PreK-12 Innovation Subcommittee
February 13, 2019
1:30 PM
Mashburn Hall (306 HOB)

Meeting Packet
Committee Meeting Notice
HOUSE OF REPRESENTATIVES

PreK-12 Innovation Subcommittee

Start Date and Time:       Wednesday, February 13, 2019  01:30 pm
End Date and Time:        Wednesday, February 13, 2019  03:30 pm
Location:                 Mashburn Hall (306 HOB)
Duration:                 2.00 hrs

Consideration of the following bill(s):
HB 401 Mastery-based Education by DiCeglie

Presentation on Career and Technical Education by Dr. James R. Stone III.
In 2016, the Legislature created the Competency-Based Education Pilot Program within the Department of Education (DOE) to provide an educational environment that allows students to progress to higher levels of learning based upon the mastery of concepts and skills. Under the program, the State Board of Education may allow the Commissioner of Education to waive rules relating to student progression and awarding of credits. Participation in the voluntary pilot program is limited to the P.K. Yonge Developmental Research School and the Lake, Palm Beach, Pinellas, and Seminole County school districts. The pilot program is set to expire in 2021.

The bill:

- Renames the Competency-Based Education Pilot Program as the Mastery-Based Education Pilot Program.
- Allows any school district in the state to submit an application to the DOE to participate in the program.
- Authorizes participating districts to approve and use an alternative interpretation of letter grades using rigorous scoring rubrics to measure student success in grades 6-12. Districts must continue to use a four-point scale for calculating a student’s grade-point average.
- Allows participating districts to determine and award one full credit toward high school graduation based on the student’s mastery of core content and skills without meeting the current minimum requirement of 135 or 120 hours of instruction.
- Requires participating districts to amend their student progression plans to conform to the alternative awarding of credit.
- Requires the statewide articulation agreement be amended to ensure fair and equitable access for high school graduates with mastery-based, nontraditional diplomas and transcripts.

The bill does not appear to have a fiscal impact.

The bill has an effective date of July 1, 2019.
FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Present Situation

In 2016, the Legislature created the 5-year Competency-Based Education Pilot Program (CBEPP) within the Department of Education (DOE) to provide an educational environment allowing students to progress through Florida's Next Generation Sunshine State Standards (NGSSS) at their own pace to demonstrate higher levels of learning through the mastery of concepts and skills.\(^1\)\(^2\) Voluntary participation in the CBEPP is limited to the P.K. Yonge Developmental Research School and the Lake, Palm Beach, Pinellas, and Seminole County school districts.\(^3\) The program is scheduled to end in 2021.

The DOE was required to:

- Develop a pilot program application.
- Compile student and staff schedules of participating schools before and after pilot program implementation.
- Provide participants with access to statewide, standardized assessments.
- Submit an annual report by June 1 to the Governor, Senate President, and House Speaker summarizing the CBEPP activities, accomplishments, and recommendations for statutory revisions.\(^4\)

School districts applying to participate in the pilot program were required to include the following:

- Vision and timelines for implementing competency-based education within the district.
- Annual goals and performance outcomes for participating schools, including student performance, promotion and retention rates, graduation rates, and indicators of college and career readiness.
- Communication plan for parents and other stakeholders.
- Scope and timelines for professional development for school instructional and administrative personnel.
- Plan for student progression based on the mastery of content.
- Plan for using technology and digital and blended learning to enhance student achievement.
- Proposed allocation of resources for the pilot program.
- Recruitment and selection of participating schools.
- Rules to be waived for participating schools.\(^5\)

The State Board of Education may allow the Commissioner of Education to waive rules relating to student progression and the awarding of credit.\(^6\) This is in addition to the Commissioner's waiver authority to facilitate innovative practices and allow local selection of educational methods.\(^7\)

Students enrolled in a participating pilot program school are reported for and generate funding consistent with other public schools.\(^8\)

\(^1\) Section 1003.4996, F.S.
\(^2\) Rule 6A-6.0652, F.A.C.
\(^3\) Section 1003.4996(1), F.S.
\(^4\) Section 1003.4996(1),(2) and (5), F.S.
\(^5\) Section 1003.4996(2), F.S.
\(^6\) Section 1003.4996(3), F.S.
\(^7\) See s. 1001.10(3), F.S.
\(^8\) Section 1003.4996(4), F.S.
Four of the five eligible school districts participated in the CBEPP during the 2016-2017 school year, with Seminole using 2016-2017 as a planning year. Four districts, including Seminole, participated in the 2017-2018 school year, while Lake chose to pause its participation in the 2017-2018 school year.

The four participating school districts implemented the pilot program partially in 64 elementary schools, two middle schools, ten high schools, and one K-12 school during the 2017-2018 school year.9

Definition of Credit

Current law defines, for purposes of high school graduation requirements, one full credit as a minimum of 135 hours of bona fide instruction in a designated course of study containing student performance standards, except as otherwise provided through the Credit Acceleration Program (CAP). For districts authorized to implement block scheduling, one full credit means a minimum of 120 hours of bona fide instruction in a designated course of study containing student performance standards.10

Each district school board must maintain a one-half credit earned system that includes courses provided on a full-year basis in awarding credit for high school graduation. A student enrolled in a full-year course but successfully completes only the first half or the second half of the course must receive one-half credit if the averaged grades would result in a failing grade.11

Middle and High School Grading System

Current law defines the grade 6 through grade 12 grading system and interpretation of letter grades used to measure student success as follows:

- Grade “A” equals 90%-100%, has a grade point average value of 4, and is defined as “outstanding progress.”
- Grade “B” equals 80%-89%, has a grade point average value of 3, and is defined as “above average progress.”
- Grade “C” equals 70%-79%, has a grade point average value of 2, and is defined as “average progress.”
- Grade “D” equals 60%-69%, has a grade point average value of 1, and is defined as “lowest acceptable progress.”
- Grade “F” equals 0%-59%, has a grade point average value of zero, and is defined as “failure.”
- Grade “I” equals zero percent, has a grade point average value of zero, and is defined as “incomplete.”12

For purposes of class ranking, district school boards are authorized to exercise a weighted grading system in accordance with the weighted provisions allowed in dual enrollment courses.13

Alternative Grading

One form of alternative grading is a standards-based learning grading system which measures students’ understanding or mastery of the knowledge and skills they are expected to learn as they progress through their education. Concise, written descriptions of what students are expected to know and be able to do at specific points in their education set the goals of a lesson or course, and teachers then determine how and what to teach so the students meet the standards’ learning expectations.14

10 Section 1003.436(1)(a), F.S.
11 Section 1003.436(2), F.S.
12 Section 1003.437, F.S.
13 Section 1003.437, F.S.
“Standards-based learning” is different than “standards-referenced learning” in which what gets taught or tested is “referenced” to or derived from learning standards, whereas “standards-based” refers to student demonstration of competence on the expected standards.\textsuperscript{15}

The P.K. Yonge Developmental Research School has indicated that it is moving to a standards-based grading system to provide parents, students and teachers with more accurate information about students’ progress toward meeting the content and skill standards. Students will receive a separate progress report for each subject within a course, rather than for an entire course, in order to help students set goals and achieve standards. Student progress is reported as a level of proficiency, i.e., \textit{Expert (A), Proficient (B), Approaching Proficiency (C), Beginning (D), and Not Meeting (F)}.\textsuperscript{16}

\textbf{Student Progression Plan}

Each district school board must establish a comprehensive plan for student progression which provides for a student’s progression from one grade to another based on the student’s mastery of the NGSSS, specifically in English Language Arts, mathematics, science, and social studies standards.\textsuperscript{17} Among other things, the progression plan must specify requirements for whole-grade and midyear promotions, provide subject matter acceleration and early graduation options, and specify available dual enrollment courses.\textsuperscript{18}

\textbf{Statewide Articulation Agreement}

The SBE and Board of Governors of the State University System must enter into a statewide articulation agreement to preserve Florida’s “2+2” articulation system and facilitate the seamless articulation of student credit between Florida’s educational entities, including between secondary and postsecondary educational institutions.\textsuperscript{19} The articulation agreement governs articulation between secondary and postsecondary programs.\textsuperscript{20}

\textbf{Effect of Proposed Changes}

The bill renames the Competency-Based Education Pilot Program (CBEPP) the Mastery-Based Education Pilot Program (MBEPP) and expands the option to participate in the MBEPP to all school districts. The voluntary pilot program became effective for 5 years beginning with the 2016-2017 school year, and it is scheduled to end in 2021.

The bill authorizes school districts participating in the MBEPP to award course credit as a student demonstrates mastery of the core content and skills, consistent with the NGSSS, rather than award credit based on the 135 or 120 hour instructional requirements. The district school board must approve a participating school’s use of mastery-based progression in lieu of instructional time. Some students may progress more rapidly through a course by mastering core content and skills without having to meet the minimum instructional hours’ requirement, while others may need more than 135 or 120 hours of instruction to master course core content and skills.

The bill authorizes participating school districts to use alternatives for the interpretation of middle and high school letter grades (“alternative grading system”) to measure student success in grades 6–12, but participating districts must continue to use the established four-point scale for calculating a student’s grade-point average.

\textsuperscript{15} Ibíd.
\textsuperscript{17} Section 1008.25(2), F.S.
\textsuperscript{18} See s. 1008.25(2)(b), F.S.
\textsuperscript{19} Section 1007.23(1), F.S.
\textsuperscript{20} Section 1007.23(1)(a), F.S.
The bill allows participating school districts, beginning with the 2019-2020 school year, to amend their applications to include alternatives for awarding credit and alternative grading systems for middle and high school letter grades. Applications that are amended must be approved by the district school board.

Alternatives to awarding credit must include verification of the student's mastery of the applicable course content using rigorous scoring rubrics to evaluate the student's work. 21 A participating school district that uses an alternative to awarding credit must amend its student progression plan to conform to the alternative awarding of credits.

The bill requires the statewide articulation agreement to ensure fair and equitable access to postsecondary educational institutions for high school graduates with mastery-based, nontraditional diplomas and transcripts.

B. SECTION DIRECTORY:

Section 1. Amends s. 1003.436, F.S., relating to definition of “credit.”

Section 2. Amends s. 1003.437, F.S., relating to middle and high school grading system.

Section 3. Amends s. 1003.4996, F.S., relating to the Competency-Based Education Pilot Program.

Section 4. Amends s. 1007.23, F.S., relating to the statewide articulation agreement.

Section 5. Provides an effective date of July 1, 2019.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:
   None.

2. Expenditures:

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:
   None.

2. Expenditures:
   None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:
   None.

21 A “rubric” is an evaluation tool used to promote the consistent application of learning expectations or learning standards in the classroom, or to measure their attainment against a consistent set of criteria, and to clearly define academic expectations for students and help to ensure consistency in the evaluation of academic work. Glossary of Education Reform, Rubric, available at https://www.edglossary.org/rubric/ (last visited Feb. 11, 2019).
D. FISCAL COMMENTS:
Indeterminate, as any costs can likely be absorbed within existing DOE resources.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:
1. Applicability of Municipality/County Mandates Provision:
   None.
2. Other:
   None.

B. RULE-MAKING AUTHORITY:
   None.

C. DRAFTING ISSUES OR OTHER COMMENTS:
   Section 4 of the bill refers to students with a "nontraditional diploma." This term could be misleading because the DOE is authorized to issue a standard high school diploma but is not authorized to issue a "nontraditional diploma."

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES
   Not applicable.
A bill to be entitled
An act relating to mastery-based education; amending
s. 1003.436, F.S.; authorizing a district school board
participating in the Mastery-Based Education Pilot
Program to award credit based on student mastery of
certain content and skills; amending s. 1003.437,
F.S.; authorizing a district school board
participating in the Mastery-Based Education Pilot
Program to use an alternative interpretation of letter
grades for certain students; requiring such district
school board to use a specified scale for certain
calculations; amending s. 1003.4996, F.S.; renaming
the Competency-Based Education Pilot Program as the
Mastery-Based Education Pilot Program; authorizing
public school districts to submit applications for the
program; authorizing participating school districts to
amend their applications to include alternatives for
the award credits and interpretation of letter grades;
providing requirements for such alternatives;
requiring participating school districts to amend its
progression plan for specified purposes; amending s.
1007.23, F.S.; requiring the statewide articulation
agreement to ensure fair and equitable access for
students with mastery-based, nontraditional diplomas
and transcripts; providing an effective date.
Be It Enacted by the Legislature of the State of Florida:

Section 1. Paragraph (a) of subsection (1) of section 1003.436, Florida Statutes, is amended to read:

1003.436 Definition of "credit."—

(1)(a) For the purposes of requirements for high school graduation, one full credit means a minimum of 135 hours of bona fide instruction in a designated course of study that contains student performance standards, except as otherwise provided through the Credit Acceleration Program (CAP) under s. 1003.4295(3). One full credit means a minimum of 120 hours of bona fide instruction in a designated course of study that contains student performance standards for purposes of meeting high school graduation requirements in a district school that has been authorized to implement block scheduling by the district school board. However, district school boards participating in the Mastery-Based Education Pilot Program under s. 1003.4996 may determine and award credit based on a student's mastery of the core content and skills, consistent with s. 1003.41, as approved by the district school board. The State Board of Education shall determine the number of postsecondary credit hours earned through dual enrollment pursuant to s. 1007.271 that satisfy the requirements of a dual enrollment articulation agreement according to s. 1007.271(21) and that
equal one full credit of the equivalent high school course identified pursuant to s. 1007.271(9).

Section 2. Section 1003.437, Florida Statutes, is amended to read:

1003.437 Middle and high school grading system.—

(1) The grading system and interpretation of letter grades used to measure student success in grade 6 through grade 12 courses for students in public schools shall be as follows:

(a) Grade "A" equals 90 percent through 100 percent, has a grade point average value of 4, and is defined as "outstanding progress."

(b) Grade "B" equals 80 percent through 89 percent, has a grade point average value of 3, and is defined as "above average progress."

(c) Grade "C" equals 70 percent through 79 percent, has a grade point average value of 2, and is defined as "average progress."

(d) Grade "D" equals 60 percent through 69 percent, has a grade point average value of 1, and is defined as "lowest acceptable progress."

(e) Grade "F" equals zero percent through 59 percent, has a grade point average value of zero, and is defined as "failure."

(f) Grade "I" equals zero percent, has a grade point average value of zero, and is defined as "incomplete."
(2) District school boards participating in the Mastery-Based Education Pilot Program under s. 1003.4996 may use an alternative interpretation of letter grades to measure student success in grade 6 through grade 12. However, the four-point scale established in subsection (1) for calculating a student's grade point average must continue to be used.

For the purposes of class ranking, district school boards may exercise a weighted grading system pursuant to s. 1007.271.

Section 3. Section 1003.4996, Florida Statutes, is amended to read:

1003.4996 Mastery-Based Competency-Based Education Pilot Program.—Beginning with the 2016-2017 school year, The Mastery-Based Competency-Based Education Pilot Program is created within the Department of Education to be administered for a period of 5 years. The purpose of the pilot program is to provide an educational environment that allows students to advance to higher levels of learning upon the mastery of concepts and skills through statutory exemptions relating to student progression and the awarding of credits.

(1) PARTICIPATION.—The P.K. Yonge Developmental Research School and public school districts, including, but not limited to, the Lake, Palm Beach, Pinellas, and Seminole County School Districts, may submit an application in a format prescribed by the department to participate in the pilot program.
(2) APPLICATION.—The application to participate in the pilot program must, at a minimum, include:

(a) The vision and timelines for the implementation of mastery-based competency-based education within the school district, including a list of the schools that will participate in the pilot program during the first school year and the list of schools that will be integrated into the program in subsequent school years.

(b) The annual goals and performance outcomes for participating schools, including, but not limited to:

1. Student performance as defined in s. 1008.34.

2. Promotion and retention rates.


4. Indicators of college and career readiness.

(c) A communication plan for parents and other stakeholders, including local businesses and community members.

(d) The scope of and timelines for professional development for school instructional and administrative personnel.

(e) A plan for student progression based on the mastery of content, including mechanisms that determine and ensure that a student has satisfied the requirements for grade-level promotion and content mastery.

(f) A plan for using technology and digital and blended learning to enhance student achievement and facilitate the
(g) The proposed allocation of resources for the pilot program at the school and district levels.

(h) The recruitment and selection of participating schools.

(i) The rules to be waived for participating schools pursuant to subsection (3) to implement the pilot program.

(3) EXEMPTION FROM RULES.—In addition to the waivers authorized in s. 1001.10(3), the State Board of Education may authorize the commissioner to grant an additional waiver of rules relating to student progression and the awarding of credits.

(4) ALTERNATE CREDIT AND LETTER GRADE SYSTEMS.—

(a) Beginning with the 2019-2020 school year, participating school districts may amend their applications to include alternatives for awarding credit, as authorized under s. 1003.436, and for the interpretation of middle school and high school letter grades, as authorized under s. 1003.437.

1. Alternatives to awarding credit must include verification of the student's mastery of the applicable course content using rigorous scoring rubrics to evaluate the student's work. A participating school district must amend its student progression plan required by s. 1008.25 to conform to the alternative awarding of credits pursuant to this section.

2. Alternatives to the interpretation of middle school and
high school letter grades may substitute the applicable language from the school district's rigorous scoring rubric. However, the four-point scale established in s.1003.437(1) for calculating a student's grade point average must continue to be used.

(b) An application that is amended pursuant to this subsection must be approved by the district school board.

(5) STUDENT FUNDING.—Students enrolled in a participating school shall be reported for and generate funding pursuant to s. 1011.62.

(6) DEPARTMENT DUTIES.—The department shall:

(a) Compile the student and staff schedules of participating schools before and after implementation of the pilot program.

(b) Provide participating schools with access to statewide, standardized assessments required under s. 1008.22.

(c) Annually, by June 1, provide to the Governor, the President of the Senate, and the Speaker of the House of Representatives a report summarizing the activities and accomplishments of the pilot program and any recommendations for statutory revisions.

(7) RULES.—The State Board of Education shall adopt rules to administer this section.

Section 4. Subsection (7) is added to section 1007.23, Florida Statutes, to read:

1007.23 Statewide articulation agreement.—
(7) The articulation agreement must ensure fair and equitable access for high school graduates with mastery-based, nontraditional diplomas and transcripts.

Section 5. This act shall take effect July 1, 2019.
Amendment No. 1

Committee/Subcommittee hearing bill: PreK-12 Innovation
Subcommittee
Representative DiCeglie offered the following:

Amendment (with directory and title amendments)

Remove lines 175-178 and insert:

1007.23 Statewide articulation agreement.—
(1) The State Board of Education and the Board of Governors shall enter into a statewide articulation agreement which the State Board of Education shall adopt by rule. The agreement must preserve Florida's "2+2" system of articulation, facilitate the seamless articulation of student credit across and among Florida's educational entities, and reinforce the provisions of this chapter by governing:
(a) Articulation between secondary and postsecondary education, including fair and equitable access for students who
graduate with a standard high school diploma and have earned high school credit through a mastery-based education program pursuant to s. 1003.4996;

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**DIRECTORY AMENDMENT**

Remove lines 173-174 and insert:

Section 4. Paragraph (a) of subsection (1) of section 1007.23, Florida Statutes, is amended to read:

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**TITLE AMENDMENT**

Remove lines 23-25 and insert:

agreement to include fair and equitable access for students who graduate with a standard high school diploma and have earned high school credit through mastery-based education; providing an effective date.

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Charting a Course for Florida: Ensuring Students’ Preparation for the Future

Dr. James R. Stone III
Director
National Research Center for Career & Technical Education
Analyzing the Problem: Begin with the End in Mind & Look At the Data

If your assumptions about a problem are wrong, then it is very likely your solution will be as well.
Overview

A Bit of Context
Building a Career Pathway

Career Pathways as a System

High Quality CTE
Partners, Programs & Pedagogy
Career Pathways Challenge: The Rapidly Evolving Workplace

Artificial Intelligence
Simulating human reasoning

Robotics
The mechanical or virtual artificial agent, usually electromechanical. And when married to artificial intelligence...

Skills Gap-Debate
What employers want; what prospective employees possess

Contingent Labor
The rise of the 1099 worker

Cognitive System
Neural Networks
Machine Learning
Natural Language Processing
Perception

1099 Worker
Risk of Jobs to Computerization & Robotics

% of Jobs by Risk Level

- 33% High Risk
- 19% Medium Risk
- 47% Low Risk

Frey & Osborne, 2013
Leading to the Rise of the (non-employee)1099 Worker

The Gig Economy, Freelancer or teaming up with others (54 million Americans now freelance) leading to entrepreneurial status.

40% Forbes (5/25/2015)
34% CNN Money (5/24/2017)
16% Katz & Krueger (RAND, 2015)

More nanojobs in technical fields (engineering, security, hardware design) supported by nanodegrees. Work is short-term, less than two years.

How do you prepare your students for a future where they are increasingly likely to be?

• Self-Employed & Independent Contractors
• Temporary Workers
• On-Call Workers
• Contracted Workers
• Short-Term Contract Workers

Implications for Guidance & Curriculum

• Self funded retirement (401K)
• Self funded health care
• Sick days?
• Other benefits of “good jobs”
20% of all American workers are contract workers hired to work on a specific project or for a fixed period of time.

51% of contract workers don't receive benefits from their jobs.

49% of contract workers have income that varies from month to month or seasonally.

65% of contract workers are male and 62 percent are under 45.

54% of workers think it would be difficult to locate for a better job.
To Summarize:
Since the early 1990s we have:

Added the equivalent of one full year of core academics (math, science, language arts) to high school graduation requirements.

(NAEP) Reading scores have not improved or significantly declined*
(NAEP) Science scores have not improved or significantly declined*
(NAEP) Math scores have remained relatively unchanged until recently and have declined

*Depends on the starting and ending timeframe
The Condition of Education Nationally

High remediation rates in postsecondary
Only 40% of young adults have 2,4-year college; grad or professional degree
U.S. trails most of its economic competitors in key academic measures-math, literacy, science
The same economic competitors have substantially more of their youth in intensive VET or TVET
The Condition of Education in Florida

<table>
<thead>
<tr>
<th>Education Outcome</th>
<th>CCR Impact on the 9th Grade Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>75% graduate high school on time (Spring 2016)</td>
<td>25% are immediately <strong>work bound</strong> with no high school credential</td>
</tr>
<tr>
<td>65% of graduates go to college, representing <strong>46.8% of 9th grade cohort</strong></td>
<td>Another <strong>26%</strong> of original 9th grade cohort are <strong>work bound</strong> with a high school credential</td>
</tr>
<tr>
<td>64% of those who start college graduate within six years Approximately <strong>25%</strong></td>
<td>Another <strong>18%</strong> of the original 9th grade cohort are <strong>work bound</strong> with “some college” and likely a great deal of student debt</td>
</tr>
<tr>
<td>graduate from a community college in three years</td>
<td><strong>Post secondary outcomes for our 9th grade cohort?</strong></td>
</tr>
<tr>
<td><strong>Post secondary outcomes for our 9th grade cohort?</strong></td>
<td><strong>Around 31% of 9th grade cohort</strong> graduate with a college degree and likely student loan debt ($X=25k+ for 52% of students)**</td>
</tr>
</tbody>
</table>

SREB

The Problem

Today's education and workforce systems designed for different times and different learners
To Prepare the Next Generation . . .

- There is an increase need for specific technical skills
- Credentials have increased in importance (Degrees, diplomas, certifications). These *signal* readiness to potential employers.
- Social skills have become increasingly important in the workplace: employability (readiness), behavioral & interpersonal (communication, negotiation, listening, problem solving) and “grit” – persistence!
Planning Ahead

"I skate to where I think the puck will be, not where it has been" - Wayne Gretzky 1979-1999.
Research Points Toward A Systems Approach to Determining Where the Puck Will Be

- Partnerships
- Programs
- Pedagogies
Career Pathway Logic

- Align Industry and Educational Partners within *Regional* Labor Markets

- **Align** existing programs to Industry Valued Credentials: add new, modify existing and eliminate legacy programs

- Ensure all CTE faculty are *highly skilled* in pedagogy and in their professions
From a Legislative Perspective:

Policy to Support High Quality CTE
Support A Systems Approach: From A District or Regional Perspective

• Vertical Integration: Secondary - Postsecondary – Business & Industry
• K-12 Career Development
Strategy for Driving Change

Fund only consortia

Examples:
1. Establish criteria for funding to focus on:
   1. Priority sectors
   2. Student achievement – proximal & distal
   3. Credential acquisition/TSA
2. Specify partnership requirements
   1. Sector leaders
   2. K-12
   3. State colleges
   4. Community leaders
3. Others to requirements to move toward where the puck will be

Use Funding to Drive Innovation

1. 32 states have some form of consortia, 6 use model exclusively
Building Your Part of the System Working with Regional Sector Partners

Fastest Growing Industries:
- Ambulatory Health Care Services
- Food Services and Drinking Places
- Administrative and Support Services
- Professional, Scientific, and Technical Services
- Specialty Trade Contractors
- Nursing and Residential Care Facilities

2018 Top CTE Concentrators:
- Health: 22%
- Arts: 15%
- Hospitality: 10%
- STEM: 9%
- IT: 9%
- Agriculture: 8%

Career Pathways Challenge: Focus

High Demand

Combined Food Preparation and Serving Workers, Including Fast Food
Registered Nurses
Customer Service Representatives
Retail Salespersons
Waiters and Waitresses
Janitors and Cleaners, Except Maids and Housekeeping Cleaners
Laborers and Freight, Stock, and Material Movers, Hand
Landscaping and Groundskeeping Workers
Medical Assistants
Cooks, Restaurant

High Growth

Combined Food Preparation and Serving Workers, Including Fast Food
Janitors and Cleaners, Except Maids and Housekeeping Cleaners
Cooks, Restaurant
Landscaping and Groundskeeping Workers
Registered Nurses
Nursing Assistants
Construction Laborers
Medical Assistants
Management Analysts
First-Line Supervisors of Construction Trades and Extraction Workers

1. FL 2018-26 Employment Opportunities
What Are the Top 3 Wealth Producing Sectors in Your Region of the Country?

• What skills are required to gain entry into these occupations?

• What credentials "signal" readiness to work in these occupations?
Identify and Focus on the Skills Relevant to the Career Pathway

Personal Effectiveness and Foundational Workforce Competence

- SCANS
- 21st Century Skills
- "Soft" Skills
- Employability Skills
- "Grit"

Occupational Expression of Academics

- Mathematics
- Science
- Communications

Technical

- Job specific skills valued by employers

SREB
Three Essential Features of Career Pathways System
A Credentialed Career Pathway

(Programs of Study)

From High School to ...
Work **and (NOT OR)**
Continuing Education and Training

Goal: Contributing Adult in a Global Economy

SREB
Designing the High Quality CTE Pathway Program

- Linked to Industry skills in demand and credentials
- Integrate academic, technical, non-cognitive skills
- Implement forward focused programs targeting on emerging occupations – transition from legacy programs
Career Pathway Challenge: Credentials

- HS Diploma
- PS Award
- PS Degree
- Requires completing a program

- Based on industry standards
- Granted by companies/associations
- Requires Assessment

- Program is registered
- Individual is registered
- Agency determines when requirements are met
- Agency determines completion

- Granted by state or federal government
- Mandatory
- Defined by law
- Required in addition to other credentials (e.g., education award; apprenticeship)
- Time limited
High Quality CTE Tools

Evidence-Based Tools
• Ensure all CTE faculty are highly skilled in pedagogy and in their professions

- Classroom instruction
- Work based learning-WBL
- CTSOs

- Contextualized learning
- Quality of Assignments
- Skilled Professionals
- Job shadowing
- Internships
- School-based enterprise
- Cooperative education
- Apprenticeships
- Leadership development
- Professional development
- Service/social engagement
- Competitive events
High Quality CTE Classroom: Contextualized Learning

Mathematics
- Students in the experimental classes scored significantly higher on Terra Nova and Accuplacer

Literacy
- Significant improvement from both approaches tested

Science
- No effect
Taking more math is no guarantee

Only 26% of students who took Alg I, II & Geometry scored a 22 (ACT Benchmark) on the ACT exam scoring an average of 17.7
Adding Trig; 37% pass with an average score of 19.9
Not until calculus is added, does the average score exceed 22 – 5 years of high school math for 55% to achieve benchmark score

There is at least one use for advanced...
CCR Math Research

NCEE, 2013

- Math needed is mostly middle school
- Alg II is not a prerequisite for CC success or most careers
- College reading requires 11th/12th grade skills
- Students enter CC weak in needed math and reading skills

NRCCTE, 2013

- Math associated with an ACT score of 22 is mostly middle school math, Algebra I and some geometry.
- Math associated with middle skill job employment tests is higher than that required for an ACT score of 22 but still found in middle school math, Algebra I and some geometry
## Skills Best Learned in the Workplace

### Personal Effectiveness
- Stay on track
- Consistency
- Not easily distracted
- Adaptability
- Hard worker
- Grit
  - *Deal with setbacks*
  - Persistence
  - *'Stick-to-it tivess'*
  - Diligence

### Employability
- Teamwork
- Oral & written skills
- Professionalism
- Ethics
- Creativity
- Problem solving
- Systems knowledge
- Responsibility
- SCANS, 21st Century

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SREB
A Developmental Approach to Work-based Learning: Linked to Industry Credentials

Job shadowing  (Cross Curricular)

Unpaid Internships (short)

School-based enterprise

Cooperative education or Paid Internships (extended)

Apprenticeships (intensive)
Everywhere but in the U.S. . . .

The % of youth in VET ranges from 5% (Ireland) to 80% (Czech Republic).
More than 50% youth in VET: Austria, Belgium, Finland, Switzerland, Australia, Germany, Sweden, Denmark and others.
Japan, United Kingdom, France, Korea and others exceed 20%.

The U.S. doesn’t make the list!

Learning for jobs (OECD, 2010)
Strategy for Driving Change in WBL
Establish Criteria

1. Career Exploration
2. Instruction related activities
   1. Employability skills
   2. Training agreements
   3. Training plans
   4. Evaluation
3. Connecting activities
4. Certifications
5. Advisory council
6. Mentor training
7. More

Georgia

1. https://www.dropbox.com/sh/b7cmfmg86wk2575/AABojjezjoodzGBJWFb1a2sfa?dl=0
High Quality CTE in the Classroom

Includes

Employability

Technical

Academic

Skills in Every Lesson

SREB
High Quality CTE

Increase Engagement
Completing HS
Completing PS/ Industry credential

Enhance Transition
Through School
To continuing education
To the workplace
To a successful adulthood

Improve Achievement
Academic
Occupational
Technical

SREB
Effective CCR Requires a Career Development Framework
A Compelling Argument for Career Development

Things I Learned From Watching CSI

- How to take a fingerprint sample.
- How to tell which direction the blood splattered from.
- How to think out of the box when faced with problems.
- All female CSIs can double as supermodels.
- You can kill someone with anything.
Imagine

10th Grade

- 5-Year Plan to 10th to 11th Grade + 3 years post HS

11th Grade

- 5-Year Plan to 11th to 12th Grade + 3 years post HS
- WBL
- Dual Credit – Youth Options

12th Grade

- 5-Year Plan to post secondary education/training & employment
- WBL
- Dual Credit – Youth Options
Signature Features of a Career Pathway System

GOAL:
Contributing Adult in a Global Economy

- Alignment with sector priorities/labor market needs
- Alignment with current offerings at the community and technical colleges.
- Advisory committee role in linking secondary and postsecondary CTE
- Facilities alignment with industry standards.
- Faculty access to and participation in robust professional development.
## Barriers to Establishing Career Pathways

(A Beginning List)

### Education
- Curriculum Space
- Testing Obsession
- Qualified Faculty
- HS-PS Systems Conflict
- Keeping Curriculum and Facilities Current
- Insurance for WBL
- Data Issues
  - Credentials
  - Work experience

### Business & Industry
- Meaningful WBL
- Sustaining Partnerships
- Workplace Mentors (Teacher On the Job)
- Capacity (Siemens=75; 60,000)
- Insurance Regulations
- Credentials

### System
- Data
  - Linking across education & training providers
  - Linking vertically: K12 through PS
  - Linking to UI wage data

SREB
A caution in trying to be all things to all people . . .

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