basis. In evaluating requests for additional local graduation credits outside the core discipline areas, the Board generally may consider, among other criteria, a local school division's graduation and dropout rates and its students' performance on the Standards of Learning tests.

Advanced Studies Diploma: Generally, the Board will approve requests from local school divisions for local additional credits required for the Advanced Studies Diploma above the 24 contained in the standards if the credits are in the discipline areas of English, mathematics, science, history/social studies, fine arts (including performing arts), career and technical education, or foreign language. The Board will consider credits outside these disciplines on a case-by-case basis.

Transfer Students: Any local school division receiving approval to increase its course credit requirements may not deny either the Standard or Advanced Studies Diploma to any transfer student who has otherwise met the requirements contained in the standards, if the transfer student can only meet the division's requirements by taking a heavier than normal course load in any

semester, by taking summer school, or by taking courses after the time when he or she otherwise would have graduated.

Prospective Application/Advance Notice: A local school division's additional credit requirements should apply only to students who have not yet entered ninth grade at the time the additional credits are approved.

Allocation of Electives: Generally, the Board will approve requests from local school divisions to allocate elective credits for local prescribed course requirements, while reducing the number of electives by an equal amount so that the total number of graduation credit requirements remains unchanged.

For the Standard Diploma, generally the Board will approve allocations of electives to prescribed credits in the core discipline areas of English, mathematics, science, or history/social studies. Requests to allocate electives for prescribed credits outside of the core disciplines will be considered on a case-by-case basis.

For the Advanced Studies Diploma, generally the Board will approve allocations of electives to prescribed credits in the discipline areas of English, mathematics, science, history/social studies, fine arts (including performing arts) or career and technical education, or foreign language. Requests to allocate electives for prescribed credits outside of these disciplines will be considered on a case-by-case basis.

Generally, in addition, a local school division may offer, as an option to students, the opportunity to pursue concentrated courses of study by taking related courses in a specialty area (for example, career and technical education, fine or performing arts), or to choose to take a variety of elective courses. Offering such options shall not require Board approval so long as choosing a particular concentration of elective courses is not mandatory for graduation.

The attached request from BVCPS describes how the proposed new graduation requirement aligns with the Board's guidance for approving additional graduation requirements, specifically:

- The number of credits required to graduate will remain unchanged, because the IT Fundamentals course would count toward one of the four elective credits required for a Standard diploma or the three elective credits required for an Advanced Studies diploma.
- The requirement would only be applicable to incoming ninth graders in the 2019-2020 school year and beyond.
- Transfer students would not be required to take the course if they transfer during or after the ninth-grade year.

Timetable for Further Review/Action:

This item will be presented to the Board of Education for final review on July 26, 2018.

Impact on Fiscal and Human Resources:

The administrative impact of this request is expected to be minimal.

Buena Vista City Public Schools



JOHN R. KEELER, ED.D
Division Superintendent

BROOKE BAKER
School Board Chairperson

ANNA R. GRAHAM
Assistant Superintendent

MARY KAYE BUCHANAN
Clerk of the School Board

To: Dr. Daniel Gecker, President of the Virginia Board of Education

From: Buena Vista City Public Schools

Date: April 19, 2018

Subject: Permission for Additional Graduation Requirement pursuant Standard of Accreditation 8 VAC 20-131-50.

Introduction

Buena Vista City Public Schools continuously strives to develop an ever-evolving vision for our educational programs that will meet the societal, cultural, and economic demands that each of our student-citizens will face upon graduation.

In aligning with Virginia's vision for a high school graduate and the federal vision for the Career and Technical Education core technical standards of study and career readiness, Buena Vista is proposing the following local graduation requirement:

1. Beginning with the 2019-2020 school year, all freshmen will take Information Technology Fundamentals (VDOE SCED Code: 10254 and VERSO Code: 6670) as a local graduation requirement, unless an Individualized Education Program (IEP) team determines otherwise. (*This course will be referred to as IT Fundamentals throughout this request.*)
2. Students transferring in during **or** after their ninth-grade year, will **not** be required to meet this local graduation requirement.
3. A student can choose to utilize this course as an elective to satisfy the Standard or Advanced Studies Diploma options.
4. This course will not be counted as a sequence for the Business/Information Technology pathway.

The Buena Vista City Public Schools school board approved the Information Technology Fundamentals course as a local graduation credit, pending state approval, at their January 25, 2018, school board meeting.

It is our commitment to every student in our charge that the following instructional competencies defined by the Assessment and Teaching of 21st Century Skills (ACT 21) not only be implemented in our high school, but implemented in such a way as to be measurable, balanced, researched and data driven:

1. VDOE's Career Exploration (Federal: Ways of Thinking)
 - a. Creativity and innovation
 - b. Problem-solving
 - c. Life-long learning strategies
2. VDOE's Workplace Skills (Federal: Ways of Working)
 - a. Teamwork
 - b. collaboration
3. VDOE's Content Knowledge (Federal: Tools for Working)
 - a. Information and communication literacy
4. VDOE's Community Engagement and Civic Responsibility (Federal: Living in the World)
 - a. Life and career soft skills
 - b. Global citizenship
 - c. Personal and social responsibility (Lai, 2012)

With our primary focus on alignment with Virginia's "Profile of a Graduate" and Virginia's current passage of the computer science standards of learning in November, of 2017, we determined that the IT Fundamentals course can be used address these standards and be the building block for all of our CTE programs. Additionally, our research has shown that this high-school level course aligns with the community college-level Information Literacy course (ITE 119).

When our local CTE instructional team, our division administrative team, and the local CTE Advisory Board decided to address how to best prepare our students for college and workplace readiness, we first agreed that:

- ✓ Our research and surveys would be focused on meeting the new state and federal educational standards **and** the needs of our regional employers and community college.
- ✓ The number of credits required to graduate will remain unchanged.
- ✓ The requirement would only be applicable to incoming ninth graders in the 2019-2020 school year and beyond.

After many hours of meetings, facility tours of our local industries, and locally administered surveys for our students and industry leaders, we found that developing a strong foundational course that would give students the opportunity to:

1. Develop personal, workplace readiness, academic and citizenship skills
2. Develop content on foundational topics for every discipline in our CTE program
3. Have direct access to experts in occupational fields such as computer science, computer hardware, engineering, web design, and ethical and legal issues impacting our programs through:

- a. Field trips
- b. Skype interview
- c. Nepris session
- d. Explorations through Google Hangouts
4. Significant opportunities for peer idea exchanges
5. Interact with and learn from our local student leaders in our programs and area businesses

We reviewed all courses on the Virginia's Educational Resource Online center.

Because IT Fundamentals is:

- ✓ A CTE course
- ✓ Will count toward one of the elective credits required for graduation
- ✓ Can build the foundation we strive to implement
- ✓ Will provide data for evidence-based learning through the use of IC3 testing

Our team feels the course meets all tenets set forth by our three guiding dictums.

Additionally, it is the opinion of our panel that this course provides a strong building block that supports and encourages our students to further pursue our other CTE programs of study because it affords all our student population the opportunities to:

1. Learn to set and measure goals
2. Develop/practice communication skills (verbal and written)
3. Develop/practice problem-solving through inquiry
4. Develop/practice ethical use of digital media/digital literacy
5. Develop foundational understanding of computing devices (hardware)
6. Develop foundational understanding of network infrastructure
7. Develop/practice foundation programming skills
8. Develop/practice 3D modeling skills
9. Develop/practice design thinking
10. Develop/practice problem-based learning

We appreciate your time in considering our local graduation requirement proposal. We have also attached our survey results and the detailed course description for your consideration. We look forward to further sharing our course with you at a board meeting.

Sincerely,

Brooke Baker [SIGNATURE ON FILE]
School Board Chair

John Keeler, Ed.D. [SIGNATURE ON FILE]
Division Superintendent

Multiple Pathways Opened by Course

In the present, educators stand on the precipice of unimaginable changes in the industrial sector of society. We have witnessed staggering amounts of disruptive technological innovation that has proliferated into every aspect of our working and personal experiences.

Buena Vista City Public Schools is developing the blueprint for our division that will drive forward the instructional decisions that will afford **every** student universally accessible and sound pedagogical and diverse training in digital learning opportunities.

It is our premise that all students should have ubiquitous access to the depth and breadth of technologies available today. Further, it is our obligation to provide students access to digital learning content and tools that deliver engaging and relevant learning experiences.

It is our hope that access to this course can facilitate in our students:

- ✓ A new vision of future demands/expectations
- ✓ Exposure to a new learning pedagogy that is focused on creating content
- ✓ A conceptual and basic working understanding of the design process
- ✓ Essential understanding of a global community and a global audience
- ✓ Enhance the development of student persistence when working through complex problems
- ✓ Enhance computational thinking
- ✓ Establish habits of rigorous learning in our youngest students (Daggett, 2015)

Potential Career Pathways for this course (as identified in the Virginia CTE Career Clusters) include:

1. Architecture and Construction
 - a. **Introductory** exposure to Sketchup, Professional Edition
2. Information Support & Services Pathway
 - a. **Introductory** exposure to Microsoft Office Suite
3. Marketing
 - a. **Introductory** exposure to visual narratives
 - b. **Introductory** exposure to development of personal blog/website
4. Network Systems Pathway
 - a. **Introductory** exposure to computer and network hardware structures
5. Printing Technology
 - a. **Introductory** Exposure to Publisher and InDesign
6. Programming & Software Development Pathway
 - a. **Introductory** exposure to Python
7. All STEM Related Pathways
 - a. **Fundamental** cybersecurity concepts are built into all units of instruction throughout the school year.
8. Visual Arts
 - a. **Introductory** exposure to Paint.net and Photoshop
9. Web & Digital Communications Pathway
 - a. **Introductory** exposure to website development

These pathways identified directly correspond to the programs offered within our high school. Due to our small staff, we partner as much as possible, and within our budgetary constraints, with Dabney S. Lancaster, our local community college, and the Rockbridge County Vocational Center. However, it should be noted that our students are only given “left-over” slots in the county’s program. Many years, there are no openings for our students.

In requiring this course of our students, we are providing them the basic skills that can carry over into multiple CTE fields and internship and service learning opportunities within our local community.

Based upon our student population, this course will provide the introductory digital fluency skills essential for academic and workplace success. Additionally, we are hoping that we, as an educational institution, spark the imagination curiosity of our students. By leveling the “digital playing field” for all students, we can build a student culture of equality and inclusion. If a student decides to pursue other CTE courses in their areas of interest, research has shown this will ultimately lead to a more rewarding educational experience. Current Virginia CTE data affirms this. CTE concentrators have a 97% on-time graduation rate versus an 86% Virginia average (Advance CTE, 2017).

The IT Fundamentals course directly relates and feeds into the following course pathways:

Table of CTE Possibilities for Parry McCluer High School Students

Completer Sequence	Architecture and Construction	Arts, Audio/Video Technology and Communications	Business	Cybersecurity	Information Technology	Marketing
Course 1	Cabinetmaking I or Carpentry I	Graphic Communication Systems	Computer Information Systems	Cybersecurity Fundamentals	Programming	Marketing or Sports Marketing
Course 2	Cabinetmaking II or Carpentry II	Video and Media Technology	Advanced Computer Information Systems	Cybersecurity Software Operations	Advanced Programming	Advanced Marketing
Industry Certification Exam	NOCTI Cabinetmaking or NOCTI Carpentry	Brainbench Desktop Publishing Certification Tests	Microsoft Office Specialists Exams	Security +	AP CS Principles Exam and/or AP CS A Exam	Workplace Readiness Exam

While in high school, our students can complete as many as **two program pathways** and earn up to three industry certifications as well as three dual-enrollment credits. Dual-enrollment credits are given for:

- Our cybersecurity courses
- Advanced Computer Information Systems

*Special notation: If a student passes the AP CS A exam, our local community does award a dual-enrollment credit.

Course Requirement Checklist

Purpose and objectives of the locally mandated course:

Purpose

To ensure that every student in our high school – regardless of language, race, ability, economic status, or gender – has the opportunity to fulfill their potential and develop the cognitive, digital, and creative skills mandatory for successful integration into the rapidly expanding digital aspect of the 21st century workforce.

Global Objectives Desired by Implementation

**We will be using the specific competencies identified by the Virginia Business/Information Technology umbrella.*

1. Students will develop the basic skills necessary to function in the day-to-day business operations through a variety of duties including information management (Word), create personal and/or business spreadsheets (Excel), execute basic data processing tasks (Access) and, communication management (e-mail etiquette).
2. Students will develop a foundational knowledge of computer systems infrastructure and feel confident in providing rudimentary technical assistance, and correctly manage their own information systems.
3. Students will develop an introductory working knowledge of a network system infrastructure for business or home use.
4. Students will develop the fundamental skills required to keep their digital devices and personal identifies secure; this will include their personal impact on a school or business digital environment.
5. Students will develop foundational skills in data assessment by learning to create questionnaires and assess data feedback. This knowledge can be used to bridge understanding of the types of data, framing of data in forming questions, and the biases that inherently come with interpretation.
6. Students will develop foundational skills to design, create, and produce interactive multimedia products and services, including digitally-generated or computer-enhanced media.
7. Students will develop the foundational skills necessary for understanding the software development cycle and the design process that must be implemented for the successful completion of a working program.
8. Students will develop the ability, regardless of their career goals, to feel justifiably confident of their ability to read, write, and debugging small software programs using the Python programming language.
9. Students will develop written communication skills for real audiences by responding to authentic, emerging technologies in their twice-weekly blog entries. Students will be required to identify at least one beneficial and one harmful effect brought about by the innovation in each entry.
10. Students will be able to design, create, and produce a basic web site based on purpose and audience. Students will plan and create a site map using meaningful relationships between the pages and elements. Additionally, students will add their own projects to the site to build a digital portfolio of work.

Description and duration of the program:

Description

The course will be directly mapped to the Virginia CTE Information Technology Fundamentals (6670) course.

Duration

The course will be offered for 36 weeks (full school year).

Anticipated Outcomes

1. Closing the digital divide, which exists in our student population.
2. Exposing students to multiple ways to approach information and communication.
3. Provide students with opportunities to express what they know in a multitude of ways.
4. Begin the process of moving our students towards becoming active, creative users of technology.
5. Igniting interests in other CTE offerings in our high school.
6. Spark an awareness of how their digital decisions can have a far-reaching impact on our society.

Number of Students Affected

Every ninth grade student in our building.

Evaluation Procedures

The class will be observed and data analyzed each nine weeks by our evaluation team, which will include:

- ✓ Building administrators
- ✓ Division director of technology
- ✓ Facilitating teacher

The evaluation will include formative and summative assessments from teachers and students. This evaluation cycle will continue until we (as division administrators) can conclude, based on data-driven evidence, that the course has struck the correct mode of instruction necessary to meet each desired objective.

Our measures will be based upon the Objectives and Key Results process. With each evaluation iteration, team will decide:

1. What should we do next to make this course successful?
2. What are the areas of focus?
3. How far have we come in meeting our objectives?

Mechanisms for measure goals, objectives, and student academic achievement

Goals, timeframes, and mechanisms of measurement will be transparent and openly communicated with the team.

1. Dynamic formative assessments
 - a. Using Google forms
2. Summative assessments
 - a. Using quiz/test/project data
3. Classroom visits
4. IC3 testing data

**Career and Technical Education Department
Parry McCluer High School**

Mandatory Freshmen Course Description/Rationale

Course Prefix & Number 6670

Course Title Information Technology (IT) Fundamentals

Pre and/or Co Requisites
(specify which are pre, co, or both) None

Duration 36 weeks

Core Requirement Local Core for Graduation: (Categories addressed below)
Individual and Society Digital Literacy
Computer Science

Grading Method Default grade scale

2. Course Description:

Information Technology (IT) Fundamentals introduces the essential technical and professional skills required for students to pursue programs leading to professional careers and IT certifications.

Students investigate career opportunities and technologies in four major IT areas:

- A. Information Services and Support
- B. Network Systems
- C. Programming and Software Development
- D. Interactive Media.

Students will evaluate the impact of IT on other career clusters.

The focus of the IT Fundamentals course is:

- A. The introduction of skills related to basic information technology
- B. Internet fundamentals
- C. Network systems,
- D. Computer maintenance/upgrading/troubleshooting
- E. Computer applications
- F. Programming
- G. Graphics
- H. Web page design and interactive media

Students also explore ethical issues related to computers and Internet technology and develop teamwork and communication skills that will enhance their employability.

Course Reading/Writing Requirement: Students will be expected to write twice-weekly blog entries (a highly effective form of connective writing) on a current technological innovation (current or future) and its harmful and beneficial effects on society, economy, or culture. Instructor(s) will use the Hochman Method utilized in the Writing Revolution pedagogy.

Rationale for Reading/Writing Component:

This requirement not affords the student the opportunity to stay informed, and develop a sense of global awareness through exposure to accurate, scholarly readings.

It is imperative that our students become master craftsmen in writing, reading, and critical thinking to achieve maximum success in their future vocations. Reading/writing is a powerful tool set that enables you to learn anything. Continued practice and focus across the curriculum allows optimum proficiency development.

Furthermore, according to Jonas Prising, Chairman and Chief Executive Officer of Manpower Group,

“Learnability is the path to career security. In an environment where new skills emerge as fast as others become extinct, employability is less about what you already know and more about your capacity to learn. By focusing on learnability – the desire and ability to adapt your skills to remain employable – millennials are redefining career security. Ninety-three percent [of employers] want ongoing skills development and four out of five say the opportunity to learn a new skill is a top factor when considering a new job” (Prising, 2016).

IC3 Exam (Global Standard Five) Opportunity: Each student in the course will be given direct instruction on the global standards identified in the IC3 exam. Students with an IEP may be exempt from the test if an Individualized Education Program (IEP) team determines this test is not beneficial to the student.

Rationale for the IC3 Exam:

According to the *2017 IT Skills and Salary Report* from Global Knowledge:

“The top issue on the minds of IT decision-makers in organizations of all sizes is whether their teams have the skills needed to meet organizational goals. Globally, 68 percent of IT decision-makers responding said their teams presently face a shortage of necessary skills. (Global Knowledge, LLC, 2017)”

- ✓ It is a globally recognized entry-level standard of accomplishment.
- ✓ The IC3 exam is a Virginia recognized industry certification.
- ✓ Virginia recognizes that certifications validate the essential skills in each of the CTE occupational areas. The IC3 exam establishes a measurable baseline that prepares each student for growth into *any* CTE program the individual student pursues. (Certiport, 2018)

3. Rationale for Mandating the Course:

Digital literacy is no longer a luxury; it is a requirement. This course is not meant to be an intermediate-level, comprehensive course, but a **basic** exposure to core skills necessary for effective functioning in the 21st century work environment.

Students can and should find an area they can be passionate about and undertake the next academic level in our specialized program areas.

“While they (students) may interact daily with computers and cell phones, many students don’t usually understand basic use, best practices, and safety risks. We must educate students to be successful in our digital world (Meyer, 2018).”

4. Consultation Statement

- a. Is the proposed change likely to affect our other CTE programs?
YES and NO

YES - It will require additional teachers, so other course offerings may be offered only on a biennial basis.

NO – Exposing students to each of the VDOE mandated areas in IT Fundamentals is equivalent to exposing them to an exploratory in each of our CTE areas; this can/should lead to increased interest and enrollment for all of our program areas.

Proposed Syllabus

Information Technology Fundamentals Syllabus

Instructor	PMHS CTE Department
Phone	(540) 261-2127
Class Page	TBD
Email	TBD
Course Materials	<u>Computer Literacy A Comprehensive Approach Guide to IC3 Fifth Edition</u> Authors: Morrison, Wells, and Ruffolo © 2015 <u>Digital Multimedia</u> Authors: Bean and Lake © 2010
Resources	<u>edhesive</u> Online resource used to teach Python Gmetrix Online resource used for training and practice tests for the IC3 exam. Additional resources may be added at the instructor's discretion.
Homework Policy	This course requires minimal homework; it will be assigned only when missed school days necessitate it to prepare for the IC3 exam.
Additional Information	This course offers each student the instruction needed to pass the <u>IC3 Digital Literacy Exam</u> (Global Standard 5). This exam is broken down into three major skill areas: <ul style="list-style-type: none">- Key Applications- Computing Fundamentals- Living Online

Course Schedule

Marking Period	Competencies
Throughout Course	Demonstrating Workplace Readiness Skills: Personal Qualities and People Skills Demonstrating Workplace Readiness Skills: Professional Knowledge and Skills Examining All Aspects of an Industry Cybersecurity Workforce Competencies
First Quarter	Mastering Information Technology Basics Using Computer Applications (IC3)
Second Quarter	Investigating Computer Fundamentals (IC3) Maintaining, Upgrading, and Troubleshooting Computers Exploring Network Fundamentals Exploring Internet Fundamentals
Third Quarter	Exploring Programming Basics
Fourth Quarter	Exploring the Basics of Web Page Design Exploring Graphics and Interactive Media Exploring 3D Printing/Modeling Software (SketchUp) Living Online (IC3)

Survey Results

Methodology

Questions for the industry and student survey were constructed using the ideals developed for Virginia's "Profile of a Graduate."

Surveys were administered:

- ✓ Using Google Forms.
 - Participant responses were anonymous, however, we did require an e-mail before entering the form to verify that identified stakeholders only submitted a response.
 - Industry representatives were asked to rank (1-5 Scale) 21st Century workplace skills in order of importance
 - Students were asked if they had participated in these same identified 21st Century skills, but skills categorized as classroom instructional components incorporated into lessons.

Stakeholders defined:

- ✓ The Buena Vista City Public Schools Career and Technical Advisory Board
- ✓ Current Parry McCluer High School Career and Technical Education students.

Feedback collected:

- ✓ Using Face-to-face meetings with area industry leaders
- ✓ Using facility tours
 - Debriefing after tours
- ✓ Using face-to-face classroom discussions with our CTE students

Snapshot of our Findings

- The majority of industry respondents reported that they agree or strongly agree that the skills we identified in the survey are ones used in our area's current job market and are **necessary** skills that should be incorporated into the school day instruction.
- Potential job candidates who have been in programs that continuously develops 21st century skills in the school is positively correlated with a higher perceived value by 100% of our industry survey participants.
- Across the 21st century skills included in this survey, problem-solving, communication skills, and flexibility are the significant skills desired for optimum work quality by our area industry representatives.
- Although a wide majority of our student respondents reported using computers and technology to complete assignments or projects in school, only 34.8% report they used technology for collaboration, indicating that students are not developing the type of advanced technology skills that would be used later in the workplace.
- Additionally, areas of concern as we analyzed our student responses:
 - Only 34.8% say they use real-world problem-based learning as part of a collaborative assignment on a regular basis.
 - Only 13% of our students report very having used 3D modeling in any form.

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