FITC Institute Final Report
Appendix M

Curriculum Analysis Report:

A Sample of High School Technology-Related Courses

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1. Introduction

Current researchers (e.g., Iskander, Gore, Furse, & Bergerson, 2013; Ullman, 2012) have reported that high school technology education can expand post-secondary student participation in STEM (science, technology, engineering, and mathematics) because high school is a pivotal time for students to "become aware of potential STEM careers and connect these career decisions to their educational decisions" (Hall, Dickerson, Batts, Kauffmann, & Bosse, 2011, p. 41). Despite the importance of the high school time on students' future educational and career goals, research also suggests that high school students are largely unaware of career opportunities in the STEM fields (Cantrell & Ewing-Taylor, 2009) as well as the skills required to pursue post-secondary education or careers in computing fields (Ernst & Clark, 2012). Part of this problem may be due to the fact that, although there is an increasing emphasis placed on the importance of high school STEM education, the focus of enlarging the STEM pipeline is high school mathematics and science education as opposed to engineering or technology (Cantrell & Ewing-Taylor, 2009).

Computing education in K-12 helps students become more familiar with computing concepts and prepares them for post-secondary education or career attainment in the technology industry, in turn allowing them to better meet the needs of employers (Randolph, 2008).

Although technology education has been cited as one of the areas that must be improved in order for the United States to remain technologically competitive, technology courses such as computer science (CS) are not offered in all public high schools, and the schools that do offer computing courses tend to focus on "rudimentary user skills" as opposed to more advanced topics such as problem solving (Cantrell & Ewing-Taylor, 2009; Randolph, 2008; Ryoo et al., 2013, p. 162). Furthermore, research reports that high school computing teachers are often under-prepared to teach more advanced technology concepts, and they have few opportunities to develop their content knowledge or pedagogical strategies (Ryoo et al., 2013).

To understand how students can navigate technology education and career pathways from high school to two- and four-year colleges and universities, researchers from the Florida IT Career Alliance (FITC)[1] assessment group examined how necessary technology knowledge bases and skill sets have been developed and implemented into current high school technology education courses in North Florida. Two questions guided this investigation:

1) To what extent are technology course learning outcomes and content coverages aligned among selected high schools; and
2) To what extent does the content reflect relevant technology learning frameworks and industry certifications?

To answer the research questions, we performed a syllabus analysis. Syllabus analysis is a subset of curriculum analysis, a process that is commonly used to illustrate academic program content. At the core of curriculum analysis is course syllabus analysis, an efficient and non-obtrusive means of assessing knowledge and skill sets within a curriculum (Apigian & Gambill, 2008; Madson, Melchert, & Whipp, 2010; Veltri et al., 2011; Willingham-Mclain, 2011). A course syllabus, which contains information such as course schedules, assignment descriptions, student learning objectives, subject content, and grading criteria, is a "contract" between the instructor and the student, a permanent record for academic institutes, and a reference tool for students (Parkes & Harris, 2002). In this study, we compared the student learning outcomes listed in technology course syllabi to relevant standards in selected technology curriculum frameworks.

2. Method

2.1 Data Collection

Based on the comprehensive course description and immediate availability of technology course syllabi in participating FITC high schools, we used a purposive sampling data collection method in this study. Within the sample, a total of 57 technology-related syllabi were collected from 15 high schools across four North Florida counties. The four school districts included Bay County, Duval County, Gulf County, and Leon County, as shown in the highlighted areas of Figure 1.

[1] **http:://fitc.cci.fsu.edu**

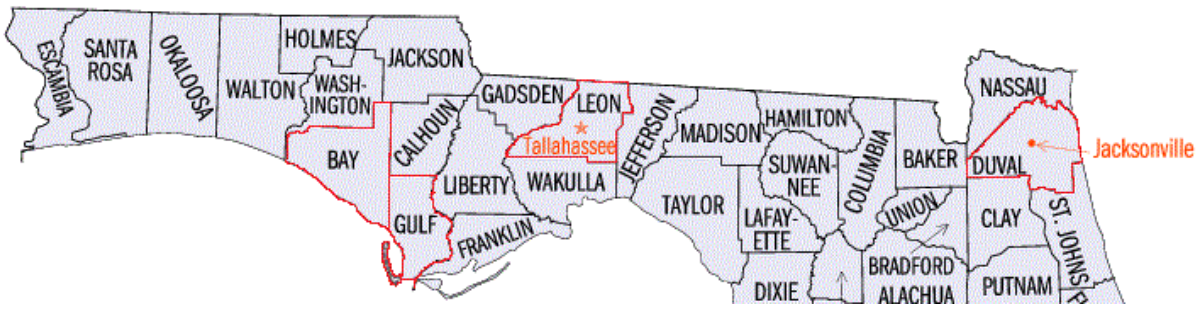

Figure 1. Map of sample north Florida school districts[2]

Although, as Figure 1 suggests, the districts are roughly of the same geographic size, they serve widely varying numbers of school buildings and students in their buildings. The Bay County school district has 50 schools, while Duval County has 201 total schools, Gulf County has 8 schools, and Leon County has 64 schools. Table 1 shows the collected technology course syllabi by school district ranging from four to 26. Basic descriptive information of individual school districts is also provided to give a sense of the district's overall size.

Table 1: Number of technology course syllabi by school district and related school district characteristics[3]

School District	Course Syllabi	Schools (PK-12)	Student Enrollment
Bay County	11	50	26,634
Duval County	26	201	125,686
Gulf County	4	8	1,930
Leon County	16	64	33,432
Total	57	323	

2.2 Data Analysis

The unit of analysis was an individual syllabus from a high school technology related course. We collected a total of 57 syllabi, but 3 were excluded because they were duplicates. As a result, 54 syllabi were analyzed for their alignment with the Florida Department of Education (FLDOE) technology curriculum frameworks from the *Information Technology* and *Engineering & Technology Education* Career Clusters.

For the purposes of this research, "alignment" is defined as a linear relationship between the content standards listed in the FLDOE technology curriculum frameworks and the learning outcomes extracted from the syllabi. We extracted learning outcomes from each syllabus (N=54). Learning outcomes can appear in various syllabus sections, such as *Course Description, Learning Outcomes, Course Objectives, Course Outline,* or *Weekly Assignment.* The learning outcomes from each syllabus were then compared to their counterpart content standards

[2] Adapted from United States Census Bureau, State & County Quick Facts. Retrieved January 26, 2015 from http://quickfacts.census.gov/qfd/maps/florida_map.html

[3] Demographic information reported by National Center for Education Statistics (NCES) in the Common Core of Data. Retrieved from http://nces.ed.gov/

conveyed in the FLDOE technology curriculum frameworks based on keyword matches, as shown in Figure 2a and 2b. For instance, the syllabus learning outcome "The student will learn to use *Cascading Style Sheets*," would be matched to the FLDOE content standard "Use *Cascading Style Sheets* (CSS)." The alignment between the FLDOE content standards and the syllabus learning outcomes was then measured as a percentage. For example, if the FLDOE listed 20 content standards for a particular course, and a syllabus contained 10 learning outcomes that matched to 10 of the FLDOE learning outcomes based on keyword matches, then the syllabus would be determined to demonstrate 50% alignment with the FLDOE technology curriculum framework for that course. An example of the extraction, matching, and alignment calculation is provided below in Figure 2a and 2b.

Foundations of Web Design Syllabus
9001110
2014 – 2015

Instructor:
Email:
Phone:
ETextbook: My Graphics Lab – Adobe Dreamweaver CS6, Classroom in a Book. Pearson Education Resources: GMetrix & Adobe Creative Suite 5 Certification Prep BASICS

Software Applications: Adobe Dreamweaver CS6, Adobe Photoshop, Text Editor

Course Description: This course focuses on helping students learn coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers such as an Assistant Web Designer, a Web Designer, and Senior Web Designer in the Information Technology career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Information Technology career cluster. The content includes but is not limited to operating system commands and web document development, design, promotion and scripting. Students will gain knowledge and understanding of web development essential concepts, components, terminology, software applications, and delivery systems. Students will acquire a working knowledge, an understanding of capabilities, and demonstrate knowledge through the creation of projects. Personal and interpersonal skills will be implemented to prepare for a workplace environment. The knowledge and skills acquired and practiced will enable student to successfully perform and interact in a technology-driven society. Students will enhance their reading, writing, computing, communication, and critical thinking skills by applying them to the information technology environment. Upon completion of this course students will have the opportunity to earn the Adobe Certified Associate (ACA) industry certification in Dreamweaver CS6.
Course Standards: The State of Florida Department of Education specifies that in preparation for every course, students achieve learning outcomes. Students are graded on achievement and what is **earned**. Students will successfully achieve course requirements if they are prepared for each session and participate to the fullest extent allowed. Each student is to maintain a high standard of honesty, ethical behavior, and professionalism. All documents created during this course, as covered in this syllabus are to be typed and submitted on time.
Course Objectives: Upon the successful completion of this course, a student will be able to:

- Demonstrate proficiency in website planning and the design process.
- Develop markup language structures.
- Create basic webpages.
- Incorporate images and graphical formatting on a webpage.
- Create a basic table structure.
- Incorporate form structures in a webpage.
- Describe frame structures and their usages.

- Use Cascading Style Sheets.
- Examine web design technologies and techniques.
- Describe the process for publishing a website.
- Describe how website performance is monitored and analyzed.
- Create and informational website.
- Demonstrate language arts knowledge and skills.
- Demonstrate mathematics knowledge and skills.
- Understand and apply digital media copyright laws for educational Web content.

Figure 2a. Example of a high school syllabus with learning outcomes highlighted

2013 – 2014

Florida Department of Education
Student Performance Standards

Course Title: **Foundations of Web Design**
Course Number: **9001110**
Course Credit: **1**

Course Description:
This course is designed to provide students with opportunities to acquire and apply foundational skills related to web design.

25.0	Demonstrate proficiency in website planning and the design process
26.0	Develop markup language structures
27.0	Create basic webpages
28.0	Incorporate images and graphical formatting on a webpage
29.0	Create a basic table structure
30.0	Incorporate form structures in a webpage
31.0	Describe frame structures and their usage
32.0	Use Cascading Style Sheets (CSS)
33.0	Examine web design technologies and techniques
34.0	Describe the process for publishing a website
35.0	Describe how website performance is monitored and analyzed
36.0	Create an informational website
74.0	Demonstrate language arts knowledge and skills
75.0	Demonstrate mathematics knowledge and skills
76.0	Demonstrate science knowledge and skills

Figure 2b. FLDOE Technology Framework with Matching Learning Outcomes Highlighted

Figure 2a presents an example of a course syllabi for the *Foundations of Web Design* course. The school name as well as the teacher's name and contact information have been removed. The highlighted portions of the text represent the learning outcomes that were extracted for comparison to the FLDOE technology curriculum frameworks. Figure 2b shows the 2013-2014 FLDOE curriculum framework for the *Foundations of Web Design* course. As with the course syllabus, the highlighted portions of the text are the content standards that were matched to the extracted syllabus learning outcomes based on keyword matching. The FLDOE framework specifies 15 content standards for this particular course. The syllabus provided lists 14 learning outcomes that match to the FLDOE. Therefore, this course was determined to demonstrate approximately 93% alignment with the FLDOE technology curriculum framework for this course.

The FLDOE Career & Technical Education (CTE) Programs reflect input from both educators and industry representatives. The curriculum frameworks specify a variety of Career Clusters, such as *Agriculture, Food, & Natural Resources Home, Engineering & Technology Education,* and *Information Technology*. Each Career Cluster is further broken down into individual program frameworks. Each framework contains detailed student learning outcome requirements. In particular, a comprehensive list of technology-related frameworks in both the *Information Technology* and *Engineering & Technology Education* career clusters cover the technology-related curriculum standards for the *Secondary Courses/Programs* and *Degree & Certificate Programs*. The Information Technology Career Cluster frameworks were mostly from 2013-14. We compiled all of the standards listed here to form the basis for the high school technology syllabi analyses.

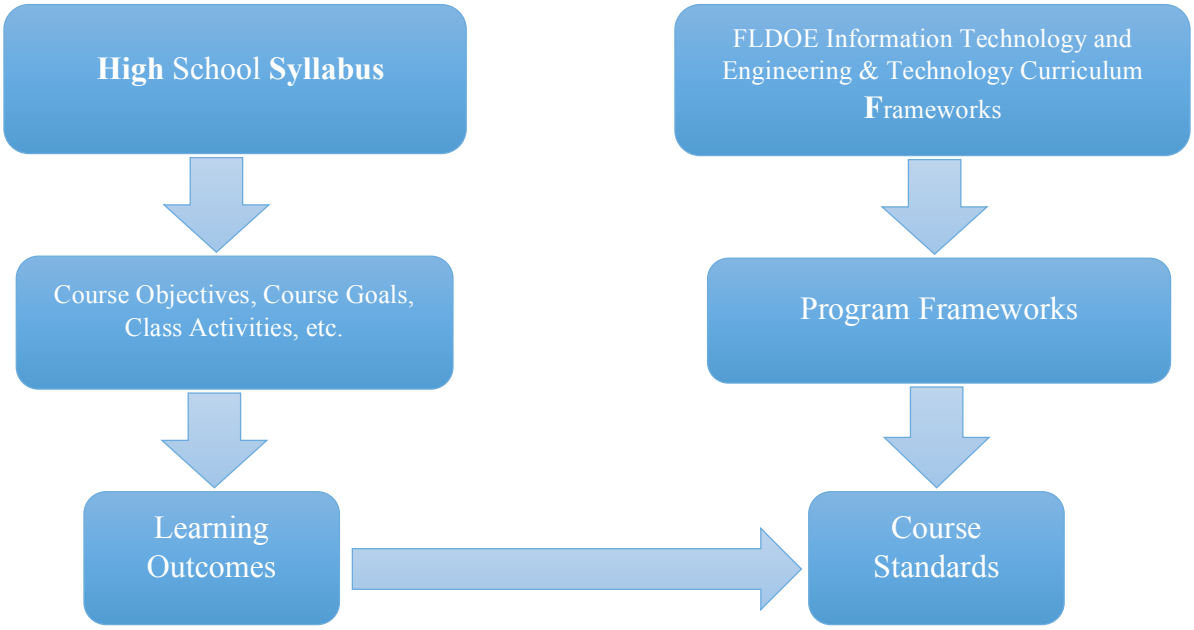

Figure 3. Overview of syllabus analysis method

We then compared the syllabi learning outcomes to the competencies/content standards through automated keyword matching strategy. The keywords were technology concept words and phrases derived from FLDOE technology curriculum frameworks' learning outcomes. Additionally, some syllabi in the sample listed specific industry certifications the students may attain. The certification titles were extracted from the syllabus and sorted by name and district to determine the most frequently listed certifications.

2.3 Intercoder Reliability

We tested the analysis method with intercoder reliability. After the initial round of analysis was conducted, another member of the FITC Assessment team repeated the comparison of learning outcomes to the FLDOE technology curriculum frameworks and determined the level

of alignment with the FLDOE. The second round of analysis resulted in more than 80% reliability.

2.4 Limitations

Due to the scope of the assessment plan, course syllabi were analyzed only for their alignment with the FLDOE technology curriculum frameworks. To gain a more comprehensive view of technology education at the high school level, further research may examine the relationship between the FLDOE frameworks and other course materials such as textbooks and assignments, student and teacher interaction inside and outside of the classroom, and informal learning opportunities.

Furthermore, the quality and amount of data were limited. We received 57 syllabi, of which 54 were usable; this small amount of data affects the generalizability of the findings. A larger sample of high school syllabi would allow for a deeper understanding of how high schools are preparing students to either work in the technology industry or pursue further education in technology-related fields.

3. Findings

We analyzed high school technology course syllabi (N=54) for the extent to which they reflected the FLDOE technology curriculum frameworks and the extent to which the syllabi reflected preparation related to industry certifications. Figure 4 provides a breakdown of the course topics.

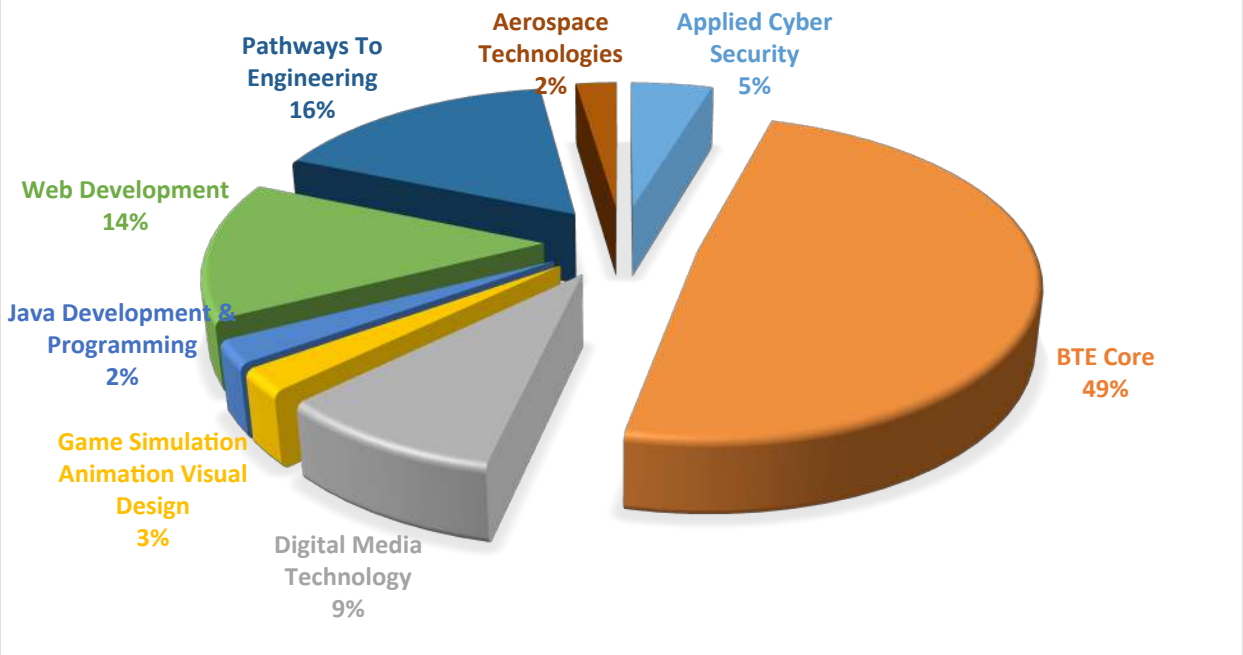

Figure 4. Percentages of types of technology-related courses (N=54)

As the figure shows, Business and Technology Education (BTE) courses were the bulk of the provided syllabi (26 syllabi or 49%), followed by Pathways to Engineering courses (9 syllabi or 16%), Web Development (7 syllabi, or 14%), Digital Media Technology (5 syllabi or 9%), and Applied Cybersecurity (3 syllabi or 5%). The least frequently offered courses were Game Simulation and Animation Visual Design (2 syllabi, or 3%), Java Development and Programming (1 syllabus) and Aerospace Technologies (1 syllabus).

3.1. Alignment between Technology Course Syllabi and FLDOE Standards

In the first set of analyses, we calculated the extent to which the keywords in the FLDOE curriculum standards and frameworks were reflected in the technology course syllabi gathered from Bay, Duval, Gulf, and Leon Counties.

Of the 54 courses analyzed, the most frequently recurring course title was *Introduction to Information Technology* (n=16). Many schools from Duval County offered this course and Duval County's syllabi reflected 100% alignment with the FLDOE framework learning outcomes. Next was Gulf County with 96.2% framework alignment and finally, Bay County and Leon County with 40.7% and 33.3% framework alignment.

The next most frequently occurring courses were engineering courses (n=3) and digital design courses (n=3). The three engineering courses included *Introduction to Engineering, Introduction to Engineering Design,* and *Principles of Engineering*. Godby High School from Leon County and Robert E. Lee School from Duval County followed the FLDOE standards most closely with 60% alignment while the remaining schools followed the standards less closely with alignment percentages ranging from 30% to 50%.

Digital Design and *Digital Media Production* courses from Bay County and Leon County reflected lower levels of alignment with the FLDOE standards at 13% and 30%, respectively. However, *Digital Media Production* and *Digital Media Fundamental* courses from Duval County schools reflected a 100% alignment with FLDOE standards and frameworks. Bay, Duval, and Leon Counties all had *Web Design and Development* courses. The courses in Bay and Leon reflected the FLDOE standards' frameworks at 100%. Duval's high schools also demonstrated a high level of alignment to the frameworks except for two high schools: Duval County's Sandalwood Academy of Information Technology, a specialized technology academy, had 40% alignment while Atlantic Coast High School demonstrated 66.6% alignment to the FLDOE frameworks' content standards.

When compared to schools in other counties, Bay County's A. Crawford Mosley High School offered 2 unique courses. *Advanced Placement Computer Science (Java)* and *Game & Simulation Foundations,* which had 78% and 46% alignment (respectively) to the standards. Mosley High School also offered information security-related technology subjects that had 100% alignment with FLDOE's frameworks.

Godby High School from Leon County provided syllabi for courses related to finance and accounting as part of their technology-related offerings. Gulf County's Wewahitchka High School offered core IT courses in *Administrative Office Technology I, Computing for College*

and Careers, Business Software Applications I and they demonstrated over 85% alignment to FLDOE standards. While they are not specifically related to the *Information Technology* Career Cluster in FLDOE's definition, they are likely prerequisites for advanced level technology-related courses at the college level.

Figure 5 provides a summary of the extent to which district syllabus content overall reflected or aligned with FLDOE frameworks, with Gulf County's syllabi having the strongest alignment and Leon County's being the least aligned.

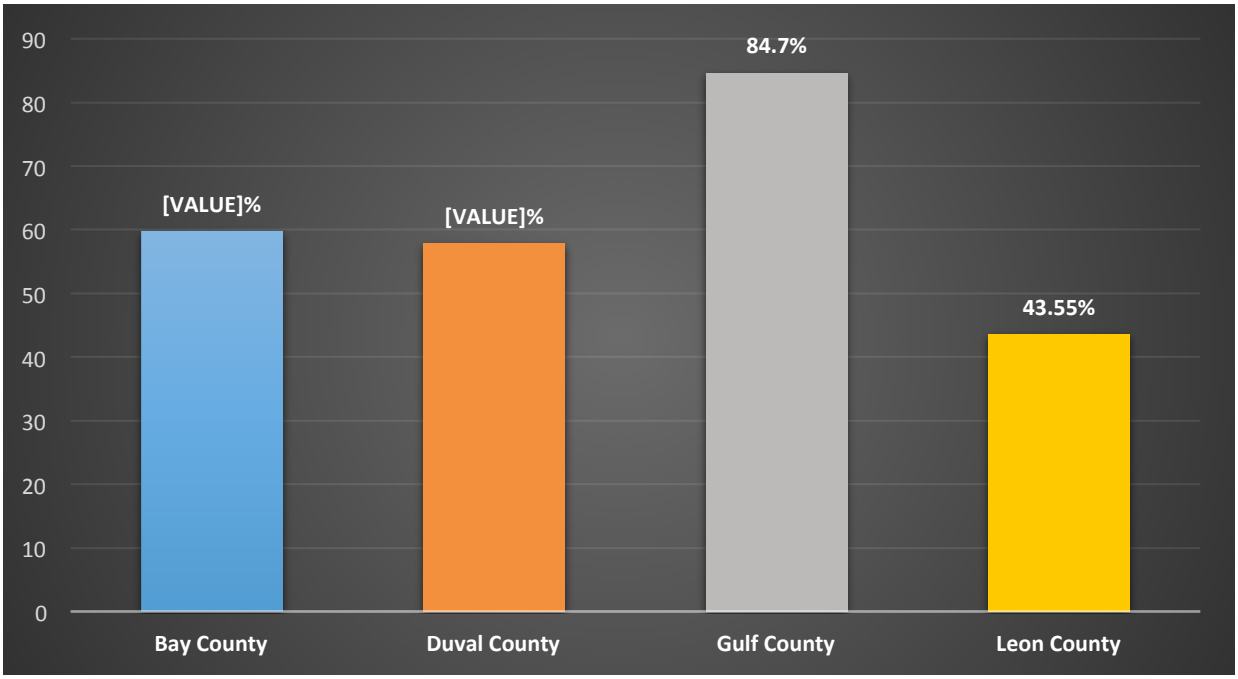

Figure 5. Summary of alignment between district's high school technology course syllabi and FLDOE frameworks

Figure 5 shows the percentage of the FLDOE technology related curriculum frameworks each school district is covering in the syllabi. As Figure 4 shows, Gulf County's syllabi had the overall greatest amount of alignment with the FLDOE frameworks (84.7%), followed by Bay (59.8%) and Duval (57.86%), with Leon County's syllabi (43.55%) having demonstrated the lowest levels of alignment.

3.2. Industry Certifications in Syllabi

In the second analysis, we reviewed the syllabi for mentions of outcomes related to specific industry certifications. As Figure 6 suggests, the high school syllabi demonstrated varying numbers of industry certifications that the student may test for upon completion of the course.

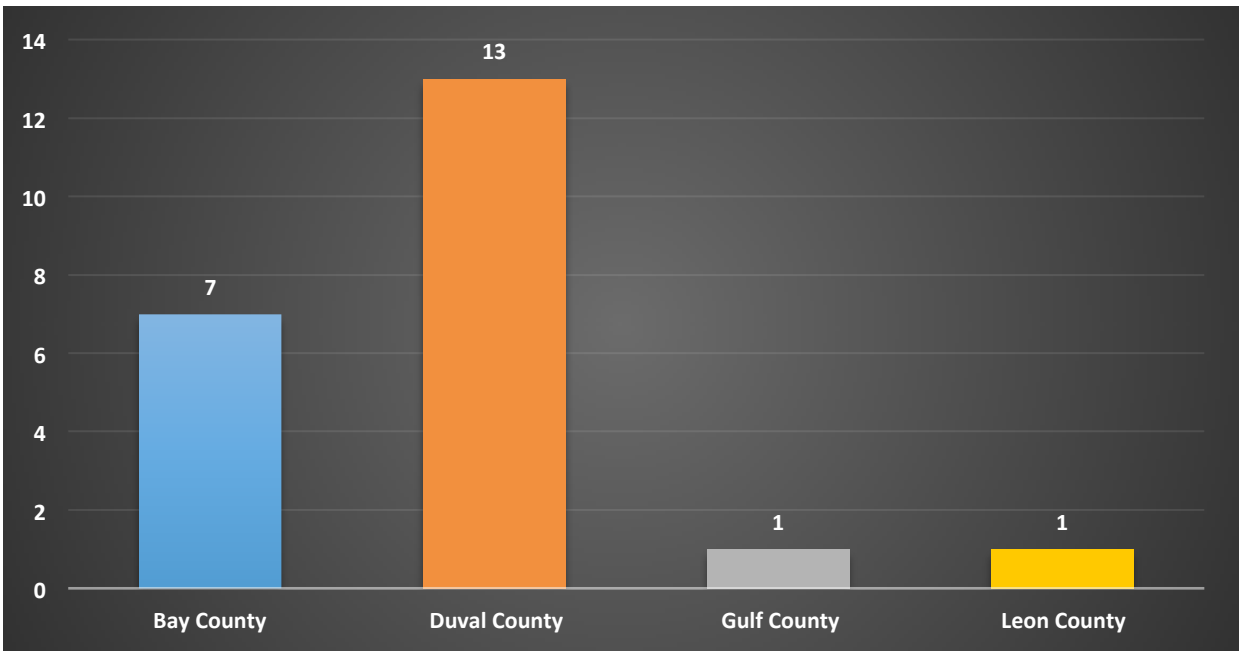

Figure 6: Distribution industry certifications listed in syllabi

Figure 6 illustrates the number of industry certifications listed in the syllabi across the various school districts. Bay County listed 7 certifications in the syllabi from that district, Duval County mentioned 13 certifications, and Gulf County and Leon County both mentioned 1 certification each in the syllabi provided. There were a total of 22 certifications listed in the syllabi, with 10 of them being different certification titles. The remaining 12 certifications were duplicates of the 10 certification titles.

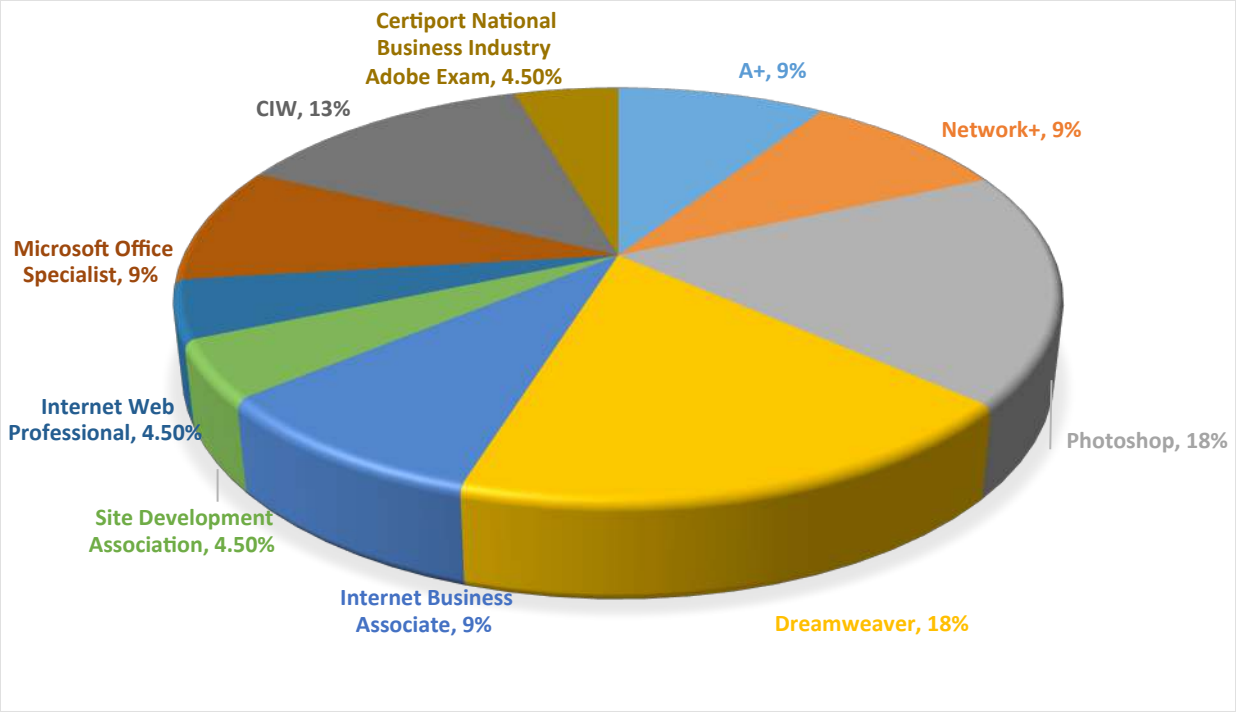

Figure 7. Distribution of technology certifications listed in syllabi

Figure 7 illustrates the overall percentage of each industry certification type in the sample of 22 certifications. Based on the data available in the syllabi sample (N=54), the most frequently occurring certifications were *Adobe Dreamweaver* and *Adobe Photoshop*, which each made up 18% of the 22 certifications named in the syllabi. *Certified Internet Web* (CIW) Professional, was the next most frequently listed certification (13%). There was one occurrence of "Internet Web Professional," listed in a course syllabus which is most likely an additional *CIW certification. Network+, A+, Internet Business Associate,* and *Microsoft Office Specialist* were the next most popular certifications, and each represented 9% of the total. Finally, the certifications that represented 4.5% of the total were *Certiport National Business Industry Adobe Exam, Internet Web Professional,* and *Site Development Association*.

4. Discussion

We compared technology-related course syllabi (N=54) to the 2013-14 FLDOE technology curriculum frameworks' learning outcomes in order to answer two research questions:

RQ1. ***To what extent are technology course learning outcomes and content coverages aligned among selected high schools?***

Based on the sample, the emphasis in high school technology courses is on presenting introductory topics in information technology. The FLDOE technology framework that is most represented in the sample was the Business Technology Education Core (BTE), which contains courses such as Introduction to Information Technology, Computing for College and Careers,

etc. The FLDOE programs for the Information Technology Career Cluster that are not represented in the sample are: *Applied Information Technology, Business Computer Programming, Computer Systems & Information Technology, Database and Programming Essentials, Database Application Development & Programming, Game/Simulation/Animation Advanced Applications, Game/Simulation/Animation Audio/Video Effects, Game/Simulation/Animation Programming, Geospatial/Geographic Information Systems Technology, .NET Application Development & Programming, Network Support Services, Network Systems Administration, Technology Support Services, and Web Application Development & Programming.* These frameworks contain courses that present more advanced, specialized topics in information technology. Based on the syllabi provided, these programs are not being addressed at the high school level. Furthermore, there was only one course syllabus provided that contained learning outcomes related to coding (AP Computer Science). Coding and programming have been identified as important knowledge areas for high school students seeking to pursue computing careers (Ernst & Clark, 2012). Although there may be more similarly advanced courses in North Florida high schools, they are not present in the sample. While the introductory topics taught in high school technology courses may serve to spark an interest in IT or serve as a basis for further IT education at the college or university level, more could be done to closely align the knowledge expectations from high school to college or high school to employment.

Our results suggest that there is a wide range of alignment between the high school course syllabi and the FLDOE frameworks both between schools and among course topics. In some areas, the alignments were very close. For example, in many areas, Gulf County's syllabi reflected a 100% alignment to the FLDOE frameworks, while Introduction to Information Technology courses most closely followed the FLDOE frameworks in all districts. However, in other IT curriculum areas, district-level and course-level alignments reflected a range of alignment percentages. This great variation is a warrant for further research, but does suggest that many schools' offerings are linked to FLDOE's goal to "prepare individuals for occupations important to Florida's economic development" (FLDOE, 2014).

Although the syllabi collected were from technology-related courses, they did not only follow the FLDOE technology-related frameworks; they also contained learning outcomes from other Career Cluster frameworks. There is no standardized method for courses to align with the FLDOE frameworks, and there are so many Career Clusters to choose from that more research should be conducted to determine how instructors are choosing to include learning outcomes from multiple frameworks.

Certain courses focused on finance education, and the syllabi contained no technology-related learning outcomes that would allow them to be compared to the FLDOE frameworks for Information Technology or Engineering & Technology. However, they could be compared to learning outcomes in the finance-related frameworks. What is important about their inclusion in the sample is that, despite the fact that the syllabi do not list any technology-related learning outcomes, they were still considered part of the high school technology curriculum. It is possible that the course does convey technology-related skills that are not listed in the syllabus, but it could also suggest a lack of consensus about what qualifies as a technology course and what should be included in high school technology curricula.

We were surprised to find that although the syllabi were mainly compared to the *Information Technology* and *Engineering & Technology* frameworks, syllabi also sometimes included learning outcomes from other Career Clusters like Finance, Fine Arts, A/V Technology & Communication. We did not include these additional learning outcomes in our results, but they pose interesting avenues for future interdisciplinary investigation.

Additionally, the syllabi demonstrated an occasional lack of coherence between different parts of certain syllabi. There was evidence of disagreement between the *Course Description* and the actual *Course Content/ Course Schedule*. There is no format that the syllabi consistently follow, and there is also a lack of consistency concerning syllabus quality across districts and schools. For instance, a *Digital Design 1* course received from one county contained learning outcomes consistent with the *Foundations of Web Design* course in the FLDOE technology curriculum frameworks in the description of the course, but the actual course topics contained learning outcomes such as "How to Use Paint" and "Understanding Adobe Photoshop." Although the *Course Objectives* section of the syllabus described a course focused on web design and web development, the actual *Course Topics* focused on digital photo manipulation.

A syllabus analysis is but a starting point to document students' experiences; other substantial curriculum resources such as instructor-student interaction, textbooks, supplemental course materials, and extracurricular learning activities also contribute to student learning.

RQ2. ***To what extent does the content reflect relevant technology learning frameworks and industry certifications?***

Industry certifications may play an important role in preparing students to work in information technology fields (Hua, 2013; Hunsinger & Smith, 2009) and while the majority of syllabi analyzed did not mention certifications, some did. The majority of the certifications were application-based; for example, Adobe Photoshop and Adobe Dreamweaver were most frequently mentioned, but the extent to which these skills are in demand or adequate preparation for a career in a highly technical work environment is unclear. Likewise, employers may not be impressed with a candidate who has a Microsoft Office Specialist certification over a more advanced technology-related certification. More attention should be paid as to whether the certifications high school students are receiving will actually help them as they travel educational or professional pathways in IT.

5. Conclusion

A major goal of the FITC Assessment project is to create a picture of IT students' experiences from high school through college and career. In an effort to characterize the extent to which high school IT students' educational outcomes reflected those specified by the FLDOE frameworks, the research team analyzed 54 course syllabi from 15 North Florida high schools. The learning outcomes from the syllabi were extracted, compared to the course standards listed in the 2013-14 FLDOE technology curriculum frameworks, and determined the percentage of alignment. We also examined the course syllabi's mentions of industry certifications.

The findings revealed that schools across the four counties offered basic courses like *Introduction to Information Technology, Introduction to Engineering Design,* and *Principles of Engineering,* all which strongly reflected content in the FLDOE standards. Web design and development is another frequently offered content area that reflects FLDOE standards. These basic courses give students a foundation to build upon in later educational experiences. Some districts offered advanced level courses like *Java Programming, Cyber Security,* and *Aerospace Technology*, but these courses reflected little of the FLDOE framework content. Course designers may wish to more closely align content to the FLDOE frameworks to ensure that learning outcomes are built upon in subsequent post-secondary experiences.

Further research into the availability and effectiveness of informal learning opportunities for high school students in North Florida is crucial, as previous research suggests the importance of these extracurricular activities in encouraging student enrollment in STEM degrees and careers (VanMeter-Adams et al., 2014). However, if course content and state frameworks are not in concert, then students may not receive the foundation or inspiration they need to exit the K-12 pipeline and enter STEM college and/or career pathways.

This research suggests two additional areas for research that may shed light on the apparent misalignment between the classroom experience and content frameworks. First, the role of teacher preparation for teaching technology needs to be explored. The opportunity for high school technology instructors to engage in professional development and training is limited by time and funds. (Ryoo et al., 2013). Due to the rapidly shifting nature of technical expertise, frequent professional development is required of technology instructors. However, schools may be under time and financial constraints that hinder instructors' professional development, which suggests the importance of informal learning opportunities to increase student exposure to and knowledge of these technology-related learning outcomes that are missing from the classroom setting through partnerships with colleges, universities, and industry.

Second, this study's findings suggest that a more in-depth exploration of the extent to which state curriculum shapes classroom experiences is warranted. While a comprehensive examination of the curricula requires further analysis of other aspects of the course (class instruction, textbooks, assignments, etc.), the syllabus analysis leads to the conclusion that teachers also require more support to create consistent, comprehensive syllabi. Due to the varying levels of syllabus alignment with the FLDOE technology curriculum frameworks, it would be useful to investigate how instructors are making decisions about course curricula.

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