**CAREER TECHNICAL EDUCATION PARTNERSHIPS**

**FACILITATIONS AND BARRIERS**

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CTED 650 Research in Career and Technology Education II

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**Abstract:**

The purpose of this study will be to evaluate the relative strength in partnership

development in local Career Technology Education (CTE) programs. CTE programs share a

common challenge in their efforts to develop and strengthen their partnerships. Partnerships are

not easy to cultivate and sustain. As CTE programs align new and existing programs with college

and career ready standards, CTE programs of study engagement with schools, communities,

industry, and post-secondary institutions will be increasingly necessary. Research regarding CTE

partnership facilitations and limiting barriers can provide individual teachers and administrators

specific targets for attention. With the potential availability of CTE partnership resources and the

willingness and capability of CTE programs to utilize them, this study will explore the current

profiles of partnership development within an CTE district. Specifically, this study will seek to

discover the current needs or strategies used that sustains the network of CTE partnerships in the

district participating in this study. CTE partnership research findings would be a valuable starting

point for professional development and new teacher orientations. A survey was developed and

distributed to 38 CTE program of study instructors. The study measures alignment to partnership

criteria and relates teacher perceptions regarding factors associated with that criteria.

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Chapter 1.

**Introduction**

In July of 2018, President Donald Trump signed the Strengthening Career and Technical

Education for the 21st Century Act. “The purpose of this federal funding was to develop the

academic knowledge, technical and employability skills more fully of secondary education and

postsecondary education students who elect to enroll in career and technical programs.”

(CTE.ed.gov, Perkins V. p. 1.)

Key provisions of Perkins V included:

* Increase employment opportunities for subgroups and special populations.
* Include preparation in high-skill, high-wage, or in-demand occupations.
* Integrate challenging academic and CTE instruction, linking to post-secondary education.
* Provide technical assistance that improves quality of CTE faculty, teachers, counselors, and administrators.
* Support partnerships between secondary, postsecondary, local workforce boards, business, and industry

Accordingly, “Perkins V has continued a push toward more systemic partnership,

particularly with business and industry, incorporating labor market alignment into the definition

of programs of study and requiring extensive stakeholder engagement on the local level.”

(ACTE online,2019, p.2) Fundamentally, Perkins V requires improvement in student readiness

and employability by funding support for high quality student preparation that is aligned,

integrated and in partnership with, high quality destinations of opportunity for students.

In 2018, the Association for Career and Technical Education (ACTE) published a

framework designed to answer the question “What is high-quality CTE?” The research-based

framework was designed to apply to individual or a local CTE programs of study. Of the

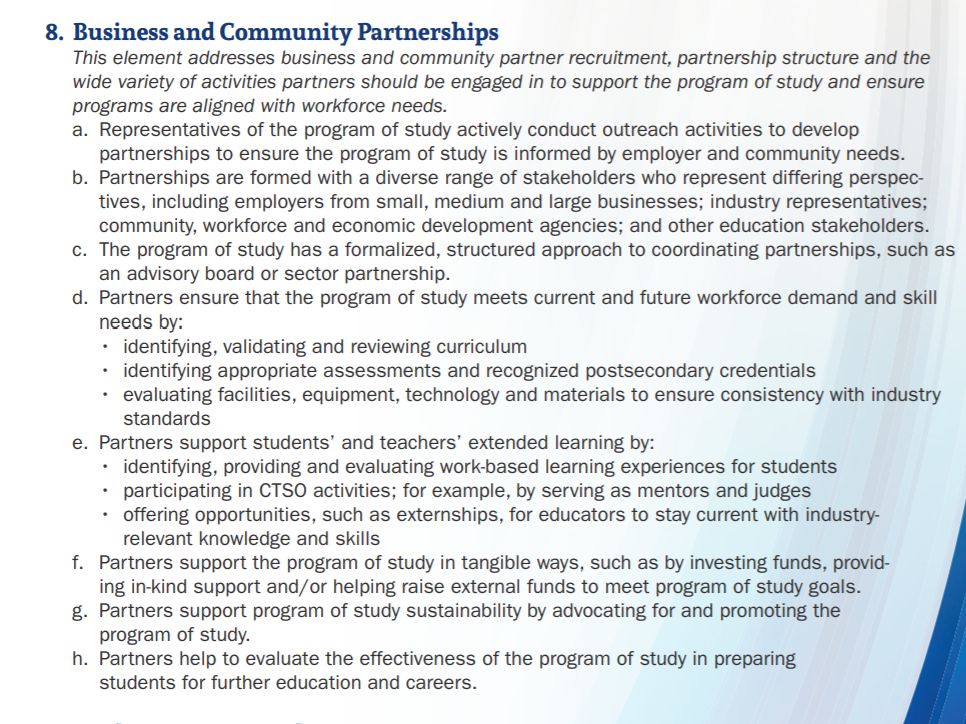
framework’s twelve elements and ninety-two criteria, business and community partnerships were

considered a key element. This key element addresses partnership recruitment, partnership

structure, and the wide variety of activities partners should be engaged in to support the program

of study and align with workforce needs. The (ACTE, 2018, p.4) defining quality business and

community framework element and the associated criteria are below.



*Figure 1. ACTE Business and Community Partnership Elements*

Criteria “A” and “B” of the framework elements above addresses the importance of CTE

programs conducting outreach to both be informed by employers and the greater community and

to establish a diversity of stakeholders with differing perspectives. Criteria “C” from above,

addresses the importance of having an established and formalized structure of advisory of

industry expertise and local knowledge. The following criteria “D”, “E”, “F”, “G” and “H”

addresses critical program partnership activities that in multiple ways supports program

alignment with current industry standards and student opportunities. In the ACTE CTE total

framework developmental process mentioned above “the topic that appeared most frequently

was the involvement of business partners, followed by the involvement of education partners.”

(“ACTE, 2019, p.2) A 2013 national study of 20,000 CTE educators found, “the biggest gap

between the importance of program components and satisfaction levels was in access to industry

partners and mentors.” (Education Development Center, 2014, p.10)

**Purpose and Significance of Research**

The purpose of this study will be to evaluate the relative strength in partnership

development in local CTE programs of study. The study will measure alignment to partnership

criteria and relate teacher perceptions regarding barriers and facilitating factors associated to that

criteria.

A diverse range of partners and partnership collaboration is fundamental to CTE program

quality and student opportunities. A CTE high quality partnership profile would be considered to

include a diverse range of stakeholders, who understand their responsibilities, and participate in a

range of activities. CTE programs aligned with meaningful partnerships with community and

industry help provide programs with additional technological resources, insights, and ideas that

shape curriculum, operational infrastructure, and valuable workplace orientations for students.

The research questions for this study address partnership criteria in recruitment, partnership

structures in place and partnership activities. This research survey can be used as the evidence

base for district-wide evaluations regarding partnership patterns and structures. Research

regarding CTE teacher partnership profiles could benefit all CTE stakeholders in the continuing

effort toward improvement.

With the potential availability of CTE partnership resources and the willingness and

capability of CTE programs to utilize them, this study will explore the current profiles of

partnership development within an CTE district. Specifically, this study will seek to discover the

current limiting barriers or facilitating strategies used that sustains the network of CTE

partnerships in the district participating in this study. Research regarding CTE partnership

facilitations and limiting barriers can provide individual teachers and administrators specific

targets for attention. Partnership research findings would be a valuable starting point for

professional development and new teacher orientations.

**Statement of the Problem**

“Career and technical education is a unique component of the American education

system. Spanning K-12 and postsecondary, CTE is intentionally the most outward facing

curriculum. No other program, if developed well and implemented with fidelity, requires the

same elevated level of advisement and engagement of external stakeholders.” (ExcelinEd.org,

2018, p.7) Career Technical Education (CTE) programs share a common challenge in their

efforts to develop and strengthen their partnerships. Partnerships are not easy to cultivate and

sustain. As CTE programs align new and existing programs with college and career ready

standards, CTE program engagement with schools, communities, industry, and post-secondary

institutions will be increasingly necessary.

Inherent in the development of expanded CTE partnerships are the challenges and

sometimes inability of CTE programs and partners to find common understandings, shared

priorities, and mutual benefits. “The reason for and manner by which stakeholders are identified

and engaged sets the stages for how well the overall CTE effort meets its goals in a timely

fashion and with minimal setbacks.” (ExcelinED.org, 2018, p.7)

A 2018 survey of nearly eight hundred CTE teachers conducted by the Student Research

Foundation reported significant results related to teacher retention alongside frustrations with

external engagements. Of the CTE teachers surveyed, thirty-seven percent plan to leave the

teaching profession within next five years, forty eight percent are frustrated because of the

quality of external collaborations, and sixty percent say improving business/industry engagement

should be a top priority. Advance CTE, a nonprofit representing CTE directors and leaders,

conducted a survey of CTE directors, teachers, and administrators. Key findings included: “98%

percent of State Directors stated that increasing access to industry experts in high schools is a

key priority today. 100% percent stated that it will be an increasingly large priority in the future.”

(Advance CTE, 2016, p. 2)

Industry and community professionals who have competing priorities and limited time to

engage with CTE programs and students exacerbate partnership efforts. Accordingly, schools

have to find ways to connect with industry professionals in a manner that facilitates expertise in

the classroom. How can we both facilitate and reduce barriers to partnership development that

are fundamental to CTE program quality?

**Research Questions**

The following are research questions studied in this report:

Main Research Question Criteria A-H.

1. To what degree are the elements used as criteria for the ACTE High Quality CTE Program of Study Framework/Partnerships (ACTE HQP) evident in local CTE programs?

Other Research Questions:

Recruiting and Structuring Partnerships

1. Regarding partnership structures and recruiting efforts. What are your supports or how are individuals involved? What is needed?

Partnership Activities

1. Regarding partnership activities. What are your supports or how are individuals involved? What is needed?

Student and Partnership Exposure and Interaction

1. Regarding student exposure and interactions with partners. What are your supports and how are individuals involved? What is needed? Please explain.

Variables of Demographic Influence, Criteria CTE Teachers

1. Does the number of years a CTE teacher has worked in the career field prior to teaching have an impact on their partnership profile?
2. Does the number of years teaching CTE have an impact on program partnership profiles?
3. Does the general industry type of CTE program of study have an impact on program partnership profiles?

**Definition of Terms**

*ACTE*: Association for Career and Technology Education (ACTE online, 2019)

*Career and Technical Education:* The alignment of education-to-occupation pathways meeting

the immediate and long-term needs of the state. (ExcelinED.org, 2018, p.3)

*Collaboration:*  Bringing together industry and education stakeholders who have a vested interest in each other’s success allows students to obtain careers upon graduation and employers to hire qualified employees. (King 2020)

*CTE:* Career Technical Education (Maryland State Department of Education, 2019)

*Elements:* The twelve organizing divisions of the ninety-two criteria subsets of the ACTE high quality CTE framework.

*Frameworks:* standards, rubrics, and documents outlining key CTE program characteristics.

*Stakeholder:* A stakeholder is anybody who can affect or is affected by an organization, strategy, or project. They can be internal or external and they can be at senior or junior levels.

(Stakeholdermap, 2014)

*Partnership activities:* Partnership involvement to ensure programs are aligned with workforce and community need. (ACTE online, 2019)

*Partnership CTE -* A stakeholder-integrated approach to cooperative education involving formalized sustainable relationships between stakeholders. (Fleming and Hicky, 2012)

*Perkins V:* The Strengthening Career and Technical Education for the 21st Century Act was signed into law by President Trump on July 31, 2018. (CTE.ed.gov, Perkins, 2020)

*Program of Study:*  A structured sequence of academic and career and technical courses leading to a postsecondary-level credential. (CTE.ed.gov, Initiatives, 2020)

**Research Limitations**

Research findings are from one CTE District. Organizational factors can significantly impact partnership profiles.

Eleven instructors surveyed co-teach in same course.

Self-evaluations can be skewed based on timing of survey. School events can affect participation and focus.

Due date for completion is May 2021.

Impact of online teaching due to COVID.

**Research Methodology**

As previously noted, the purpose of this study will be to evaluate the strength of

partnership development in local CTE programs. With survey data from district CTE teachers, a

understanding of the form and scope of partnership development within that district will be

evaluated. To evaluate the relative strength in partnership development, the study will measure

alignment to partnership criteria and relate teacher stated perceptions regarding barriers and

facilitating factors associated to that criteria.

Survey data will be from thirty-two CTE instructors in Wicomico County Maryland. The

instructors sampled will cover twenty courses of study. The research will use a concurrent mixed

quantitative and qualitative method. The research questions will be both a Likert scale and open-

ended response format. Quantitative survey data will be aligned with the underlying criteria from

the ACTE High Quality Framework Element: Business and Community Partnerships. (ACTE

online, 2018, p.4) Evaluation Criteria will use Likert Scale (1 = Not at all achieved) (2.

Minimally achieved) (3. = Moderately achieved) (4. =Substantially achieved) For each criteria

responses will be accumulated and mean, and standard deviation assigned. Achieved scores for

each criteria will be ranked for discussion purposes.

Convergent qualitative survey questions aligned as follow-up from partnership quality

criteria responses will give each respondent opportunity to expand on their situational

dynamics of partnership facilitations or needs to that criteria. These expanded responses will be

coded using the constant comparative method to develop major and minor themes of partnership

facilitation and occupying barriers.

Variables of demographic influence on partnership profiles including number of years in

career field, years of CTE teaching, and the generalized category of CTE program of study will

be studied. Accumulated respondent demographic categories and the achieved mean score

partnership data will be compared for discussion.

**Chapter Summary**

The numerous cited reports in this chapter describe the necessity and importance of CTE

programs establishing stakeholder bonds, bridges, and linkages. As stated above, CTE programs

require an elevated level of engagement with external stakeholders. This study will examine the

identity and status of CTE partnerships in their developed extensions and sustained structures.

The study questions are aligned to survey responses from standard based partnership

criterion to provide a generalized profile of CTE teacher engagement in partnership

development. The partnership insights will be situated in three categories: recruitment,

coordinating structure, partnership activities and partner student engagement. Open ended

questions will provide insights into the factors of support and need in CTE partnership

development. In the findings from this study, of particular interest will be the understandings

related to partnership supports, coordinating structures, shared purposes, goals, and means of

achieving those goals. This study can be used by individual CTE teachers and administrators in

evaluating partnership program profiles for developing opportunities and professional

development.

**Chapter 2.**

**Introduction**

Career Technical Education (CTE) has long incorporated employer partnerships in the

development of programs and the provision of workplace opportunities for students. In the recent

decade, National, State, and local CTE leadership have made it a goal to develop more

systematic alignment and inclusion of diverse partnerships with business and community. This

goal has been supported through federal policy, including the School-to-Work Opportunities Act

of 1994, and the following Perkins IV and Perkins V legislation. The goal of these federal

policies has been the continued focus on labor market alignment and definitions of programs of

study that lead to high quality preparation and destinations for students. CTE programs are

increasingly subject to state and federal accountability systems that mandate improvement in key

indicators toward student and program success. Aligned to these accountability mandates has

been the development of benchmarks, frameworks, and rubrics that support the identifying

characteristics of high quality CTE. As a means to achieving these goals, federal and state

mandates are increasingly requiring extensive partnership engagement at the local level.

Partnership development remains a key indicator of CTE program of study success.

**Perkins: Partnership Alignment**

The Strengthening Career and Technical Education for the 21st Century Act. (Perkins V,

2020) added new requirements for local Career Technical Education programs. “One of the most

significant changes in Perkins V is the new requirement for local eligible recipients to conduct a

comprehensive local needs assessment and update it at least every two years.” (ACTE online,

2019, p.1) The implementation of the local needs assessment requires CTE leadership to evaluate

how their programs measure up on federal accountability standards, scope, and size of programs,

quality of programs, progress in implementation of programs of study, recruitment, retention,

and training of teachers and progress in improving access and equity. “Ultimately, the local

needs assessment process is about helping you make a more formal shift from merely collecting

information to using information to ensure your local CTE programs help create success for

students and employers.” (ACTE online, 2019, p.2) Perkins V accents the importance of

partnership development in local CTE programs by requiring consultation with a diverse

range of stakeholders in the needs assessment development. Perkins V outlines at a minimum the

participants who should be engaged in the assessment and development of the local Perkins

funding application. Uniquely, Perkins V specifies who should be engaged in the local needs

process and ongoing consultation.

* CTE program representatives at the secondary and postsecondary levels, including teachers, faculty, administrators, career guidance and advisement professionals
* State or local workforce development board representatives
* Representatives from a range of local businesses and industries
* Parents and students
* Representatives of special populations
* Representatives from agencies serving at-risk, homeless, and out-of-school youth
* Representatives from Indian Tribes or Tribal organizations, where applicable.

(ACTE online, 2019, p.2)

Highlighting the need for partnership development between CTE secondary and postsecondary institutions are key provisions in Perkins V providing for expanded student opportunity.

“In a much more expansive way than Perkins IV, Perkins V encourages states and local entities to consider dual and concurrent enrollment and early college high schools (otherwise known as college in high school programs) as a pathway for postsecondary attainment in a student’s desired career field. States are to detail in their state plans how they will make opportunities available for students to engage in dual enrollment programs, which carries over from Perkins IV.”   
 (Perry, 2019 p. 17)

**National Partnership Frameworks**

In 2010, the National Association of State Directors of Career Technical Education Consortium

(NASDCTEc) released a report that documented key principles and actions the community

needed to advance CTE’s role in the educational and economic advance of the nation. The

document “Reflect, Transform, Lead: A New Vison for Career and Technical Education,”

identified five principles to guide success. The principles included:

* CTE is critical to ensuring that the United States leads in global competitiveness.
* CTE actively partners with employers to design and provide high-quality, dynamic programs.
* CTE prepares students to succeed in further education and careers.
* CTE is delivered through comprehensive programs of study aligned to National Career Clusters framework.
* CTE is a results-driven system that demonstrates a positive return on investment.

(Hyslop and Imperatore, 2015, p15.)

“To support state administrators and local program providers in assessing the status of CTE programs of study, in 2010 the U.S. Department of Education, Office of Vocational and Adult Education (OCTAE) commissioned the development of a self-assessment tool. The tool identifies the criteria for evaluating whether a CTE provider is ready and has sufficient capacity to implement a comprehensive program of study.” (CTE.ed.gov. Initiatives) This self-assessment tool was aligned to the requirements of the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) which called for states to offer programs of study (POS). Each local educational agency and postsecondary institutions receiving Perkins funding would be required at minimum to have at least one POS that:

* Incorporates and aligns secondary and postsecondary education elements.
* Includes academic and CTE content in a coordinated, non-duplicative progression of courses.
* Offers the opportunity, where appropriate, for secondary students to acquire postsecondary credits; and leads to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.
* Leads to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree. (CTE.ed.gov. Initiatives, p.1)

The OCTAE framework and assessment tool for CTE programs in Table 1 below

contains ten supporting elements that are considered instrumental for creating and implementing

a high-quality CTE program of study. This assessment tool has been used to promote program

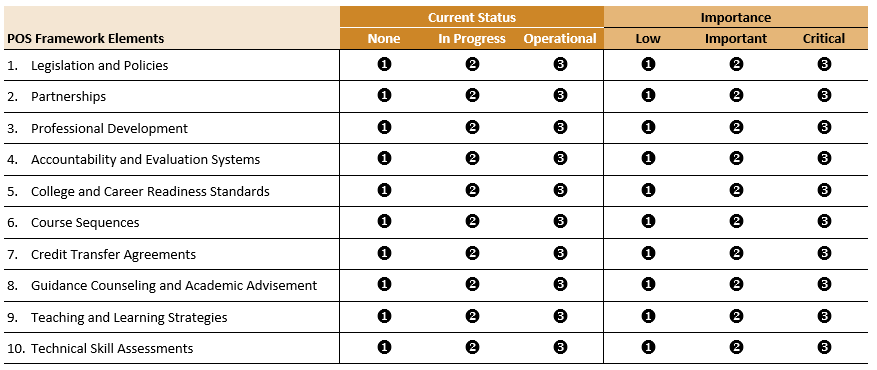
improvements within Perkins-funded programs. The legislatively specified POS elements and

underlying criteria may or not be currently incorporated into existing program approval

processes used by states, in part because the elements are broadly defined and open to state and

local interpretation.

**Table 1. Programs of Study: Local Implementation Readiness and Capacity for Self-Assessment.**

(CTE.ed.gov. Initiatives p.19) 

Alongside the OCTAE framework, states were given the flexibility to establish their own

criteria for approving CTE programs that qualify for federal Perkins funding support. “As a

result, programs of study offered within and among states may differ in structure because of a

lack of uniform criteria used to establish and implement a program of study.” (CTE.ed.gov.

Initiatives)

In 2013, the American Federation of Teachers and the Albert Shanker Institute released a

paper outlining their thoughts on high-quality CTE programs. With the foundation of the

OCTAE framework, the paper identified a number of essential components of high-quality CTE

programs. Programs should:

* Be aligned with the Common Core and Common Career Technical Core standards.
* Employ teaching strategies and curricula that integrate career and technical subjects, as well as core academic subjects, in students’ programs of study.
* Have as their foundation partnerships between educational institutions, on the one hand, and, on the other hand, businesses, community institutions and labor unions from all sectors of the economy, private and public, for profit and not-for-profit.
* Coordinate career and technical programs and sequences between secondary and post-secondary institutions.
* Provide educators with high-secondary high-quality professional development that is embedded in their educational workplace, focused on real issues they confront in their work and sustained over a period of time.
* Incorporate appropriate technology.
* Whenever possible, provide internships and other work-based learning opportunities for students.
* Use high quality performance assessments of technical skill.

(Albert Shanker Institute, 2013, p.3)

Associated with the release of the above paper outlining high-quality CTE programs, was

a presentation by James Stone, Director of the National Research Center for CTE. The 2013

presentation summarized the research on CTE programs and posited four elements critical to

quality CTE programs: (1) Rigorous programs and curriculum, (2) Effective pedagogy- a

systems approach aligned between levels and sectors of education, (3) Alignment with industry,

(4) Professional Development. (Stone, 2013, p.38)

In 2015, the Association of Career and Technical Education (ACTE) developed a

summary and crosswalk of the various program quality frameworks used in CTE nationally.” To

develop a rigorous definition of high-quality CTE, the ACTE staff began by examining existing

frameworks and standards developed by national education and workforce organizations and

government agencies that describe quality for CTE programs and schools, career academies,

career pathways and related initiatives.” (ACTE online, 2019, p.2) The review concluded: “while

there were many commonalities among the frameworks, there was content missing with

relevance to CTE, and generally, few sets of quality standards, directed at individual, local

programs of study.” (ACTE online, 2019, p.2) With the above analysis and feedback from focus

groups, surveys, subject matter experts, pilot testing, and correlated criteria from the above

mentioned OCTAE framework, ACTE released their own “CTE Program of Study Framework.”

The ACTE framework defines ninety-two criteria from twelve elements (listed below) of a high

quality CTE program of study.

ACTE CTE Program of Study Framework Elements

* Standards-aligned and Integrated Curriculum
* Sequencing and Articulation
* Student Assessment
* Prepared and Effective Program Staff
* Engaging Instruction
* Access and Equity
* Facilities, Equipment, Technology and Materials
* Business and Community Partnerships
* Student and Career Development
* Career and Technical Student Organizations
* Work Based Learning
* Data and Program Improvement (ACTE online, 2019, Defining Quality p.1)

A 2017 study examined the quality indicators guiding the rigor of secondary career and

technical education programs of study in the United States. The study provided a picture of state

practices in the design and review process of local secondary CTE programs of study. Xing,

Shaw and Gordon (2017) were able to locate publicly accessible secondary CTE quality program

standards for thirty-eight states. “Through content analysis we identified twelve quality elements

that conform to those of the ACTE framework, therefore, we adopted the names of those twelve

elements. In addition, we synthesized two more quality elements from the analysis of state

documents that did not fit into the ACTE framework and named them Legislation and Policies

and Program Administration.” (p. 51) Their study found the top five implemented quality

elements from across the nation were: (1) Prepared and Effective Program Staff, (2) Business

and Community Partnerships, (3) Standards-aligned and Integrated Curriculum, (4) Sequencing

and Articulation (5) Engaging Instruction.

The CTE program of study assessment and guidance tools are targeted with frameworks

and criteria in generalized terms for improvement and growth for all CTE programs of study.

Industry sector program quality guidelines have also been developed and available that coincide

with the national generalized framework elements yet speak to industry specific criteria. Program

of study frameworks alongside their supporting criteria can foster stakeholder conversation and

reflection on both the status of local readiness and capacity for implementation of proposed CTE

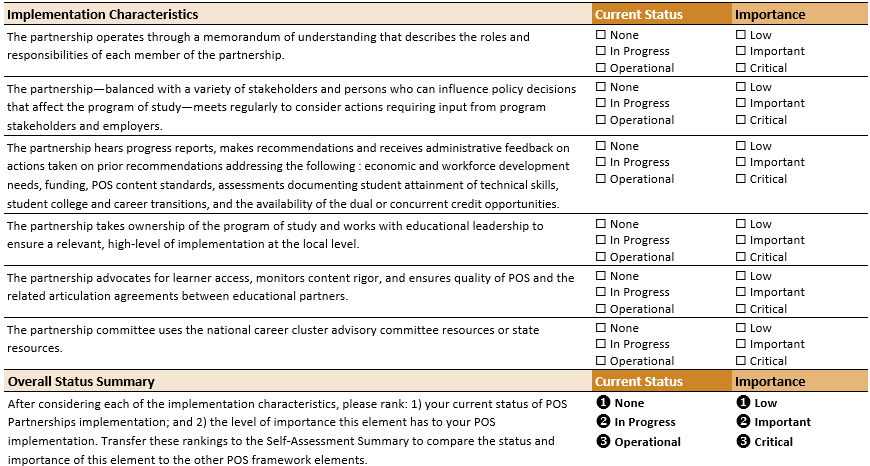
programs and the evaluation of current ones.

The central role of partnerships is situated in all the related documents regarding quality

CTE and the program improvement or readiness guidelines within Perkins-funded programs. The

Table 2 below is the OCTAE framework and assessment tool for CTE program partnerships.

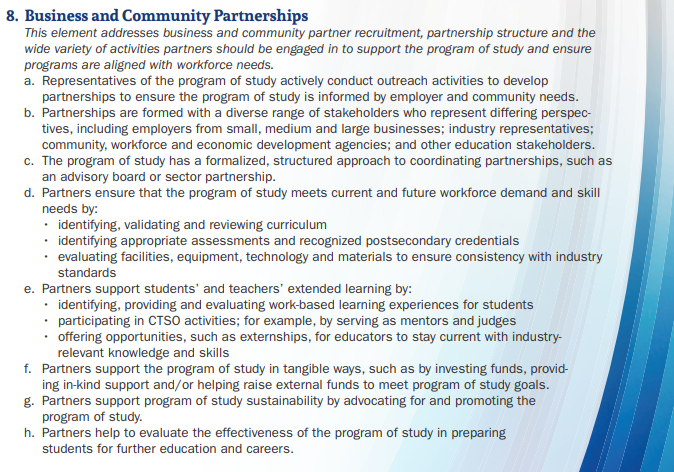
**Table 2: Partnerships Self-Assessment Ranking of Status and Importance**



(CTE.ed.gov. Initiatives p.19)

Figure 2 below is the (ACTE online, 2018) program of study framework for business

community partnerships. (p.4)

**Partnership Recruitment, Structure, Activities**

*Figure 2.**ACTE Business and Community Partnership Elements*

Related to the above program of study partnership framework, key guidance is proffered aligned to the above outlined criteria.

Active outreach and recruitment strategies can ensure that programs of study are making connections that meet the diverse needs of their students and their community. Employers are far from the only partners who can and should be engaged with your CTE program of study. Engaging industry associations, programs of study can gain a more comprehensive perspective on workforce needs in the region, The advisory board or committee uses local knowledge and industry expertise to support a specific CTE program of study or program area in a school or district. (p.3) The ultimate goal of recruiting a diverse group of partners and supporting them with formalized structures is to maximize partners’ ability to contribute to a quality program of study, for the benefit of students and the workforce. (ACTE online, 2019, p.4)

The advisory board or committee is the primary mode of engagement and collaboration

between CTE programs and business and community partners. The advisory board members

provide local knowledge and industry expertise to support CTE programs of study. Advisory

committees ensure CTE program administration and program instructors remain engaged with

local advocates and industry professionals and remain abreast of industry trends and

opportunities for students. Kerka (2002) outlined the primary responsibly of an advisory

committee as: “the group develops and carries out a yearly plan of action, they articulate long-

term and short-term goals and objectives, by regularly reviewing curricula to determine if they

are meeting the needs of the students and the projected employment needs of business and

industry. (p.4)

**Partnership Facilitations and Outcomes**

Understanding what supporting factors are necessary for schools to develop and sustain

partnerships can alleviate struggles or barriers. (Buettner, Morrison, Wasicek, 2002), describe

what is referred to as the necessary seeds for partnership success. (1) Defined mission and goals,

(2) Overlap of partner and school activities, (3) Extension of credibility and reputation, (4) Gains

in productivity and efficiency, (5) Shared resources. (p.6)

Bryan and Henry (2012) note that “Sustainability should be a key consideration in

partnership building because a lack of sustainability can lead to partners' pessimism and

reluctance to engage in the future in what may be perceived as wasted efforts.” (p.417)

Alexander, Weiner, Metzger, Shortell, Bazzoli, Hasnain-Wynia, Sofaer and Conrad (2003)

identified five characteristics that differentiate thriving/robust partnership profiles from those

that are identified as low potential partnerships.

* Outcomes based advocacy and the sharing and celebration of the partnerships accomplishments with all stakeholders.
* Vision-focused or agreement of partners on long-term vision, goals, and actions.
* A systems orientation in which problems and solutions are seen as resulting from all systems, that is, school, families, and communities.
* Internal structure that fosters partners’ participation, develops current and new leaders, and shared roles and responsibilities.
* Community linkages with strong inclusive connections. (p.142)

Valadez and Snyder (2006) in studying partnerships across educational institutions make

recommendations for the following elements to be evident for partnership success. (1.) Mutually

agreed on partnership goals, (2.) Commitment to the partnership, (3.) Appreciating and bridging

cultural differences, (4.) Ongoing communication, (5.) Strengths of each partner recognized, (6)

Shared power in decision making and policy formation, and (7.) Ongoing evaluation. These

above elements stress the need for an organized structure of agreement and commitment to the

attainment of the partnership goals. Valdez and Snyder (2006) note that “information flow must

occur through regular formal meetings with all sectors of the partnership coming together to

share ideas and discuss issues.” (p. 45)

School-based partnerships can have both an impact on student opportunity and

motivation according to the study findings by Scales, Foster, Mannes, Horst, Pinto and

Rutherford:

Students with high partnership exposure agreed significantly more that partnership experiences had made them more interested in their regular academic classes, improved their schoolwork, and improved their problem-solving abilities and creative thinking. Students with high exposure to partnership activities also were far more likely to have discussed college with their teachers and to have talked to an adult about careers, especially to have talked about careers with a person who was already employed in a field in which the student was interested. (2005, p.170)

**Partnership Barriers**

Amey, Eddy and Campbell (2010) clarify important considerations regarding barriers in

partnership development. Highlighted in these points is the a priori intent, understanding and

commitment needed of the constituent individuals of the partnership. (1.) Partnerships cannot be

considered a form of compliance. (2.) Partnerships cannot be considered fringe activities. (3.)

Partnerships are difficult and complicated. (4.) Partnerships do not always fit into work

evaluation criteria. (5.) Partnerships need to operate across organizational cultures, values, and

policies that conflict.

Leadership within partnership groups should be aware of potential barriers for

continuing success. The Kentucky University Center for Community Health (2020) reports that

competition and dominance of current and potential partners should be resolved. Also noted,

was that partnership effectiveness, efficiency and coordination is realized when there

are greater links to the community and partner membership capacities of time, skill, and

resources are available.

**Summary**

Federal legislation in the Perkins IV and Perkins V Acts continue to encourage partnership development in CTE programs of study and have expanded provisions that require specified program involvement and alignment with a diverse range of stakeholders. As CTE programs align their capacities and quality to Perkins mandates, Federal, State and industry program evaluation framework and assessment tools have been developed and have become available. The central role of partnerships is situated in all these frameworks. The framework elements and criteria regarding partnership quality typically correspond to partnership recruitment, structure, and activities. Awareness to the supporting factors and possible barriers to partnership development are necessary to ongoing program success. The correspondent studies in this review highlight that quality CTE partnership constructs are system level developed, ongoing process oriented and include a diverse range of stakeholders and activities. This literature review highlights the critical element of school-based partnerships in quality CTE program development and student success.

**Chapter 3.**

**Methodology Introduction**

A critical element in the success of Career Technical Education (CTE) programs are

ongoing relationships with industry and community stakeholders. CTE programs require

collaborative partnerships aligned to industry and community need that provide identification,

validation and currency of technical and workforce readiness skills required of students. These

CTE partnerships are enhanced and sustained through a systematic and ongoing development

process of recruitment, engagement, and evaluation. CTE programs share a common challenge in

their efforts to develop and strengthen their partnerships. Partnerships are not easy to cultivate

and sustain. This study will explore the relationship of factors that are complimentary or

needed to the development of high-quality partnership profiles in CTE.

**Research Questions**

The research questions of this study are oriented to the facilitating factors or needs in

CTE partnership development that accomplish or diminish important criteria necessary in high

potential partnership profiles. The research questions for this study will evaluate CTE programs

of study by relating accomplished partnership criteria in juxtaposition to reported factors

facilitating or needed regarding that criteria.

The following questions are to be answered during the study:

1. To what degree are the elements used as criteria for the ACTE High Quality CTE Program of Study Framework/Partnerships (ACTE HQP) evident in local CTE programs?
2. What are the facilitating supports and what is needed in recruiting a diversity of stakeholders in CTE programs of study.
3. What are the facilitating supports and what is needed in developing coordinating partnership structures in CTE programs of study.
4. What are the facilitating supports and what is needed to ensure CTE partners participate in a wide range of collaboration and participation?
5. What are the facilitating supports and what is needed for CTE partnership student interaction and exposure?
6. Does the number of years a CTE teacher has worked in the career field prior to teaching have an impact on their partnership profile?
7. Does the number of years teaching CTE have an impact on program partnership profiles?
8. Does the type of industry program of study have an impact on program partnership profiles?

**Research Design**

This study will explore the numerous factors related to the ability of CTE teachers to

develop thriving robust partnership profiles from those that are seemingly of low potential.

This research study uses a non-experimental design method as the variables are as reported and

not manipulated. The type of research is a mixed method convergent design from reported data

and responses collected from surveyed CTE teachers in Wicomico County Maryland. The survey

questions are structured and the point of analysis is at the integration of the qualitative and

quantitative responses that follow immediate to each other. This research will be explanatory in

elaborating the causal qualitative partnership support themes that interface with the evidentiary

ordinally ranked criteria data set values. “Explanatory sequential designs are used when the

purpose of the study is to elucidate, elaborate on, or explain quantitative findings.” (McMillan

2016, p 373) The data sets are mean “u” and standard deviation “SD” response values from

Likert scale reporting in areas of partnership recruitment, organizing partnership structures,

partnership activities, and partner student engagement. Instructor categorical years of teaching,

industry experience and program of study industry category will be surveyed and compared to

the partnership individual criteria mean scores for comparative analysis.

The juxtaposition of the partnership support/need themes with the reported partnership

criteria data positions will provide overall evidence to supporting factors in theory necessary

for high quality CTE partnership profiles

**Population and Sample.**

The population from which this study samples are the secondary CTE program of study

instructors (POS) in Maryland. The majority of Maryland school districts support ten or more

CTE career clusters with numerous programs of study within each. (Maryland State Department

of Education, 2019) The sample for this study is the CTE district in Wicomico County Maryland.

Wicomico County CTE programs reside at four different high schools. There are thirty-eight

instructors to be surveyed that comprise ten career clusters and twenty-five CTE POS. There are

thirteen CTE programs of study that have multiple instructors. Of the twenty-five Wicomico

CTE POS surveyed, twenty-one have established program advisory committees (PAC). The

program PAC committees are members of industry and community that support programs in

various or multiple ways. As of 1/30/2021 there were three hundred and seventy reported PAC

members aligned to Wicomico CTE programs of study.

**Study Variables**

Dependent Variables

The dependent variables of this study are nine partnership criteria postures as developed

in CTE programs of study. The first dependent variable is the responses quantified by CTE

instructors in measures of partnership recruitment and the diversity of stakeholders engaged.

The second dependent variable is the responses quantified regarding structures in place to

involve and coordinate ongoing and organized participation with involved partners. The third

dependent variable is the responses quantified regarding the array of activities that relate to

partnership involvement to ensure overall program success. These activities include: reviewing

standards, evaluating activities, program investment, program advocacy, and program evaluation.

The fourth dependent variable is the responses quantified regarding the level of student exposure

and interaction with program partners.

Independent Variables

Independent demographic variables of instructors number of years teaching, number of

years involved with industry before teaching, and program of study industry category will be

studied for possible impacts on partnership criteria.

Confounding Variables

The relative fidelity of CTE district supervisors toward the forging of partnerships can

impact individual programs of study and district wide partnership profiles. Other variables could

include how often industry advisory boards meet, relationships of instructors to industry

members, economic strength of industry sectors within local area, gender of teacher, ethnicity

of teacher, level of education of teacher and partners, and continuity of instructional goals.

**Table 3: Study Variables**

|  |  |  |  |
| --- | --- | --- | --- |
| Variable Name | Type | Measure | Scale |
| Partnership Recruitment and Diversity of Stakeholders | Dependent | Partner Recruitment and Diversity of Partners | Continuous Likert Scale |
| Partnership Coordinating Structures | Dependent | Partnership Structure and Organization | Continuous Likert Scale |
| Partner Activities:  Reviewing standards  Evaluating activities  Program investment  Program advocacy  Program evaluation | Dependent | Partnership Activities | Continuous Likert Scale |
| Partner Student Engagement | Dependent | Student Engagement  with Partners | Continuous Likert Scale |
| Instructor Years of CTE Teaching | Independent | Reported Years Teaching | Continuous |
| Instructor Years in Career Before Teaching | Independent | Reported Years in Teaching | Continuous |
| Program of Study Industry Category | Independent | Reported Program of Study Category | Categorical |

**Instrumentation**

The survey for this study was created in Survey Monkey by the researcher. The first

question of this sixteen-question survey will require an acknowledged yes for consent (yes/no)

before progressing to the survey. The survey has nine Likert scale partnership criteria-based

questions, three open-ended questions related to instructor partnership supports and needs, and

three questions asking for instructor years teaching in CTE, years in profession before CTE

teaching, and industry identification of program of study.

Instructor Partnership Survey

Evaluation Criteria:

(1 = Not at all achieved)

No evidence of the criteria in your program of study.

(2 = Minimally achieved)

The criteria is minimally implemented in your program of study.

Implementation is just beginning.

Evident infrequently.

Implementation is in small portion of program of study.

Access limited to a small segment of students.

(3 = Moderately achieved)

The criteria is evident in your program of study, but implementation is uneven and not on a sustained and regular basis.

Access is available to most, but not all, students.

(4 =Substantially achieved)

The criteria has been fully implemented throughout your program of study.

All parts of criteria are evident.

Implementation is evident on a regular and sustained basis

Implementation is evident across all portions of your program of study

Access is available to all students.

*The questions in this section are related to your industry experience, years teaching and program identification.*

2. What are the number of years you had worked in the career field prior to teaching in your program of study?

(1. 0-5

(2. 6-10

(3. 11-15

(4. 16-20

(5. More than 20

3. What are the number of years you have been teaching in your program of study?

(1. 0-5

(2. 6-10

(3. 11-15

(4. 16-20

(5. More than 20

4. From the four categorical options below where would your CTE program of study be situated?

(1. Auto and Construction Trades

(2. Health, Education and Human Services

(3. Media and Computer Sciences

(4. Business and Related Sciences

*The statement and questions in this section ask for you honest opinion regarding partnership recruitment efforts. Please do not use names.*

5. Representatives of your program of study actively conduct outreach activities in developing partnerships to ensure your program is informed by employer and community need.

(1 = Not at all achieved)

(2=Minimally achieved)

(3=Moderately achieved)

(4=Substantially achieved)

6. Partnerships are formed with a diversity of stakeholders who represent differing perspectives, including industry representatives, community members, and education stakeholders.

(1=Not at all achieved)

(2=Minimally achieved)

(3=Moderately achieved)

(4=Substantially achieved)

*The statement and questions in this section ask for your honest opinion regarding partnership structures that coordinate your support. Please do not use names*

7. Your program of study has a formalized, structured approach to coordinating partnerships, such as an advisory board or industry sector partnership.

(1=Not at all achieved)

(2=Minimally achieved)

(3=Moderately achieved)

(4=Substantially achieved)

8. Regarding partnership structures and recruiting efforts. What are your supports and how are individuals involved? What is needed? Please explain.

*The statement and questions in this section ask for your honest opinion regarding partnership activities. Please do not use names.*

9. Partners ensure that your program of study meets current and future workforce demand and consistency with industry standards.

(1=Not at all achieved)

(2=Minimally achieved)

(3=Moderately achieved)

(4=Substantially achieved)

10. Partners support your students and extended learning by: identifying, providing, and evaluating experiences for students.

(1=Not at all achieved)

(2=Minimally achieved)

(3=Moderately achieved)

(4=Substantially achieved)

11. Partners support your program of study in tangible ways, such as investing funds, helping to raise external funds, providing in-kind support i.e. providing classroom instruction or support for student projects.

(1=Not at all achieved)

(2=Minimally achieved)

(3=Moderately achieved)

(4=Substantially achieved)

12. Partners support the sustainability of your program of study by both advocating for and promoting it.

(1=Not at all achieved)

(2=Minimally achieved)

(3=Moderately achieved)

(4=Substantially achieved)

13. Partners help to evaluate the effectiveness of your program of study in preparing students for further education and career.

(1=Not at all achieved)

(2=Minimally achieved)

(3=Moderately achieved)

(4=Substantially achieved)

14. Regarding Partnership Activities. What are your supports and how are individuals involved? What is needed? Please explain.

*The questions in this section ask for your honest opinion regarding student and partnership exposure and interaction.*

15. Your program of study provides numerous opportunities for students to interact with industry and program partners.

(1=Not at all achieved)

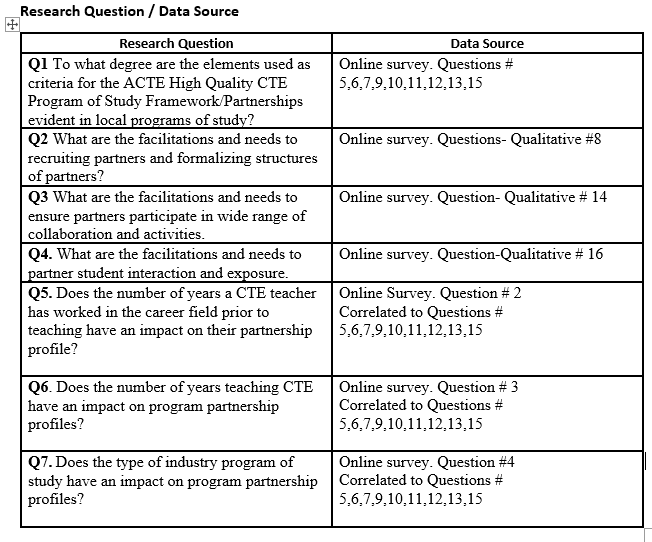
(2=Minimally achieved)

(3=Moderately achieved)

(4=Substantially achieved)

16. Regarding student exposure and interaction with partners. What are your supports and how are individuals involved? What is needed? Please explain.

**Table 4: Research Question Data Source**



**Data Collection**

The surveys will be available to participants by using a weblink to SurveyMonkey. IP

address tracking will be disabled through SurveyMonkey. The survey link will be simultaneously

sent to email addresses of all CTE instructors in Wicomico County, Maryland. These email

addresses are provided by the Wicomico County CTE supervisor. The email addresses will not

be saved or entered on the SurveyMonkey website. Once the survey data is downloaded to Excel,

the individual surveys will be destroyed.

The emails have an explanation regarding the overall survey, the option to participate,

and the participation requirement of acknowledging the consent statement. (See appendix)

One week subsequent to initial email survey request, a follow-up email thanking respondents

and a reminder for those who have not will be sent.

**Analysis of Data**

The data collected from the survey instrument will be a series of Likert Scale criteria

based inputs followed by qualitative responses. Individual respondent totals from the nine

criteria will be analyzed and the distributive statistics of mean, median, mode and standard

deviation reported and charted.

The three quantitative independent variable questions regarding years teaching, years

in career field, and teacher program of study will each be charted in group frequency

distributions. These variables will use the One Way Anova test statistic to evaluate group

population means, standard deviation, F stat, and P value.

Representative major themes of defined partnership facilitating factors and needs

for each years of experience category and program of study industry category will be charted.

The integration of the quantitative partnership data sets with the qualitative responses will

use a traditional grounded theory method of analysis.

Grounded theory (GT) is a structured, yet flexible methodology. This methodology is appropriate when little is known about a phenomenon; the aim being to produce or construct an explanatory theory that uncovers a process inherent to the substantive area of inquiry. One of the defining characteristics of GT is that it aims to generate theory that is grounded in the data. (Chun, 2019)

The three qualitative partnership responses will evolve with initial coding of the responses

looking for similarities and differences and then labeled. Secondly, these initial coding

dimensions will be categorized around core concepts. These core concepts will be charted for

discussion. The core concepts derived will be aligned to representative groups of partnership

facilitating factors or need factors. Finally, these core concepts alongside the criteria data will be

integrated for interpretation and a thick description of meaningful storylines of partnership

facilitations and barriers will be developed. “A thick description is an explanation that includes

both the behavior and the context in which the behavior was displayed.” (Bui, 2014, p. 185.)

Participant quotations will represent major themes and the survey participant perspectives for

discussion.

**Summary**

The research questions for this study evaluate CTE programs of study by relating

accomplished partnership criteria to reported factors of facilitation and need regarding that

criteria. The research questions ask participants for both quantitative and qualitative responses to

their postures in important areas of partnership development. The survey will use a mixed

method convergent design from reported data and responses. This research will be explanatory in

elaborating the causal partnership support or need themes that interface with ranked criteria data

set values. The population represented in this study are the CTE program of study instructors of

Maryland. This study samples the CTE instructors in Wicomico County Maryland.

The dependent variables of this study are nine partnership criteria postures as developed

in CTE programs of study. The independent variables of this study are the CTE instructors

years in the career field, years teaching, and program of study industry category. The survey has

nine scaled partnership criteria-based questions, three open-ended questions related to instructor

supports and needs, and three questions regarding instructor years of teaching, career

professional experience and categorical industry profile of instructors program of study. The

data will be collected by email survey. The analysis of the data will be from the criteria based

quantitative summaries and the integrated adjoining explanatory qualitative response themes.

**Chapter 4.**

**Introduction**

The purpose of this study as explained in previous chapters has been to evaluate the

relative strength in partnership development in local Career Technical Education (CTE)

programs. CTE programs share a common challenge in their efforts to develop and strengthen

their partnerships. Partnerships are not easy to cultivate and sustain. As CTE programs align new

and existing programs with college and career ready standards, CTE program engagement with

schools, communities, industry, and post-secondary institutions is increasingly necessary. With

the potential availability of CTE partnership resources and the willingness and capability of CTE

programs to utilize them, this study has explored the current profiles of partnership development

within an CTE district. Specifically, this study has elucidated the current status, needs and

facilitations used that sustain the network of CTE partnerships in the district participating in this

study. A survey was developed and distributed to 38 CTE programs of study with 30 instructors

responding. Included in this chapter are the descriptive statistics regarding demographics of the

participants and the study measures associated with alignment to partnership criteria. Teacher

perceptions regarding facilitating supports and needs follow these statistics on partnership

recruitment, activities, and student engagement. The themes included all responses and the

designate numbers in times they appeared. All teachers responded at least once to the three

extended questions regarding facilitating support and need. This chapter concludes with the

partnership criteria statistics discussed in depth related to the research questions on partnership

attainment profiles.

The descriptive demographic statistics of the study participants are presented below in

frequency and percentages of respondents in Table 1,2,3. The teacher program of study data in

Table 1. was categorically organized associated to contiguous aspects of how programs relate

and collaborate jointly in such aspects has program planning, budgeting, and student activities.

The largest percentage of respondents are associated categorically with health, education and

human services (43%) (Table 5), greater than 20 years in the career field (27%) (Table 6), and

greater than twenty years teaching (27%) (Table 7).

**Table 5: Teacher Program of Study- Frequency and Percent**.

|  |  |  |
| --- | --- | --- |
| **Characteristic** | **Frequency** | **Percentage of Respondents** |
| *Group One*: Health, Education, Human Services | 13 | 43 |
| *Group Two*: Auto, Construction | 8 | 27 |
| *Group Three*: Media, Computer Sciences | 4 | 13 |
| Group Four: Business and Related Sciences | 5 | 17 |

**Table 6: Teacher Years in Career Field Prior to Teaching- Frequency and Percent.**

|  |  |  |
| --- | --- | --- |
| **Characteristic** | **Frequency** | **Percentage of Respondents** |
| 0-5 | 6 | 20 |
| 6-10 | 7 | 23 |
| 11-15 | 4 | 13 |
| 16-20 | 5 | 17 |
| > 20 | 8 | 27 |

**Table 7: Teacher Years Teaching CTE, Frequency and Percent.**

|  |  |  |
| --- | --- | --- |
| **Characteristic** | **Frequency** | **Percentage of Respondents** |
| 0-5 | 5 | 17 |
| 6-10 | 7 | 23 |
| 11-15 | 6 | 20 |
| 16-20 | 4 | 13 |
| > 20 | 8 | 27 |

**Research Question # 1** To what degree are the elements used as criteria for the ACTE High Quality CTE Program of Study Framework/Partnerships (ACTE HQP) evident in local CTE programs?

The respondent data in Table 8 describes the study population (n=30) achieved

cumulative scores associated with nine partnership elements. The cumulative partnership value

for all criteria was (*M*=2.90, *SD*=.82). The means range was tightly patterned on all nine

elements from *M*=2.7-*M* 3.13. The partnership elements with the highest values were the

structuring of partnerships (*M*=3.13, *SD=* .99), and evaluation of standards (*M*= 3.13, *SD*= .88).

The partnership elements with the lowest values were partnership activities in providing tangible

investments in securing classroom materials or project support (*M*=2.70. *SD*=1.06), and direct

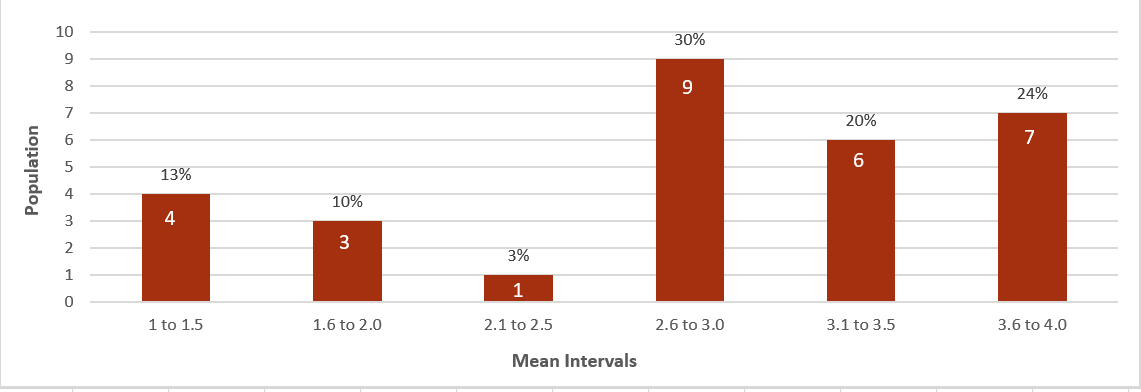
engagement with students (*M*=2.73, *SD*=.89). The total population (n=30), *M* distribution

intervals are represented in Figure 3. 74% of respondents achieved =/> (*M*=2.6).

Research Question # 1 *To what degree are the elements used as criteria for the ACTE High Quality CTE Program of Study Framework/Partnerships (ACTE HQP) evident in local CTE programs? Note: (1 = Not at all achieved) (2=Minimally achieved) (3=Moderately achieved) (4=Substantially achieved)*

**Table 8. Partnership Element Mean Totals**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Partnership Element** | **Mean** | **SD** | **Mode** | **Median** | **Range** | **N** |
| Partnership Outreach | 2.93 | .77 | 3 | 3 | 2-4 | 30 |
| Diversity of Stakeholders | 3.03 | .85 | 3 | 3 | 1-4 | 30 |
| Partnership Structure | 3.13 | .99 | 4 | 3 | 1-4 | 30 |
| Evaluation of Standards | 3.13 | .88 | 4 | 3 | 1-4 | 30 |
| Identifying, Providing,  Evaluating, Student  Experiences | 2.96 | .91 | 3 | 3 | 1-4 | 30 |
| Tangible Investment,  Classroom Project Support | 2.70 | 1.06 | 4 | 3 | 1-4 | 30 |
| Promote and Advocate  Program | 2.96 | .91 | 3 | 3 | 1-4 | 30 |
| Evaluate Program Effectiveness  Program Preparing Students | 2.83 | .96 | 3 | 3 | 1-4 | 30 |
| Engagement with Students | 2.73 | .89 | 2 | 2.5 | 1-4 | 30 |
| Total Criteria Mean Values | 2.90 | .82 | 2.66 | 2.88 | 1.4-4 | 30 |



*Figure 3. Mean Distribution Partnership Criteria Totals (N 30)*

**Research Question # 2.** Regarding partnership structures and recruiting efforts. What are your supports or how are individuals involved? What is needed?

The respondent data in Table 9. describes the study population (n=30) achieved

cumulative scores associated with facilitating supports and what is needed in outreach and

recruiting a diversity of stakeholders and structuring support in CTE programs of study.

Additionally, Table 9. includes the concurrent qualitative response themes associated to this

criteria. The achieved totals related to this criteria were (*M*=2.86, *SD*=.80). The most related

response need associated to this criteria was the lack of time provided to recruit partners. (5) The

most related partnership facilitating factor was that the current status of the program of study

partnership individuals was satisfactory. (4) The greatest reported need was time to recruit (5).

*Research Question # 2**Regarding partnership structures and recruiting efforts. What are your supports or how are individuals involved? What is needed? Note: (1 = Not at all achieved) (2=Minimally achieved) (3=Moderately achieved) (4=Substantially achieved)*

**Table 9: Partnership Structures and Recruiting Efforts Mean/Themes**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Partnership Elements** | **Mean** | | **SD** | **Mode** | | **Median** | **Range** | **N** |
| Partnership Outreach + Diversity | 2.86 | | .80 | 3 | | 3 | 1-4 | 60 |
| **Themes Emerged from Teacher Narratives** | | **#**  **Responses** | | | **Definition** | | | |
| - Workforce Coordinator Recruiter Needed | | 2 | | | Workforce Coordinator could establish ties with community on behalf of teachers. | | | |
| - Lack of Time to Recruit | | 5 | | | Teachers lack necessary time to establish community relationships. | | | |
| + Industry Partners Sufficient | | 4 | | | Relationships with current industry partners satisfactory. | | | |
| + Maintaining Relationships Important | | 3 | | | Teachers broaden their portfolio of partners by maintaining them and using them to recruit. | | | |
| + PAC Meetings Organization. | | 3 | | | Program Advisory Council dinner and meeting is scheduled and planned by CTE Staff. | | | |
| - Beginning Teacher Overwhelmed | | 1 | | | Beginning teacher not familiar with Partnership structuring. | | | |
| - Lack time for Individual meetings | | 3 | | | Teachers lack time to meet individually with partners. | | | |

**Research Question #3.** Regarding partnership activities. What are your supports or how are individuals involved? What is needed?

The respondent data in Table 10. describes the study population (n=30) achieved

cumulative scores associated with partnership activities. These scores are cumulated from five

areas associated with partnership activities. Additionally, Table 10 includes the concurrent

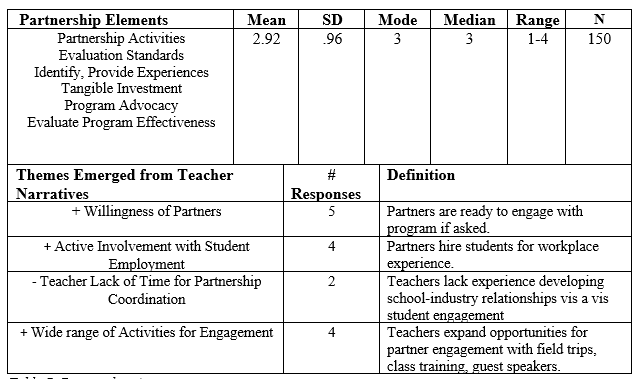
qualitative response themes associated to this criteria. The achieved totals related to this criteria

were (*M*=2.92, *SD*=.96). The most related response need associated to this criteria was lack of

teacher experience in coordinating expanded involvement of partners in diverse range of

activities. (2) The most related partnership facilitating factor was the willingness of partners to

participate in program activities. (5)

**Table 10: Partnership Activities Mean/Themes**

**Research Question #4** Regarding student exposure and interactions with partners. What are your supports and how are individuals involved? What is needed? Please explain.

The respondent data in Table 11. describes the study population (n=30) achieved

cumulative scores associated with partnership activities. These scores are cumulated from five

areas associated with partnership activities. Additionally, Table 11 includes the concurrent

qualitative response themes associated to this criteria. The achieved totals related to this criteria

were (*M*=2.73, *SD*=.89). The most related response need associated to this criteria was lack of

time (4), and teacher experience in coordinating expanded involvement of partners in diverse

range of activities. (3) The most related partnership facilitating factor was the willingness of

partners to participate in program activities. (8)

*Research Question #4 Regarding student exposure and interactions with partners. What are your supports and how are individuals involved? What is needed? Please explain Note: (1 = Not at all achieved) (2=Minimally achieved) (3=Moderately achieved) (4=Substantially achieved)*

**Table 11: Partnership Student Interaction Mean/Themes**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Partnership Elements** | **Mean** | | **SD** | **Mode** | | **Median** | **Range** | **N** |
| Student Exposure Interaction  w/ Partners | 2.73 | | .89 | 2 | | 2.5 | 1-4 | 30 |
| **Themes Emerged from Teacher Narratives** | | **#**  **Responses** | | | **Definition** | | | |
| + Willingness of Partners to Engage w/ Students | | 8 | | | Partners are ready to engage with students if asked. | | | |
| -Students not ready for interface with partners | | 1 | | | Students have behavioral and learning issues. | | | |
| - Businesses lack interest. | | 2 | | | Businesses lack interest in working directly with schools/students | | | |
| + Universities and Partners visiting schools and classrooms | | 5 | | | Students learn about post-secondary opportunities in career field through visits from university | | | |
| + Worksite relationships | | 4 | | | Students gain exposure and interaction with onsite experiences. | | | |
| - Few interactions scheduled /organized | | 3 | | | Teachers schedule few opportunities for industry/student engagement. | | | |
| - Lack of time | | 4 | | | Teachers lack time to coordinate visits from partners or for students to visit them. | | | |
| - Lack of Transportation | | 2 | | | Students lack ability to visit or accept job experiences because of transportation issues. | | | |

**Research Question #5** Does the number of years a CTE teacher has worked in the career field prior to teaching have an impact on their partnership profile?

The respondent data in Table 12 and Figure 4 describes the study population (n=30)

achieved cumulative scores associated with the categorical number of years instructors spent in

the related industry before teaching CTE. The highest score (*M*=3.39, *SD*=.52) was in the >20-

year group five. The lowest score (*M*=2.66, *SD* 1.17) was in the 0-5-year group. The One Way

Anova F-Stat of 1.406 relates a relative low quotient in the sum of the squares difference

between the groups and the squares of the groups themselves. The null hypothesis is that there is

no impact on partnership profiles as related to the number of years in the career field. The null

hypothesis is correct as the F-Stat = 1.4069 and (P=.2606). The correlation (r = .3837) of the

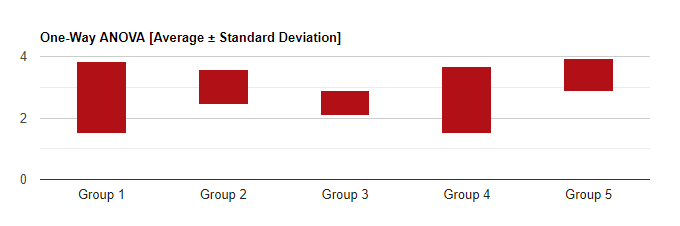
mean years in career field group partnership scores was moderately positive.

Research Question #5 *Does the number of years a CTE teacher has worked in the career field prior to teaching have an impact on their partnership profile? Note: (1 = Not at all achieved) (2=Minimally achieved) (3=Moderately achieved) (4=Substantially achieved)*

**Table 12: Teacher Years in Career Field Group Criteria Values.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Years in Career Field | Mean | SD | Mode | Median | Range | N |
| Group 1 0-5 | 2.66 | 1.17 | None | 25 | 13-35 | 6 |
| Group 2 6-10 | 3.01 | .56 | 29 | 29 | 18-35 | 7 |
| Group 3 11-15 | 2.49 | .41 | None | 24.5 | 17-30 | 4 |
| Group 4 16-20 | 2.54 | .41 | 14 | 22 | 14-36 | 5 |
| Group 5 > 20 | 3.39 | .52 | 26 | 28.5 | 24-36 | 8 |

*Note:* *One-Way Anova: Sum of Squares 19.55 F-Stat 1.406 P-Value .2606*



*Fiqure 4. Number of Years in Career Field: Criteria Average +/- SD*

**Research Question #6** Does the number of years teaching CTE have an impact on program partnership profiles?

The respondent data in Table 13.and Figure 5 describes the study population (n=30)

achieved cumulative scores associated with the categorical years the CTE teachers has spent

teaching. The highest score (*M*=3.05, *SD*=1.0) was in the 16-20-year category. The lowest score

(*M*=2.70, *SD* .83 was in the 0-5-year group. The null hypothesis is that there is no impact on

partnership profiles as related by the number of years in the teaching. In this case we would

accept the null hypothesis. The One Way Anova F-Stat of .1913 relates a relative low quotient

in the sum of the squares difference between the groups and the squares of the groups

themselves. Likewise, the (P=.940) relates that there is not strong evidence to reject the null

hypothesis. The correlation (r = .27) of the mean years teaching group partnership scores was

near zero.

Research Question #6*Does the number of years teaching CTE teacher have an impact on partnership profiles. Total Partnership Mean Criteria Values. Note: (1 = Not at all achieved) (2=Minimally achieved) (3=Moderately achieved) (4=Substantially achieved)*

**Table 13: Teacher Number of Years Teaching CTE: Group Criteria Values**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Years of Teaching CTE | Mean | SD | Mode | Median | Range | N |
| Group 1 0-5 | 2.70 | .83 | None | 25 | 13-34 | 5 |
| Group 2 6-10 | 3.04 | 1.0 | None | 29 | 14-36 | 7 |
| Group 3 11-15 | 2.86 | .83 | None | 26 | 18-36 | 6 |
| Group 4 16-20 | 3.05 | .43 | None | 26.5 | 24-33 | 4 |
| Group 5 >20 | 2.71 | 1.02 | None | 29.5 | 14-36 | 8 |

*Note: One-Way Anova: Sum of Squares 19.25 F-Stat .1913 P-Value .940*



*Figure 5 Years Teaching. Group Criteria Average +/- SD*

**Research Question #7** Does the general industry type of CTE program of study have an impact on program partnership profiles?

The respondent data in Table 14.and Figure 6 describes the study population (n=30)

achieved cumulative scores associated with the categorical industry program of study. The

highest score (*M*=3.54, *SD*=.46) was in the Health, Education, and Human Services category.

The lowest score (*M*=2.06, *SD* .54 was in the Business and Related Sciences. The null

hypothesis is that there is no impact on partnership profiles as related to the program, of study

The One Way Anova F-Stat of 19.55 relates a significantly high quotient in the sum of the

squares difference between the groups and the squares of the groups themselves. Likewise, the

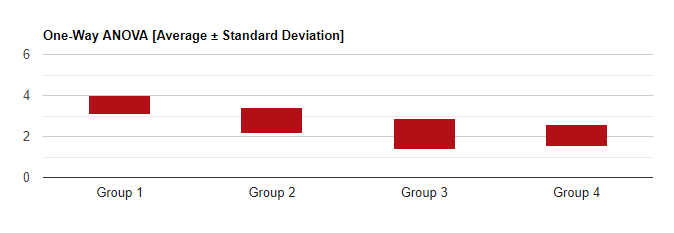
(P=.00004) relates that there is strong evidence to reject the null hypothesis.

**Research Question #7** *Does the type of industry program of study have an impact on program partnership profiles? Total Group Partnership Mean Criteria Values. Note: (1 = Not at all achieved) (2=Minimally achieved) (3=Moderately achieved) (4=Substantially achieved)*

**Table 14. Industry Program of Study: Group Criteria Values**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Industry Program of Study | Mean | SD | Mode | Median | Range | N |
| Group One: Health, Education, Human Services | 3.54 | .46 | 36 | 30 | 24-36 | 13 |
| Group Two; Auto, Construction | 2.77 | .62 | None | 28.5 | 17-35 | 8 |
| Group Three: Media, Computer Sciences | 2.13 | .74 | None | 19 | 13-26 | 4 |
| Group Four: Business and Related Sciences | 2.06 | .54 | None | 18 | 14-25 | 5 |

*Note: One-Way Anova: Sum of Squares 19.55 F-Stat 12.07 P-Value .00004*



*Figure 6. Teacher Program of Study CTE Group Criteria Average +/- SD*

**Summary:**

Research question #1 and the evidentiary partnership element profiles for the

total sample group and the associated nine partnership elements suggests key understandings.

The data in Figure 1 suggests that there is a differentiated strata of partnership criteria

attainment in the total population. Seventy-four percent of respondents scored (=/>) 2.6

cumulative Mean Scores and the balance except for one individual scored (=/<) 2.0. Across all

elements of partnership criteria (Table 8) there are closely arranged mean scores (2.70-3.13) yet

large standard deviations (.77-1.06), and ranges (1-4). The relative lower partnership element

scores (Classroom project support 2.70, Engagement with Students 2.73) suggests that programs

of study in this district have higher proficiency in recruiting, structuring and advisory statures

from partners than direct personal interface with instruction and students.

Regarding the emerged themes from the three open ended responses to needs and

facilitations in partnership recruitment/structuring, partnership activities, and student interaction

there were 65 direct responses.

**Table 15: Years Teaching/ Theme Response #’s (n=65)**

|  |  |  |
| --- | --- | --- |
| Years of Teaching CTE | Population % | % of Responses |
| Group 1 0-5 | 17 | 5 |
| Group 2 6-10 | 23 | 11 |
| Group 3 11-15 | 20 | 27 |
| Group 4 16-20 | 13 | 23 |
| Group 5 >20 | 27 | 34 |

The data above relates a low comparative response ratio to the total for teachers in the two years

teaching groups (</=) 10 years. The data suggests that teachers with lower experience levels

can have harder time articulating or coordinating their thoughts regarding partnership needs, and

facilitations. The related need associated to all three open-ended questions was the lack of

time appropriated and needed to establish, develop, and engage partners. (14 Responses). The

related partnership facilitating factor most mentioned was the overall willingness of partners to

engage in CTE programs and student support. (16 Responses) The data here suggests that CTE

programs that have had the time and ability to invest in partnership development have a willing

community of support. The group mean criteria values suggested from this study is that the

industry program of study has the highest linkage to partnership criteria profiles. This data

suggests that these industry group programs of study (Table 14) (Health, Education, Human

Services 3.54) (Auto, Construction 2.77) have partnership orientations that could be potentially

capitalized by other CTE partnership groups.

**Chapter 5.**

**Introduction.**

Community and industry partnerships are critical to the success of Career Technical

Education Programs. (CTE) Federal, state, and local policies in addition to standards and

frameworks related to CTE quality all recognize that partnerships are integral in delivering

quality CTE programs. The data analysis in the previous chapter and the correspondent studies of

this research paper highlight that CTE partnership realities and profiles are constructs of

development, are ongoing process-oriented, and include a diverse range of performance

levels. Industry and community stakeholders and their associated activities with CTE programs

of study are key determinants of CTE program success. The analysis in the previous chapter

highlights that there is capacity for improved development in partnership potentials in CTE

programs of study.

This study of CTE district partnership profiles has identified four major findings (1)

Levels of partnership orientation and development both in individual programs and industry

generalized categorical programs of study have stratified partnership accomplishments. (2) There

is a lack of needed time allotted for instructor and partner interface. (3) There are barriers to

direct partner and student interface. (4) There is a willingness and active support from partners

when developed and coordinated. Possible limitations in this study would consider that particular

elemental partnership aspects were adrift as this study and survey took place after a year of

COVID related school disruptions. However, approximately a third of the study participants

mentioned their responses reflected before COVID partnership realities. Additionally, there was

strong response numbers in direct open-ended thoughts. CTE programs of study with a diversity

and matrix of partnership support would be assuring program continuity and student opportunity

through period of abrupt and directional change.

**Conclusion.**

*Research Question 1.*

Evaluated in this study were the partnership postures of CTE programs of study across

nine partnership criteria as reported by the associated program of study instructors. The first set

of criteria included partnership outreach, diversity, and partnership structuring. The second set of

criteria included partnership activities associated with evaluation of standards, providing student

experiences, investment in project support, promotion and advocacy of programs, and program

evaluation. The third criteria included direct engagement with students. The standing across all

element values for all programs resides below moderately achieved. As reported, the total

population projected large deviations and ranges within each partnership element. However,

these large variances were generally attuned by the distributed totals from individual respondent

scores rather than the inherent stature of the element itself. Evident in this study was that if

CTE programs of study have strong orientations in outreach and structuring they have as well

strong values across the other dimensions in partnership activities. In this regard it is worth

noting a quote from ExcelinEd.org “The reason for and manner by which stakeholders are

identified and engaged sets the stages for how well the overall CTE effort meets its goals in a

timely fashion and with minimal setbacks.” (ExcelinED.org, 2018, p.7) The opposite is also

evident that if CTE programs of study are not yet oriented to an ongoing process of outreach and

recruitment this is reflected in all other partnership elements. This reality of partnership

orientation stratifies the partnership evidentiary achievement distributions, with a large segment

of programs of study realizing partnership potentials and a smaller quartile(s) minimally

achieving success. Across all partnership elements for moderately and substantially select

achieving programs, was a static accomplishment disrupted only by the partnership criteria

positions in partner investment in classroom projects and partner direct engagement with

students.

*Research Question # 2*

Active outreach and recruitment strategies ensure CTE programs of study are making

connections in their community that meet the needs of their program and students. Recruitment

and structuring partner participation in CTE programs is a networking and development

function toward engaging current partners and forging new relationships. An important finding

that emerged from this study is that CTE program instructors have a lack of time or the support

of coordination to engage with their current partners and to establish new community

connections. All respondents residing in the lower accomplished partnership profiles related this

concern. These “time” concerns ranged from overwhelmed to lack of time to meet with already

established partners. As with many of the partnership elements considered in this study, once

these relationships are prioritized, forged and structured, the maintenance of these relationships

becomes the priority with accumulated benefits. These accumulated benefits reside not only in

the created synergy of building a network of partners but also in all the partnership activity

elements.

*Research Question #3*

In this study, CTE program of study partnership activity profiles reside generally in three

stations. (1) lack of coordinated engagement, (2) workplace direct focus and coordination, (3)

student engagement and partner interaction focus. The lack of coordinated partner engagement

and teacher availability or experience in recruitment diminishes numerous elements of

partnership support. In the workplace focused partnership profiles the support themes of

workplace experience, evaluation of standards, and program effectiveness were dominant. In the

student engagement and partner interaction profile, the expanded support themes resided with

partners identifying and providing larger community interactions and experiences. The response

themes from this research question not surprisingly came from those with established networks

of support. Two significant highlights emerge from this question. The first is that partners are

willing and ready to engage across multiple partnership activity levels. The second is that

program instructors at all partnership profiles remain frustrated with lack of time for activity

coordination.

*Research Question #4*

Direct student interaction with community and industry members creates horizons of

understanding and opportunity. Students gain career and post-secondary directional knowledge

and expanded opportunity for workplace experience. Community and industry members have

opportunity to guide the interests of students and meet potential future students or employees.

(Scales, et.al. 2005) provides substantive conclusions that current CTE students obtain

improved academic and vocational interest with direct contact with larger community. The

majority of the partner-student engaged themes resided in the worksite relationships and visits

from post-secondary institutions. Not unlike the other research questions, lack of time for

student-partner coordination emerged here. Likewise, the willingness of partners to engage

with students when asked was predominantly noted. There was a paucity of responses associated

with partner direct instructional support and student project and community engagement. It is

unclear from this question and associated responses what directly influences these varying

approaches or to what degree are possible barriers impeding developing opportunities for

in class student-partner interface.

*Research Question #5*

This research has shown that the number of years a teacher works in the career field does

not generally impact partnership profiles. Evidentiary partnership criteria attainments resided

above others in the greater than twenty years in the career field category. Regarding this detail, it

is impractical to assume this is significant as all other categorical years in the career field groups

show categorical partnership criteria correlation trends.

*Research Question #6*

This research has shown that the number of years teaching CTE does not generally

impact partnership profiles. The research indicated that there is categorically a large variance

within the years teaching categories with the lowest partnership accomplishments expectedly in

the under five-year category but also surprisingly in the greater than twenty years teaching

category.

*Research Question #7*

This research indicates that the associated type of CTE industry program of study

significantly impacts partnership profiles. From a partnership criteria standpoint, the CTE

programs of study associated with current workplace opportunities in health care and services,

including auto and construction trades distanced the other partnership groups significantly

in media, computer science and business-related sciences. Seemingly, these coordinated

possibilities in the workplace for students has been developed, structured and solidified with

ongoing collaboration.

**Implications for Education**

CTE programs of study and their correspondence in partnership with community

stakeholders has important implications. The findings from this study and its implications are

situated in the three general profiles referenced from the criteria data and the response themes

from this study: (1) Partnership/Workforce Coordinated, (2) Partnership/Student Experience

Coordinated, (3) Developing

Partnership/Workforce coordinated programs have benefits to students in that they gain

valuable industry onsite experience and establish industry related personal connections. The

success of the students, programs of study and industry partners is enhanced with successful

collaboration and continuous communication. CTE district status in developing these

relationships for students is promoted in relation to program quality indexes and community

skills and trade development targets. The study reflected substantial accomplishments from this

group profile in overall partnership attainments, yet showed moderately achieved status in

partner to student interface in the instructional setting. This interface opportunity would be a

consideration in developing early community connections for students or instructional and

student project support.

Partnership/Student experience coordinated programs have important benefits as they are

facilitated by a wide range of community engagement. These partnership structures have

valuable orientations in that students meet directly with industry and community often during

their typical three to four years of industry studies. CTE students gain valuable insights into

diverse horizons of career and post-secondary opportunity with this partnership orientation. This

profile benefits program of study instructors with a diverse range of student engagement

opportunities being facilitated by partners. This profile of structuring and engagement with

partners was the outlier as few programs in this study highlighted aspects of partner instructional

and project supports. This partnership profile is likely the most time consuming for program

instructors to coordinate. The majority of barrier of time constraint themes reported in this study

suggests this partnership profile is a difficult avenue to consider for programs. Additionally, this

profile would be enhanced with efforts in connecting students directly to workplace experiences.

CTE programs of study with marginal or low achievements in partnership engagement

orientations lose important opportunities for student development and post-secondary

opportunity. Additionally, program of study instructors miss a broader orientation from

community and the potential enhancement of program resources. CTE programs of study

residing in these low achieving partnership profiles would be well served with professional

development and needed time for recruiting and collaboration.

**Recommendations:**

CTE program partnerships and their associated collaborative activities can have a

galvanizing role in mobilizing teachers, parents, administrators, businesspeople, and other

community stakeholders to promote positive student achievement and opportunity. CTE program

of study connections with post-secondary institutions can also nurture student motivations and

provide viable options for students further education and opportunity.

Partnerships are developmental, ongoing, and potentially impact all facets of CTE

program of study engagement and success. It is recommended that CTE district leadership

establish a continuous evaluation of all partnership profiles. Guiding CTE program of study

partnership evaluations and development would be careful considerations across the three

generalized elemental partnership aspects pertained in this study. Recruiting a diverse

partnership base of support is a key developmental aspect that effects all other possibilities.

Community industry cooperatives such as local chambers of commerce and local associated

post-secondary educational departments should be engaged in this effort to support viable

connections for specific programs of study. It would be an important consideration for CTE

district programs and community industry leaders to coop an effort by establishing an initiative

of coordinated professional outreach connecting CTE programs and community. Partnership

engagement and activities should be evaluated and developed fully by heightening the

opportunity for continuous partner involvement and the building of larger collectives of support.

This effort can be guided by categorical industry programs of study working collectively to

develop events that invite and engage these industry communities. Thus, programs of study

working with industry individuals can engage larger professional entities in their efforts. Direct

student engagement with industry and community should be prioritized. Beyond advocacy and

program evaluation, partnership individuals should be engaged directly with students often. An

open door willingness to immerse community in CTE instructional and related student project

efforts should be a first guiding principle. Community partners bring a diversity of valuable

expertise. CTE programs of study should be strongly encouraged to engage that expertise

directly with students with school visits and industry onsite visits.

Professional development in partnership development is a priority for both new and

established program instructors. Orientations to creative constructs in developing community

resources and alliances for mutual benefits should be highlighted in these professional

development opportunities. Additionally, CTE programs with strong and creative partner

engagement and success should be highlighted.

**Further Study:**

This partnership study should be replicated and extended simultaneously from the

vantage of all current partners currently working with the study population of CTE programs. A

study evaluating partnership criteria and response themes from the community perspective would

provide insights surrounding opportunities missed or barriers to be confronted. Vantages from

both community perspectives and program of study partnership orientations would bring

important confirmations or needed support considerations to be established. CTE district

programs reside in differing landscapes of industry development. Local community industry

saturations and indexes of commerce growth potentials can create both boundaries and emerging

opportunities for CTE partnership development. This study should be replicated both in urban,

suburban and rural districts to compare results and surmise corresponding partnership

developmental capabilities. Broadening perspectives of industry specific program of study

categorical partnership development aspects would be obtained by replicating this study across

regions of influence. Regional and industry specific CTE partnership study elements would

raise awareness for industry and correspondingly CTE leadership to evolve new priorities of

engagement where needed.

**Conclusion:**

The purpose of this study was to evaluate the current status and facilitating factors

of partnerships associated with CTE programs of study. There is an abundance of partnership

potentials available to CTE programs of study that have not been realized. CTE programs not

currently being facilitated through partnerships should be considered for developmental support.

CTE partnership accomplishments and their necessary orientations should be highlighted for

possible capacity building in other programs and recognized for their importance.

Of all the components of high quality CTE programs of study, community partnerships

and their direct engagement with students should be the foremost priority. The priority of CTE

partnership development should reside not as mandate but the realization from all educational

stakeholders that CTE partnership involvement is the leading capacity element for student

preparedness and career opportunity. Communities have a wealth of expertise and willingness to

support CTE programs of study and students. These community resources should be capitalized

and nurtured.

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