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## **Comparison of VET and CTE Teacher Pathways: Finland and the U.S.**

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### **Abstract**

Vocational education and training (VET) is one way to bridge the achievement and inclusivity gap for students who want optional learning environments such as VET and maybe for low socioeconomic groups. However, vocational education has not been valued as a pathway to gainful employment. Improving the status of vocational programs through highly effective teachers may change societal views on VET value for equity and access. In Finland, teachers are highly valued, and teacher education degree programs are competitive. In the U.S., teachers are not as valued as Finland's teachers. U.S. career and technical education (CTE) teacher preparation program offerings have been reduced due to low enrollment. The purpose of this paper is to compare and contrast VET and CTE teacher preparation pathways and teacher value in Finland and the United States. Martino's (2017) qualitative, grounded theory study on CTE teacher preparation program sustainability is discussed. The framework presented in the study with internal and external domains includes CTE program value and its importance in program sustainability. Based on the study results, some implications for best practice are presented.

### **Keywords**

vocational teacher education, CTE teacher preparation, Finland, U.S.

## **1 Introduction**

European vocational education and training (VET) and U.S. career and technical education (CTE) play an important role to offer inclusive opportunities for diverse students. These opportunities can have life-changing benefits of offering optional learning environments and even of lifting people up and out of poverty into skilled jobs. Successful vocational education programs have been seen as a catalyst for reducing achievement gaps and increasing educational justice for diverse student populations (Kantrov, 2017). However, VET and CTE programs may have been considered unequal compared to academic programs.

Teacher quality may have impact on societal value in the workforce. In Finland, vocational teachers are highly respected and require a Bachelor's or Master's degree or higher degree. In the U.S., career and technical education (CTE) teacher certification requirements vary greatly

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from work experience to a Bachelor's degree. Furthermore, qualified Bachelor degree CTE teacher preparation programs have significantly decreased in the U.S. for decades. This has caused alternative teacher certifications for non-degreed CTE teachers. Without a professional education degree, CTE teachers may not be as effective and, therefore, not as highly valued as they are in Finland.

To bring about a change, improving the societal views on the value of VET programs has been an educational policy goal in the European Union as well as the United States for some time. In the U.S., the term vocational education was changed to career and technical education (CTE) to represent a more concise, academically rigorous, pathway from school to career (U.S. Department of Education, 2017). In Finland, applying the parity of esteem between vocational and academic education as well as other initiatives that promote and improve VET has also been endeavoured in vocational teacher education (Lasonen, 2010a, 2010b).

### **1.1 Finland VET and Florida CTE**

To compare the VET and CTE teacher pathway certifications in Finland and the U.S., it is necessary to review a selected U.S. state, such as Florida. In the U.S., the federal government operates the U.S. Department of Education, which establishes policy and administers federal assistance to education as well as collects data. Each of the 50 U.S. states has its own department of education (DOE). The state departments of education govern public education, funding, and teacher certification according to their respective state laws (Florida Department of Education, 2017). Therefore, comparing Finland's teacher pathway to the Florida teacher pathway is reasonable due to the differing teacher certification policies in each U.S. state.

Finland subscribes to a Nordic welfare state whereas there is equal opportunity for educational attainment. Finland's Constitution includes the basic right to education and culture with quality, efficiency, equity, and internationalisation that guide their education system (Finnish National Agency for Education, n.d.). The higher education system in Finland has two pathways: universities and universities of applied sciences. Admission into universities requires matriculation and entrance examinations, and admission to universities of applied sciences requires a diploma in an occupation from vocational high school and entrance examinations in Finland. However, many academic high school students with just a general education certification apply to universities of applied sciences. To adhere to a free education system for all, student selection criteria in some programs have been "lowered", and students from low socioeconomic backgrounds may receive study grants and housing supplements (Finnish National Agency for Education, n.d.).

In Finland's education system, there are eight common vocational units or clusters: culture; humanities and education; national resources and the environment; natural sciences; social sciences, business and administration; social services, health, and sport; technology, communication and transport; and tourism, catering and domestic services. Vocational education teachers have experience in their industry in addition to a degree or post-graduate certificate or license, as applicable to their field. All teachers must have training in pedagogy with research-based methods and practices (Finnish National Agency for Education, n.d.).

In the United States Constitution, there is no mention of education. However, it does state "...promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity..." (Baltzell, 2014). In the U.S. Declaration of Independence, it states, "all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness" (Independence Hall Association, 2018). In the U.S., public school is free from Kindergarten to Grade 12. Grades 5/6 through 9 are called middle school. Grades 9 through 12 are called high school. Introductory career courses may be available in middle school. Upper level CTE programs and courses are offered at the high school level. After high school, there are opportunities for tuition assistance and funding in

technical schools, community colleges, state colleges, and universities for low socioeconomic students. Technical schools, community colleges, and state colleges have open access to all students. General entry tests are given to place students in the appropriate level courses. If students fail the entry examinations, the students are required to complete remedial courses prior to college level courses.

In Florida, there are 17 career clusters: agriculture, food and natural resources; architecture and construction; arts, audio/visual technology and communication; business management and administration; education and training; energy; engineering and technology education; finance; government and public administration; health science; hospitality and tourism; human services; information technology; law, public safety and security; manufacturing; marketing, sales and service; and transportation, distribution and logistics (Advance CTE, 2018). Full time CTE teachers in Florida's public schools are designated as either degreed or non-degreed. CTE teachers with a Bachelor's degree may apply for a professional teaching certificate in one of the five CTE coverages: agriculture; business education; engineering and technology education; family and consumer sciences; and marketing (Florida Department of Education, 2018). Non-degreed CTE teachers are certified through each of the 67 school districts with at least six years of occupational experience and completion of professional education courses according to the 2018 Florida Statutes.

According to Florida's K-20 Education Code,

Employment of non-degreed teachers of career education

d. For full-time teachers, completion of professional education training in teaching methods, course construction, lesson planning and evaluation, and teaching special needs students. This training may be completed through coursework from an accredited or approved institution or an approved district teacher education program. (The Florida Legislature, 2018)

VET/CTE systems have seen positive changes in student enrollments in recent years. In Finland, 42% of students attend upper secondary vocational programs (NCEE, 2018). Finland is currently implementing reform to increase societal views on the value of VET. Finland's vocational education teacher preparation programs, as all professional education programs, are in high demand as teachers are well respected. In the U.S., there is a renewed interest in CTE after decades of focus on academic subjects and college admission. Currently, CTE programs have increased student enrollments at the secondary level in public schools. More specifically, in Florida, there has been a 20% increase in student enrollments in career-themed courses and CTE programs (Florida Department of Education, 2017). However, CTE teacher preparation programs are not aligned with the demand considering the lack of students' needs. The bachelor's degree CTE teacher preparation program availability has steadily declined. In 1990, Florida CTE teacher preparation programs totalled 27 (Lynch, 1990). In 2017, there were only four active undergraduate CTE teacher preparation programs (Martino, 2017). As of Fall 2018, there are three remaining.

What has caused the decline in available programs, especially in light of the increased CTE student enrollment? In order to understand this phenomenon on a deeper level, reviewing the remaining programs and their reasons for sustainability was necessary. Martino's (2017) study sought to discover sustainability factors from past and present CTE teacher preparation program faculty and administrators. Findings included the development of a CTE Teacher Preparation Sustainability Framework that is theoretically grounded in the data.

## 2 Methods

Martino's (2017) study used a qualitative constructivist Grounded Theory methodology with a constant comparative approach (Charmaz, 2006). A purposeful sampling method was used. Twenty-four past and present CTE teacher preparation program faculty and administrators were identified through Florida university websites. Of the 24 potential participants, 10 individuals

responded and signed informed consents, a participation rate of 42%. There were two females and eight males. Table 1 reveals the participants with some demographic details using fictitious names.

Table 1 Participant Selection Demographic Data with Fictitious Names

Fictitious Name	Job Title	Degree Attainment	Length of CTE Work Experience in Years
D. Parker	Dean of College	Doctorate	3
D. Miller	Associate Professor	Doctorate	8
D. Harris	Professor	Doctorate	13
D. Martin	Adjunct Instructor	Doctorate	11
D. Clark	Retired Professor	Doctorate	43
D. Lewis	Program Coordinator	Doctorate	14
D. Young	Adjunct Instructor	Doctorate	8
M. King	Adjunct Instructor	Masters	1.5
D. Smith	Program Chair	Doctorate	16
D. Jones	Program Coordinator	Doctorate	7

*Note.* The participants' first initial is designated with an 'M' which represents a master's degree, or a 'D' which represents a doctorate degree. (Martino, 2017, p. 50)

The participants were interviewed with an open-ended semi-structured question protocol that were modified from Mancini and Marek's (2004) quantitative Program Sustainability Index (PSI) instrument. The interviews were transcribed in a Word document and organized into tables. The data was reduced three times. Additional data collection included member checking, peer debriefing, and memo-taking notes. After the data was analysed upon saturation, themes emerged that answered the two research questions: Question 1. How do past and present undergraduate CTE teacher preparation educators and administrators describe their program experience and program sustainability? And Question 2. What perceived conditions do past and present undergraduate CTE /VET teacher preparation educators and administrators believe are essential for program sustainability?

## 2.1 Results

The findings of Martino's (2017) study revealed categories that answered each of the questions and were organized into internal and external domains. Question 1 was answered by the internal categories, and Question 2 was answered by the external categories. Figure 1 reveals the framework with both domains as equal and necessary components to sustainability.

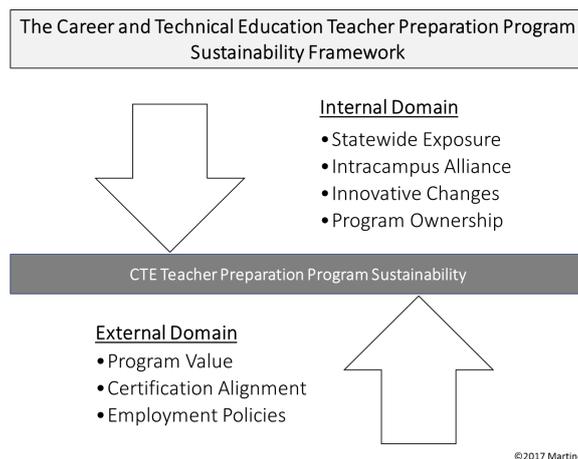


Figure 3 CTE Teacher Preparation Program Sustainability Framework (Martino, 2017, p. 111)

Question 1 internal themes, or categories, were influenced by the participants' perceived experiences. The internal domain includes the following categories: statewide exposure; intracampus alliance; innovative changes; and program ownership. Program ownership, in this study, represented value, pride, respect, success, and caring. A participant stated "So, I think a lot of the success or failure of the programs, it really lays with or rests with the individuals who are in the program" (as cited in Martino, 2017, p. 86).

Question 2 external themes, or categories, were influenced by the participants' perception of essential sustainability components controlled by others. The external domain includes the following categories: program value; certification alignment, and employment policies. Program value, as an external category, represents the necessity of having administrators and other stakeholders value CTE. When external sources do not value CTE, little support may be given, according to participants.

One participant stated,

"By the way, when are you going to teach?" I realized he didn't know what teaching was, teaching lab. My answer to him was "What do you think I've been doing this whole period since you've been here?" He said, "No, I mean when are you going to lecture?" because to him that was teaching (as cited in Martino, 2017, p. 93).

The CTE program sustainability framework show that value is an important component in both internal and external domains. In order to maintain or promote CTE teacher preparation programs, value in CTE should be present.

### 3 Conclusion

Value is a necessary component to sustainability and success in any society, both internally and externally. Vocational education, historically, has been viewed as less important than academic studies. Recently, VET and CTE programs have seen an increase in student enrollments. This may be due to changes in the workplace that require more skilled labour or job scarcity in a downward economy. In either case, vocational education and training are on an upward trend. How does that affect VET/CTE teacher education? Finland's teachers are valued as a whole due to their views on education and the high requirements of the profession. However, vocational education is still viewed as less important or less desirable than academic subjects and programs at the university level.

In the U.S., teachers are not valued as highly as Finnish teachers overall. This may be due a combination of lower educational attainment requirements for certification and societal views. CTE in the U.S. has also been historically valued as less than academic subjects and upper level university degrees. In the past, schools have guided students to vocational programs who were not able to succeed in academic programs. This practice is also changing. More students are choosing CTE programs in high school and go on to college or other postsecondary education than in the past (Advance CTE, 2018). However, CTE teacher value has not aligned with this trend. It may be due to politicians' awareness, CTE teacher degree requirements, and professional education expertise. There are less CTE teacher preparation Bachelor degree programs offered now than there were in 1990 (Lynch, 1990; Martino, 2017). As such, CTE teachers are seeking alternative certifications through school districts and employers.

In Finland, vocational education is currently being reformed with a goal towards a higher value in society and real workforce experience (Ministry of Education and Culture, n.d.). In the U.S., efforts are ongoing to improve CTE and strengthen workforce readiness programs through legislative acts, which may indirectly improve societal views (Committee on Education and the Workforce, 2017). However, is this enough to help students who choose VET/CTE programs for inclusivity that will ultimately improve the achievement gap? Will these efforts change societal views on the value of workforce education versus academia?

Governments and institutions can implement reform policy and legislation to identify and improve vocational programs for a better society, but it is societal views that may need reform for change to occur. To begin, language is important. It may be helpful to change the term "lowered standards" associated with entrance examinations for vocational programs to "authentic assessments" that apply competency-based knowledge. People who choose vocational education are not lowered or remedial. Their knowledge, skills, and experience should be equally valued. Lastly, improving the value of teachers is a strategy that may indirectly improve the value of those programs. A society that places a high value on education also places a high value on teachers. To do this, it may be necessary to increase the educational attainment levels of VET/CTE teachers to become effective in their practice.

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### Biographical notes

Dr **Lisa Martino** is a Lecturer and degree program coordinator for the Career and Technical Education (CTE) undergraduate and graduate programs at the University of Central Florida in the United States. She holds a Bachelor's, Master's, and Doctorate degree in career and technical education. Her PhD., from the University of South Florida, is in Curriculum and Instruction/Career and Workforce Education with a cognate in teacher education. Dr Martino has devoted her academic career to teaching pedagogy to subject matter experts who wish to become CTE teachers, trainers, and administrators. She is passionate about CTE policies and advocacy.

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