Annual Report on Career and Technical Education for the 2011-2012 School Year

Submitted December 20, 2012

Introduction

Rhode Island General Law §16-45 describes the role and importance of career and technical education (CTE) as a means of increasing the skill of Rhode Island's workforce, improving the employability and earning potential of students, and contributing to vitality of Rhode Island's economy. The chapter describes a system of career and technical education that provides students the opportunity to gain the skills necessary for both well-established and emerging industries and employers with the opportunity to hire from a talented and skilled workforce.

§16-45 charges the Board of Regents (Regents) with the responsibility for establishing, maintaining, and ensuring the quality of the career and technical education system. In addition, the chapter requires the Rhode Island Department of Education (RIDE) to submit an annual report on career and technical education to the Senate President and Speaker of the house. This report is the annual report covering the 2011-2012 school year.

Context

During the 2011-2012 school year, the Regents promulgated new regulations governing CTE, replacing regulations that had been untouched for over 20 years. The regulations describe three overarching principles for CTE in Rhode Island.

1. Rhode Island's CTE System will prepare learners for postsecondary education and careers resulting in employment that provides family-sustaining wages.
2. Career and Technical Education will support students' postsecondary success through planning, credentialing, industry partnerships, and articulation with higher education and training programs.

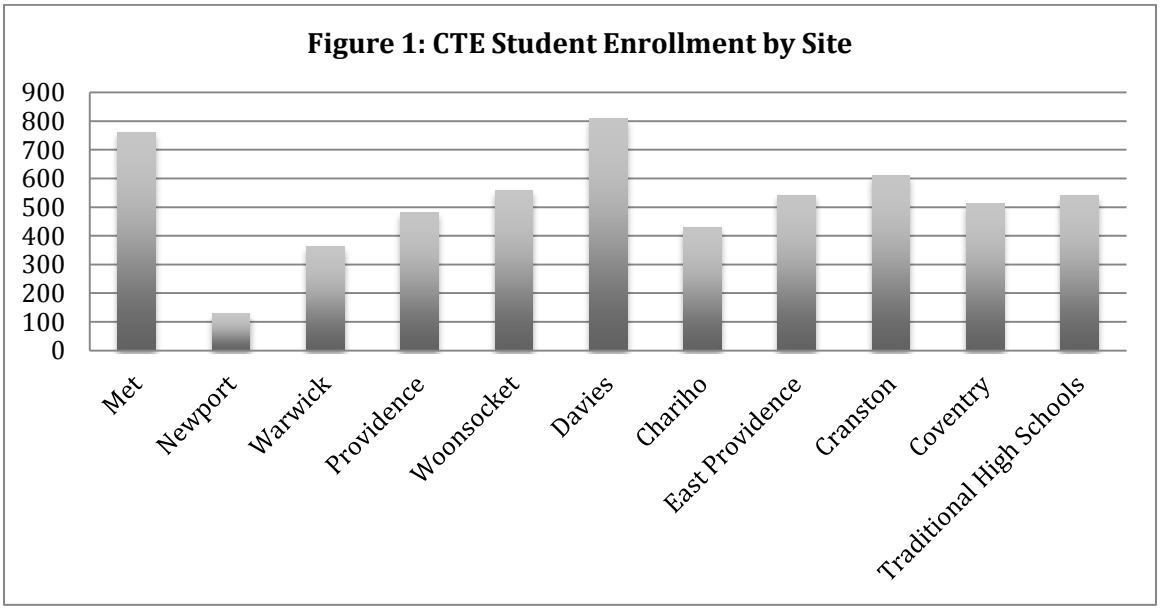
3. Rhode Island's CTE System will invest in high-quality, highly effective career preparation programs offered through a diverse statewide delivery system.

The 2012 regulations make manifest the Regents commitment to reaching the General Assembly's goal of serving 40% of Rhode Island students through career and technical education. The Regents and RIDE staff, in conjunction with career and technical educators, worked together to develop a regulatory structure to help us collectively reach this ambitious yet achievable goal. The effect of the 2012 regulations and their success in achieving this and other critical goals will be carefully monitored over the coming years and reported to the General Assembly.

One of the first steps in implementing the requirements set forth in the 2012 regulations is the establishment of a rigorous data quality and data collection system that will enable RIDE staff to provide detailed information CTE student and program performance. Historically, the CTE data collected has provided a useful but very limited view of student and program outcomes. This report provides an overview of CTE performance based upon these legacy data systems. Consequently, the depth of the analysis -- and the inferences that can be reasonably drawn – is limited. As RIDE develops and rolls out improved data collection instruments, the sophistication and usefulness of this report will improve.

Statewide Participation Data

During the 2011-2012 school year, Rhode Island career and technical education served 5,730 students. Of these students, 5,190 (90%) were being served in one of Rhode Island's ten career and technical education centers. Another 540 (10%) students were served in traditional comprehensive high schools. Figure 1 below shows overall student enrollment by facility type and location.



Of the 5,730 students, over 95% were enrolled in CTE programs that have received some form of RIDE approval. These programs bear one or more of the following characteristics:

1. At least three sequenced, rigorous non-duplicative technical courses
2. Instruction based upon a curriculum aligned to both state academic and industry-standards;
3. Instruction by appropriately certified and highly trained instructors;
4. The opportunity to earn industry-recognized credentials, postsecondary credits, and/or advanced standing in postsecondary education and training programs.

Students enrolled in CTE programs spanned a wide array of industry sectors. The current distribution of students enrolled in programs has been driven largely – though not entirely – by the facility opportunities and limitations in Rhode Island's career and technical education centers.

In 2011-2012, there were approximately 40 distinct career programs spanning each of the 16 federally defined career clusters. Table 1 below summarizes the type and frequency of each program. For additional information about program by district and school, please see Appendix 1.

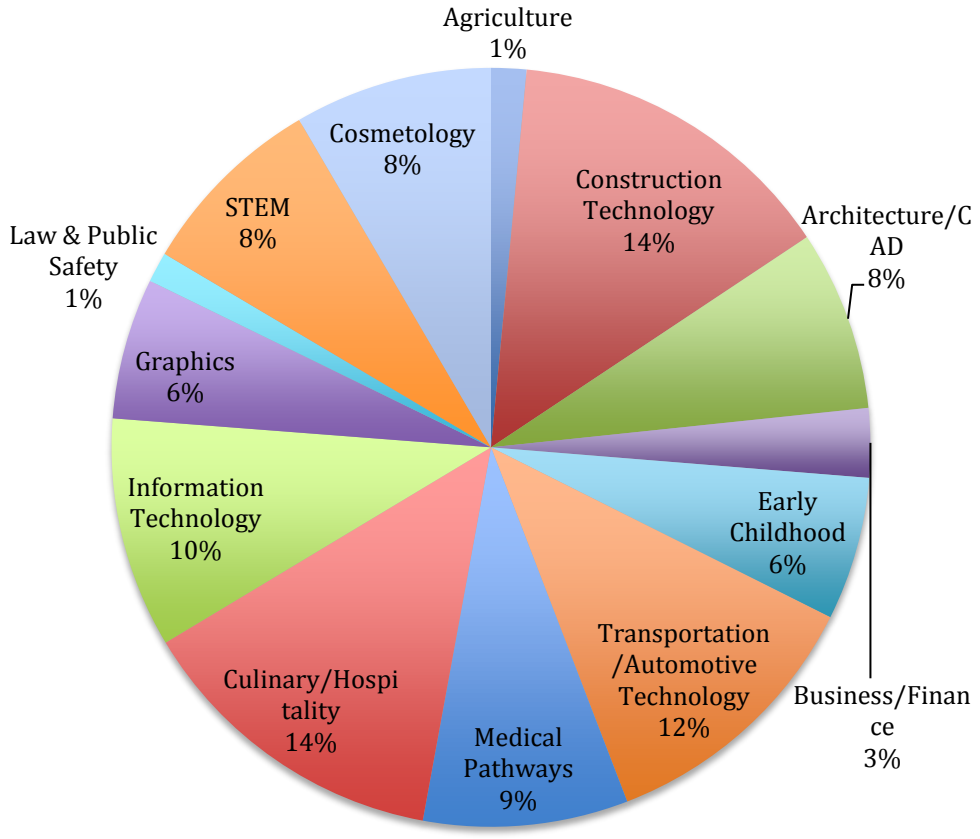
Table 1: Type and Frequency of Career and Technical Education Programs

Program Name	# programs	Program Name	# programs
Acquaculture	1	Environmental Science/Green Technology	3
Advertising, Design & Digital Print Technology	9	Facilities management	1
Arts Academy	1	Facilities management	1
Automotive & Design Technology	8	Game Design/Interactive Media	2
Aviation Academy	1	Government and Public Service	1
Biotechnology	3	Health occupations	7
Business and Finance	4	Hospitality	4
Carpentry and Building Trades	9	HVAC	2
Cisco Networking	2	Journalism & Broadcasting	1
Computer Technology	5	Law & Public Safety	3
Cosmetology	6	Machine Technology	1
Culinary Arts	9	Marine	2
Dance	1	Marketing	2
Diesel & Marine Technology	2	Music	1
Drafting & Design Technology	3	Plumbing	1
Early Childhood Education	5	Robotics	2
Electrical Tech	6	Teacher Academy	1

Engineering	6		Television Production/ Journalism	2
Entrepreneurship Academy	2		Theater	1
Environmental Science/Green Technology	3		Travel and Tourism	1
			Visual arts	2

Program type and frequency provides an incomplete view of Rhode Island student participation in career and technical education. To better understand the nature of student participation, Figure 2 below provides a summary of student enrollment by industry sector. The percentage displayed within each sector represents the number of students as a function of the overall 2011-2012 school year enrollment.

Figure 2: Total CTE Student Enrollment by Sector
2011 - 2012



Student Demographic Information

During the 2011-2012 school year, approximately 18% of students educated in career and technical education centers had individualized education programs (IEPs.) Students with IEPs have a disability that requires additional supports or services to promote their success. This percentage is roughly on par with the state average during the same period. However, the overall average masks dramatic variability across centers. During the 2011-2012 year, the percentage of students with IEPs enrolled in centers ranged from 7% to 35%.

During the 2011-2012 school year, approximately 43% of students in CTE centers qualified for free or reduced lunch, an indicator of family poverty. This too is on par with the state average. On this indicator, there was also dramatic variability across centers, which ranged from 6% to 66% of student eligible for free and reduced lunch.

2011-2012 student enrollment data shows that males and females enroll at equal overall rates. However, at the program level, the gender balance is sometimes highly skewed. Examples of programs that typically do not draw an equal blend of males and females are automotive technology, cosmetology, the building trades, and culinary arts.

Student Outcome Data

The 2012 CTE regulations require important improvements at all levels of the system including data collection and use. Data collections and use has been neglected for many years, a deficit that is being aggressively tackled by RIDE, school district, and building staff. The report for the 2011-2012 year provides ample evidence of the gaps in the legacy data systems.

The data sets requested in §16-45.1-3 are important to both the General Assembly and the Board of Regents. The Regents' commitment to data is evident in the 2012 regulations, which require CTE program review, monitoring, approval, and funding decisions to turn on the following key indicators of program quality:

1. dropout and graduation rates,
2. credential and/or postsecondary credit-earning rates,
3. program completion rates, and
4. enrollment and persistence in postsecondary education and technical training programs.

Table 2 summarizes the status and provides context for the data sets requested in §16-45.1-3.

Table 2: Status of CTE Program and Participation Data		
Data Set Requested	**Status**	**Notes**
Total number of students earning diplomas	Currently unavailable; will be available for the 2012-2013 school year.	This data is available for approximately 50% of the 12th grade students enrolled ***full time*** in career and technical education centers. However, RIDE has not historically calculated graduation rates for students enrolled in CTE programs on a part time basis. For those students, their graduation status is calculated as a part of their resident school district. For the 2012-2013 school year, RIDE will be calculating and reporting on this measure.
Total number of students that transfer to another school	Currently unavailable; data quality will increase during the 2012-2013 school year.	Like the graduation rates, this data is available for the full-time programs. Beginning in the 2012-2013 year, RIDE will have more clearly defined the accountability requirements and will be able to report on this measure.
Total number of students that are employed immediately after graduation	Currently unavailable	Data sets that report student employment after graduation are very difficult to obtain and rely heavily on student self-reporting. RIDE has a data-sharing agreement with the DLT that provides a highly circumscribed view. This is an important growth area and one that RIDE continues to actively pursue.
The number of students attending post-secondary institutions	Currently unavailable; data quality will increase for 2012-2013 school year.	Through national data-sharing agreements, RIDE can provide a limited view of post-secondary attendance for CTE students. However, it understates CTE student enrollment in post-secondary programs because some technical training programs, apprenticeship, and credentialing programs are not included. This is an important growth area that RDIE will actively pursue.
Cost per pupil per program per year	Currently unavailable; will be available for the 12-13 year	RIDE is completing a benchmarking study that catalogues FY12 and FY13 expenditure data for common CTE programs. This will be used to establish cost-based program tiers. This work has been piloted but must be validated before it can be used for reporting purposes.

Credential earning rates: RIDE collects data on credential earning amongst high school CTE students. During the 2011-2012 school year, school districts reported that a total of 2,773 students earned a credential. However, this data should be used with caution. Currently, school districts exercise broad discretion in the determining what qualifies as a "credential." This may produce an inflated credential-earning rate.

The new CTE regulations define a credential as "– a specialized subset of certificates that provide portable, meaningful documentation that a student has mastered an industry-established and validated range of skills, met necessary training and education requirements, and demonstrated readiness to enter a specific industry." With this more specific definition and further RIDE-issued guidance in place, the 2012-2013 year will create Rhode Island's first reliable baseline for credential earning rates. Please see appendix 1 for additional information about credentials that are currently being earned in Rhode Island CTE programs.

Conclusion

The last two years have been important for career and technical education in Rhode Island. The regulations governing the system for K-12 delivery were updated for the first time in 20 years. The Board of Regents established accountability measures and RIDE staff have been working to develop systems to put those measures into action. The General Assembly dedicated $3m in CTE funding through the categorical fund, the first funding source dedicated to supporting all CTE programming and to promoting program excellence and growth. With this infrastructure rapidly maturing, RIDE anticipates that program quality, student improvement, and program number and breadth will all increase over the coming years.

Appendices

Appendix 1: Provisionally Approved CTE Programs, by Location			
School	**CTE Program of Study**	**School**	**CTE Program of Study**
Acad. For Career Exploration (Providence)	Healthcare (CNA)	Barrington HS (Barrington)	Television Production/ Journalism
	Hospitality		
Burrillville HS (Burrillville)	Environmental Science/Green Technology	Central Falls (Central Falls)	Arts Academy
			Entrepreneurship Academy
			Environmental Academy
			Hotel & Lodging Academy
Central HS (Providence)	Law & Public Safety	Chariho CTE (Chariho)	Advertising, Design & Digital Print Technology
			Automotive & Design Technology
			Carpentry
			Computer Technology
			Cosmetology
			Culinary Arts
			Drafting & Design Technology
			Electrical Tech & Renewable Energy Resources
			Health Occupations
			HVAC
Cooley Health & Science Tech (Providence)	Medical Assistant	Coventry CTE (Coventry)	Automotive, Diesel & Marine Technology
			Carpentry/Construction
			Cosmetology
			Health Careers Occupations
			Culinary Arts, Baking & Food Service
			Early Childhood Education
Cranston Area Career and Tech Center (Cranston)	Acquaculture	Davies Career and Tech Center (State)	Automotive Careers
	Pre-engineering Robotics		Building & Construction Trades
	CAD/Drafting Technology		Business Technology
	Child Development		Computer Information System
	Culinary & Pastry Arts		Cosmetology & Barbering
	Entrepreneurship		Electrical/Telecommunications
	Graphic Communications		Electronics/Robotic Engineering
	Interactive Digital Media/ Computer Technology		Graphics & Art Printing
	Cisco Networking		Health Careers/Biotechnology
	Medical Pathways		Hospitality Careers
	Residential Building Repair & Remodeling		Machine Technology
East Greenwich HS (East Greenwich)	Aviation Academy	East Providence Career and	Auto Collision Repair

		Tech Center (East Providence)	Carpentry & Construction
			Cosmetology
			Culinary Arts
			Environmental & Life Sciences
			Graphic Communications
			Pre- Engineering/PLTW
Hope Arts (Providence)	Visual Arts	Hope IT (Providence)	Computer Information Systems
JMW School for the Perf. Arts	Dance	Juanita Sanchez HS	Biotechnology
	Music		
	Theater		
	Visual Arts		
Lincoln HS (Lincoln)	Design & Engineering	MET (State)	Independent Vocational Studies
	International Business Academy		
	Journalism & Broadcasting		
	Law & Public Safety & Security		
Mt Hope HS (Bristol-Warren)	Business Education	Mt Pleasant HS (Providence)	Teacher Academy
Newport Career and Tech Center (Newport)	Design, Graphics & Advertising Media	N. Providence HS (North Providence)	Marketing & Career Readiness
	Automotive Technology		
	Cosmetology		
	Culinary Arts		
	Residential Carpentry		
Portsmouth HS (Portsmouth)	Child Development	Providence Career and Technical Academy (Providence)	Automotive Technology
	Television Production		Construction Technology
			Cosmetology
			Culinary Arts & Hospitality
			Electrical Hospitality
			Graphic Communications
			HVAC
			Plumbing & Pipefitting
			Pre-engineering
			Pastry Arts
Shea HS (Pawtucket)	Government & Public Service	Smithfield HS (Smithfield)	Business Finance
	Travel & Tourism		Early Childhood Education
			Engineering Technology
Tolman HS	Early Childhood Education	Warwick	Electronics, Digital & Audio Technology

(Pawtucket)	Engineering		Career and Tech Center (Warwick)	Automotive Technology
	Law & Public Safety			Cisco Networking Academy
	Marketing & Management			Computer Aided Drafting & Design
				Graphic Design
				Health Occupations
				Construction Technology
				Culinary Arts
				Electricity
Warwick Vets HS (Warwick)	Marine Trades		West Warwick HS (West Warwick)	Academy of Finance
				Facilities Operations & Management
Woonsocket Area Career and Tech Center (Woonsocket)	Automotive Technology			
	Construction Technology/ Solar Heating			
	Graphics & Printing			
	Hospitality & Tourism			
	Academy of Information Tech & Game Design			
	Digital Media Production			
	Electrical technology			
	Baking & Pastry Arts			
	Biotechnology			

Appendix 2: Initial List of Credentials for Career Preparation Programs	
Preparation Program of Study	**Qualifying Credentials and/or Certificates for Students**
Advertising, Design & Digital Printing	Print Ed, OSHA
Agriculture	NOCTI, OSHA 10
Aquaculture	OSHA 10
Automotive Collision & Repair	ASE, OSHA 10
Automotive Technology	ASE, NOCTI, OSHA 10
Aviation	Federal Aviation Administration (FAA) License, OSHA 10
Biotechnology	OSHA 10
Boat Building	OSHA 10
Business Management	OSHA 10
CAD/Drafting Technology	NOCTI, OSHA 10
Child Development	ParaPro, OSHA 10
Cisco Networking	Cisco, OSHA 10
Computer Technology	NOCTI, OSHA 10
Construction Technology	NCCER, OSHA 10
Construction Technology: Carpentry	NCCER, OSHA 10
Construction Technology: Elect. Tech & Renewable Energy Resources	NCCER, OSHA 10
Construction Technology: Electrical Technology	NCCER, OSHA 10,
Construction Technology: HVAC	NCCER, OSHA 10,
Cosmetology	RI Cosmetology License, OSHA 10
Culinary Arts	ServSafe or ProStart, or NOCTI, OSHA 10
Cyber Security	OSHA 10
Dance	OSHA 10
Design & Engineering	NOCTI, OSHA 10
Diesel Technology	ASE, NOCTI, OSHA 10
Digital Design & Technology	OSHA 10
Digital Media Production	OSHA 10
Drafting & Design Technology	NOCTI, OSHA 10
Early Childhood Education	ParaPro, OSHA 10
Environmental and Life Sciences	NOCTI, OSHA 10
Fashion Merchandising & Mgmt.	OSHA 10
Finance	NOCTI, OSHA 10
Game Design	OSHA 10
Government & Public Administration	OSHA 10
Government & Public Service	OSHA 10
Graphic Communications	Print Ed, OSHA 10
Hotel & Lodging Academy	NOCTI, OSHA 10
International Business	OSHA 10
Journalism & Broadcasting	NOCTI, OSHA10
Law & Public Safety & Security	NOCTI, OSHA 10

Machine Technology	NOCTI, OSHA 10
Marine Technology	OSHA 10
Marketing	OSHA 10
Medical Pathways	RI CNA License, First Aid, CPR Adult and Child, OSHA 10
Music	OSHA 10
Nail Technology	RI Nail Technician License, OSHA 10
Pastry Arts	ServSafe or ProStart or NOCTI, OSHA 10
Pre-Engineering	NOCTI, OSHA 10
Robotics	OSHA 10
Teacher Assistant	ParaPro, OSHA 10
Teacher Preparation	ParaPro, OSHA 10
Television Production & Journalism	NOCTI, OSHA 10
Television/Video Production	OSHA 10
Theatre	OSHA 10
Travel & Tourism	NOCTI, OSHA 10
Visual Arts	NOCTI, OSHA 10
Visual Arts	OSHA 10