

Career and Technical (CTE) Education in Vermont

4/15/16

The Policy Challenge:



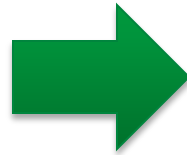
How to create and protect a strong, prosperous middle class in an era of globalization and technological change and innovation?

Implications for Education

Murnane and Levy (2013): *“American schools are not worse than they were in a previous generation. Indeed, the evidence is to the contrary. ... Today’s education problem stems from the increased complexity of foundational skills needed in today’s economy.”*



Computers are replacing humans in many middle compensation jobs, and the greatest growth of opportunity is in occupations that pay either low or high wages.



Access to jobs that pay a decent wage?



We may be looking at a future of greater inequity.

We are committed to making sure our graduates can **access or grow occupations that compensate at reasonable levels.**

Access to postsecondary learning?

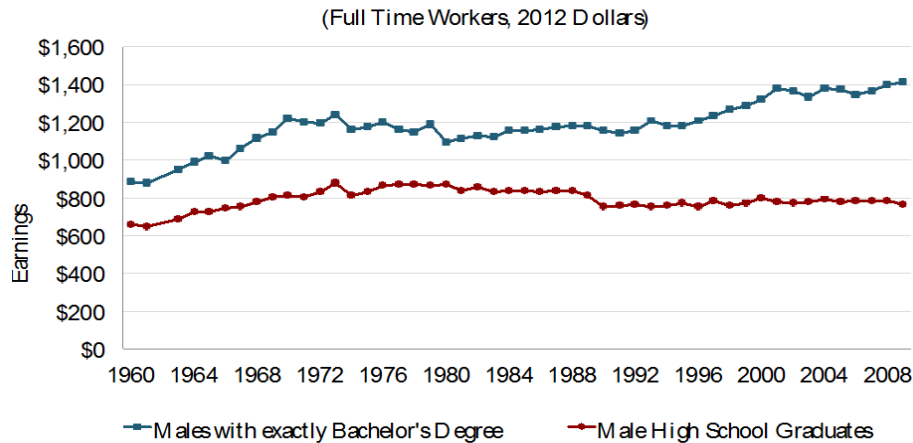


Figure 3a: Median Weekly Earnings of 35-44 Year Old Men (National Data)³

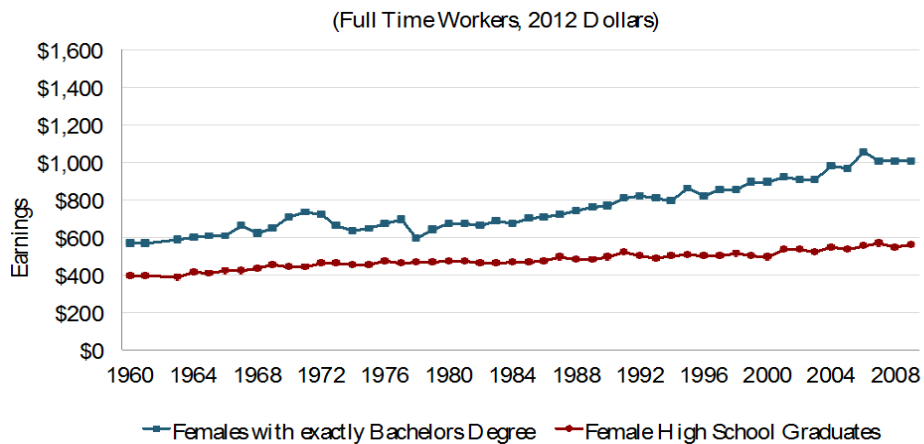


Figure 3b: Median Weekly Earnings of 35-44 Year Old Women⁴

Whether people with more skill pursue more education, or whether more education is a signal that people can acquire more skill, multiple studies suggest that having more education is associated with a greater ability to obtain and hold a job, or to create a job or business, that provides enough compensation to thrive.

What does this mean for CTE?

Preparing CTE students with 21st century skills

CTE must develop programs of study that deliberately and consistently build student proficiencies not only with respect to specific vocations, but with respect to 21st century skills such as:

- Solving unstructured problems (e.g. a mechanic repairing a problem not described in a manual, chef creating a new recipe based on what is locally sourced at a given time)
- Working with and analyzing new information (e.g. managerial and entrepreneurial tasks, patient care, human services)
- Non-routine manual tasks where judgment is needed (e.g. safely operating heavy equipment, carpentry)
- Ability to learn continuously

What does this look like?

[Mechatronics at North County:](#)

<https://youtube/Q2kFIMG53mA>



“I realized people used to do the work machines like this do. Now people write programs that make the machines do the work people used to do.”

-boy at North Country Career and Technical Center

North Country Career Center – CAD:

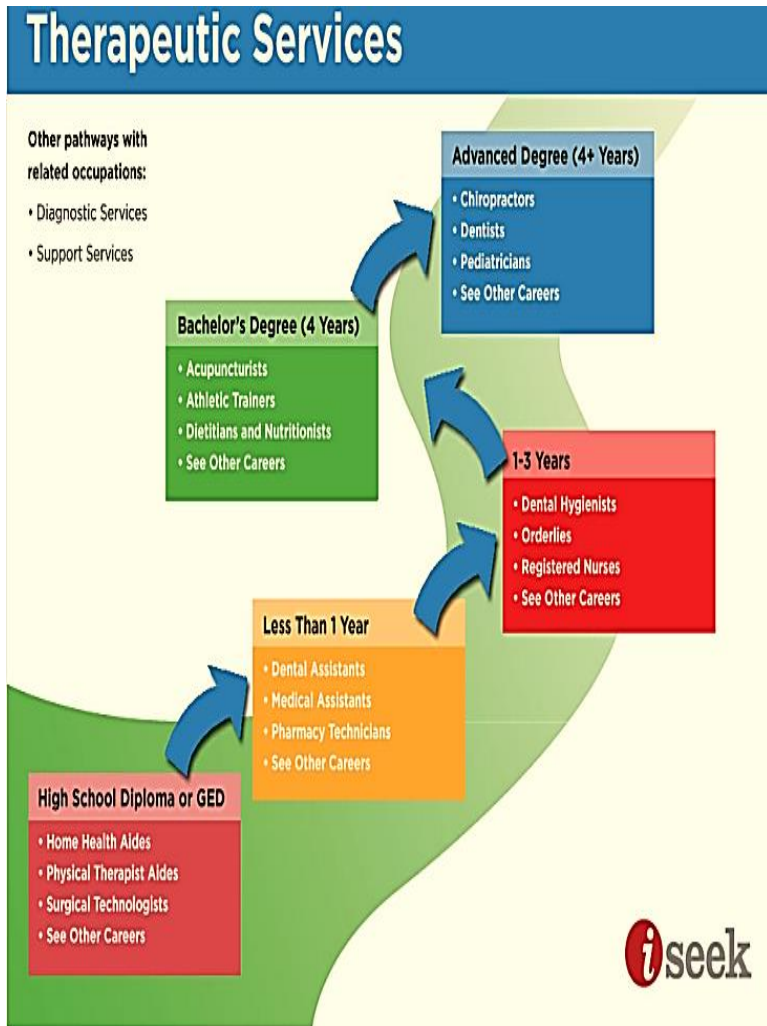
<https://youtube/MbDiTh7Kl2A>

Targeting Priority Sectors



- Travel/Tourism and Business Systems (Culinary, Hospitality, Accounting, Management, Entrepreneurship);
- Manufacturing/Engineering (STEM);
- Construction/Green Building and Design;
- Local Food Systems, Agriculture, Natural Resources;
- Information Technology (Networking, Software Development, Website Design); and
- Health/Medical (Licensed Nurse Assistant, Laboratory Assistant, Home Health Care Aid, Respiratory Therapy Assistant, Medical Assistant)

Promoting nationally recognized certifications and postsecondary attainment



- Stackable credentials
- Access to post-secondary opportunities through Act 77

E.g. for Health and Medical:

Articulation/Dual Enrollment: up to 15 credits

Certifications: Licensed Nurse Assistant (LNACPR Basic Life Support with AEDAmerican Heart Association First Aid)

- Questions posed by the committees

How do we facilitate better pathways from secondary school to trade certificates of value?

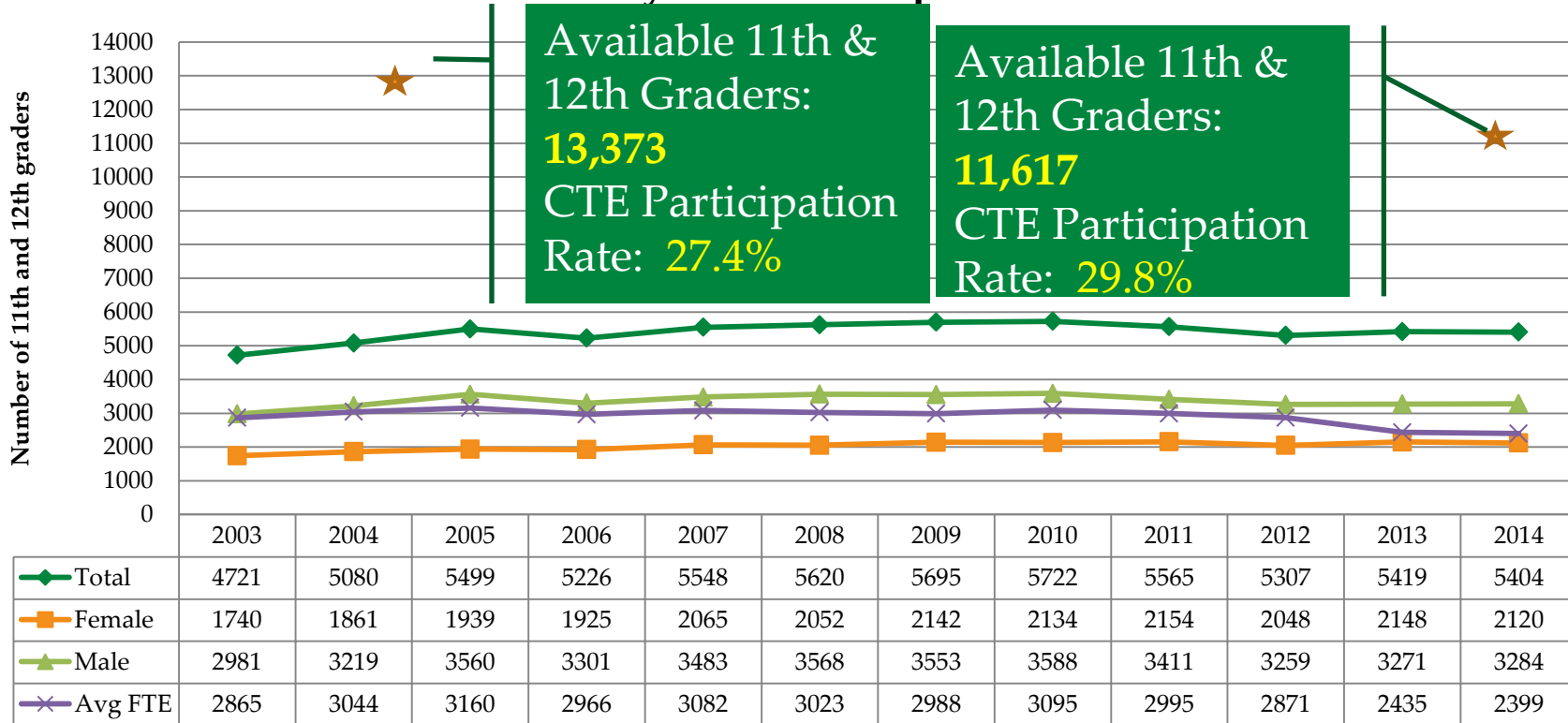


- A robust system for co-crafting Vermont Programs of Study (POS) that brings educators and employers together to plan and develop Programs of Study (See grant description.)
- Consensus around goals: do students and industry want the same things?
- Resources: a person whose job it is to coordinate and support career pathways and rigorous programs of study.
- More outreach.
- Enhance our system for tracking credentials of value, by adding career indicators to current data from the National Student Clearinghouse, which collects primarily two- and four-year college attendance.

One measure of success? Proportionally more students are participating in CTE now than 10 years ago.

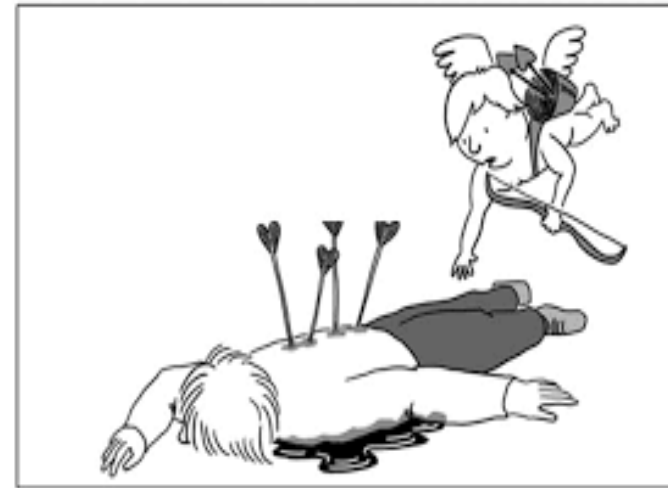
State of Vermont

10 Year Secondary CTE Participation Rate Trend



What are the challenges in rural communities?

- Transportation time
- Lack of flexibility in scheduling
- Lack of employer resources to provide work-based learning
- Lack of exposure to career opportunities that are not present in the local economy
- Declining enrollments, outmigration of people with skill, higher poverty
- Unintended consequences, including on non-CTE students

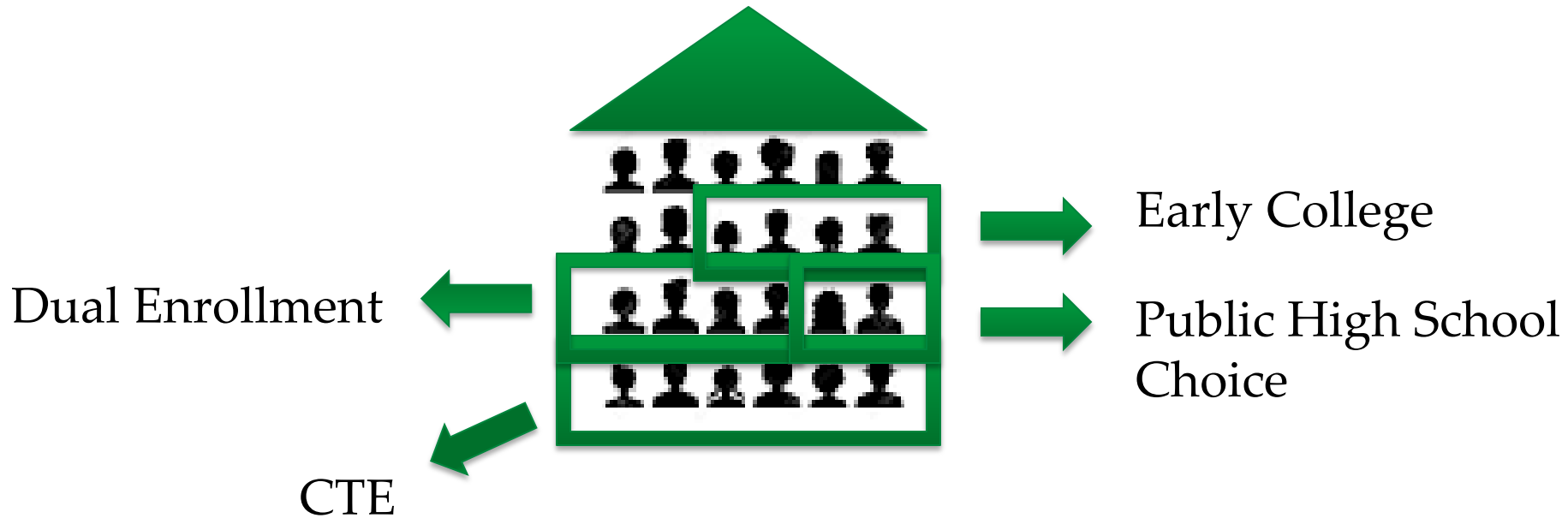


...Hello? Gary?

Unintended Consequences



Allowable
growth
thresholds



How do we better connect schools with businesses?

Sherry Lussier, GMTCC:

“Perhaps it is a rural advantage, but we know that when a student leaves our Tech Center, s/he has IRCs, Industry Recognized Credentials that we have determined through our relationships with businesses is necessary and desired. So when our local heating companies have a hiring need, instead of advertising, they know that our students earn a NORA Bronze Certificate for Oil Heat and an EPA Act 608 Refrigerant Handling Certificate and they call us for students to hire. These are national certifications and GMTCC is not unique in this. All programs come with college credits and/or IRCs.”

How do we better connect schools with businesses?

- Build on strong, current local efforts to connect with businesses.
- Set realistic and achievable expectations. About 25% of Vermont's employers have 1-19 employees and the next 20% have 20-99 employees. Can Vermont's employer base support all of the educational needs for Work-Based Learning, Advisory Committee work, etc... at the secondary and post-secondary level?
- Business and industry can and should participate in developing real-world problems for which students develop real solutions as part of authentic performance assessments.

How do we connect silos in state government to be supportive of CTE?

- The Agencies are working more intentionally together to support a comprehensive career pathways approach.
- Maintain a career and college readiness council or a career pathways coordinating council that meets quarterly or on some regular basis to discuss how funds are being used, to create direction and state-level planning will help.



What are the next steps?



- Pretty clear steps outlined in the NSFY grant (see attached).
- Consider: how do we enhance and improve the efficiency of state CTE funding and governance?
- Clarify the problem to be solved: The needs assessment conducted as a result of the NSFY grant work will help us define the problem and next steps.

What are the major issues that have been identified and how do you expect to address them?



- **Policy instability.** When rules change, the work goes back to square one.
- **Time.** Educators and AOE are already fully tasked.
- **Incentives.** We need a systemic approach for rolling out the POS, including media attention and endorsement by multiple levels/sectors statewide (e.g., education, CTEs, legislators, workforce development, employers).
- **Resources.** Finite resources, multiple needs, finite space. One option: how can we better utilize VTVLC?

What can the legislature do to facilitate in helping make sure this happens?

- Remember that **good work takes time to implement.** Give us time to implement.
- Keep the dialogue going – ask questions and be involved.
- Ask for an annual update on interagency collaboration, including employer participation.
- Ask for an annual update on career technical education.

UPDATE

- Appendix

Proposed AOE Action Plan, 2016-2017 (*now under-written by NSFY planning grant*)

- (1) Set up consortium of CTE educators, general ed, higher ed, industry experts, and other stakeholders who will co-design first statewide POS
 - Both secondary and postsecondary stackable credentials
 - Healthcare sector first, followed by manufacturing
- (2) Conduct statewide review of existing CTE programs
 - Will include 1-2 center reviews
 - Serve as launching pad for additional priority sector POS to be designed
- (3) Provide guidance to field on how PLPs can/should be used as part of a **comprehensive career guidance system** for all students
 - Recommends consideration/inclusion of CTE experiences, opportunities, and courses

Proposed AOE Action Plan, 2016-2017

(4) Develop clear **benchmarks for success** and **monitoring plan**

- Track where we are in the process; record lessons learned, what worked, what didn't, etc.
- Share and use statewide for subsequent round of priority sector POS
- Help sustain and replicate this work