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Iowa career and technical education: A case study of secondary and postsecondary collaboration on programs of study and technical skill attainment assessment

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Iowa career and technical education:
A case study of secondary and postsecondary collaboration on programs of study
and technical skill attainment assessment

by

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Abstract

The purpose of this case study was to describe how one regional team addressed, implemented, and managed POS/TSA. Utilizing McGregor's theories of management, Kelman's social influence theory, and Weick's small wins as the guiding framework for this study, three themes emerged which described participants' views about POS/TSA: absence of regional team in POS Model development and implementation, building a culture of collaboration, and cultivating collaborative relationships. Implications for secondary districts, community colleges, and state education departments include asking questions before joining collaborative ventures, consideration of institutional cultural differences when choosing collaborative partners, and supporting mandates with formalized technical assistance. In addition, recommendations for future research are discussed.

Chapter 1. Introduction

The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) supports career and technical education at both secondary and postsecondary levels. For program year 2007–2008 (FY08), the Perkins IV grant provided funding nationwide of more than $1.29 billion (U.S. Department of Education, 2010). Of this allocation, Iowa received more than $13.3 million (National Association of State Directors of Career and Technical Education Consortium [NASDCTEc], 2009). The funding's reach is significant. In academic year 2006–2007, over 15 million students were enrolled in or took at least one career and technical education (CTE) course in the United States (U.S. Department of Education, 2008). Recent studies show that "97 percent of all public high school graduates in 2005 earned credits in CTE, with 21 percent concentrating in an occupational area" (Hudson & Laird, 2009, p. 1). In Iowa, 164,042 secondary and 47,349 postsecondary students were enrolled in CTE during the 2006–2007 academic year (NASDCTEc, 2009).

CTE courses provide many benefits to students including earning advantages; increased student engagement, retention, and persistence; exploration of career options; acquisition of skills useful in the labor market; and preparation for postsecondary education (Brown, 2003; Hudson & Laird, 2009). Brown suggests that CTE programs "motivate students to get involved in their learning by engaging them in problem solving activities that lead to the construction of knowledge" (p. 3).

Using data from 1992, the more occupational credits a student attained while enrolled in a public high school, the more "they were in general to have subbaccalaureate postsecondary plans" (Levesque et al., 2008, p. 10). The number of occupational credits earned also impacts students' success in obtaining postsecondary credentials. Levesque et al.

found, "among those who enrolled, the more occupational credits high school graduates earned, the more often they attained a subbaccalaureate credential" (p. 10). From this research, it seems clear that occupational credit earned in secondary institutions positively impacts students' postsecondary plans and success.

Previous research discussed has provided evidence of CTE benefits to students' postsecondary plans and success. A recent report titled *Career and Technical Education in the United States: 1990 to 2005* provides evidence of students' success in obtaining full-time employment. Among the class of 1992 public high school graduates, nearly 90% of the students worked full-time (Levesque et al., 2008). Eighty-five percent of students who earned four or more occupational units worked full-time when compared to 76% of students who did not take any occupational credits (Levesque et al., p. 67).

To this point, the research discussed has focused primarily on CTE national statistics. CTE also benefits Iowa students, businesses, and the community. Figure 1 shows Laanan, Compton, and Friedel's (2006, p. 297) framework that identifies the benefits of CTE training in Iowa.

Business and industry benefit in many ways by CTE training. One benefit is a more skilled workforce (Laanan et al., 2006). In addition to a skilled workforce, business and industry can work with the community college to identify specific skills and training needed by its workforce; the community college in return can supply "efficient education" (p. 297). Opportunities exist for individual employees and students who participate in CTE training including a "boost in earnings through promotions or better job opportunities" (p. 297). The state economy can also benefit from a CTE trained workforce. CTE training can serve as a
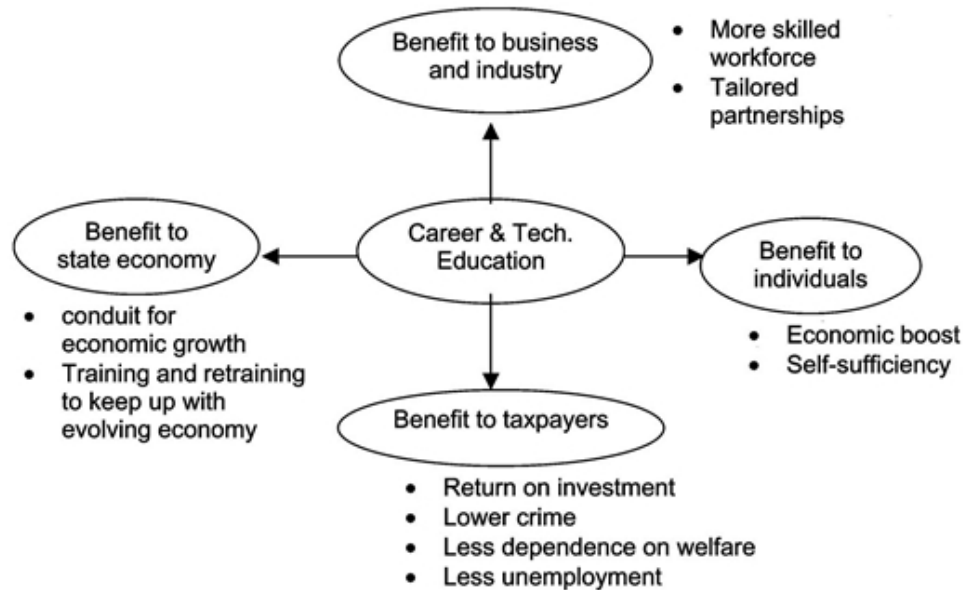
Figure 1. Benefits of CTE training in Iowa

"conduit for economic growth. Community colleges provide a way of staying competitive within a constantly changing economic environment" (p. 298).

Problem

Perkins IV (2006) mandates that states must address Programs of Study (POS) in their state plans. Iowa submitted a Five-Year Plan that addressed federal components such as secondary and postsecondary alignment, rigorous curriculum, non-duplication of courses, and use of challenging academic standards. The plan also added state initiated components such as requiring districts to satisfy Iowa Code for secondary and postsecondary schools and the inclusion of three sequential CTE units that link to a postsecondary degree, certificate, or diploma (Iowa Department of Education [IDE], 2008; Perkins IV, 2006). In addition to the POS requirements, Perkins legislation requires CTE secondary and postsecondary programs to report on Technical Skill Attainment Assessment (TSA) (Association for Career and

Technical Education [ACTE], 2006). The assessments used to measure TSA must be valid and reliable (Perkins IV).

Although guidance has been given to districts about successful implementation of POS (including TSA), there has been little success in Iowa in the widespread adoption and acceptance of the new requirements. The concept map in Figure 2 illustrates the components, roadblocks, and benefits of POS implementation.

Perkins legislation outlines the requirements of POS/TSA as does the Iowa Code. POS/TSA requirements impact all Iowa CTE discipline (service) areas. Discipline areas include the programs related to business and information technology, marketing, health occupations, industry technology, agricultural, and family consumer sciences education. Regardless of the service area, teachers within each area will need to work towards POS implementation.

Several potential roadblocks to successful POS/TSA implementation exist. One potential roadblock is the advisory committee. Iowa Code Chapter 258.9 governs advisory committees: "The local advisory council shall give advice and assistance to the board of directors in the establishment and maintenance of schools, departments, and classes that receive federal or state funds under this chapter" (State of Iowa, 2009). Advisory committees must approve all standards and assessments used. A second potential roadblock is the community college. Local Education Agencies (LEAs) must work with the community college to ensure a seamless transition of coursework (including standards and competencies) from the secondary institution to the student's postsecondary education. In addition, the community college must approve the standards and assessments used for the programs
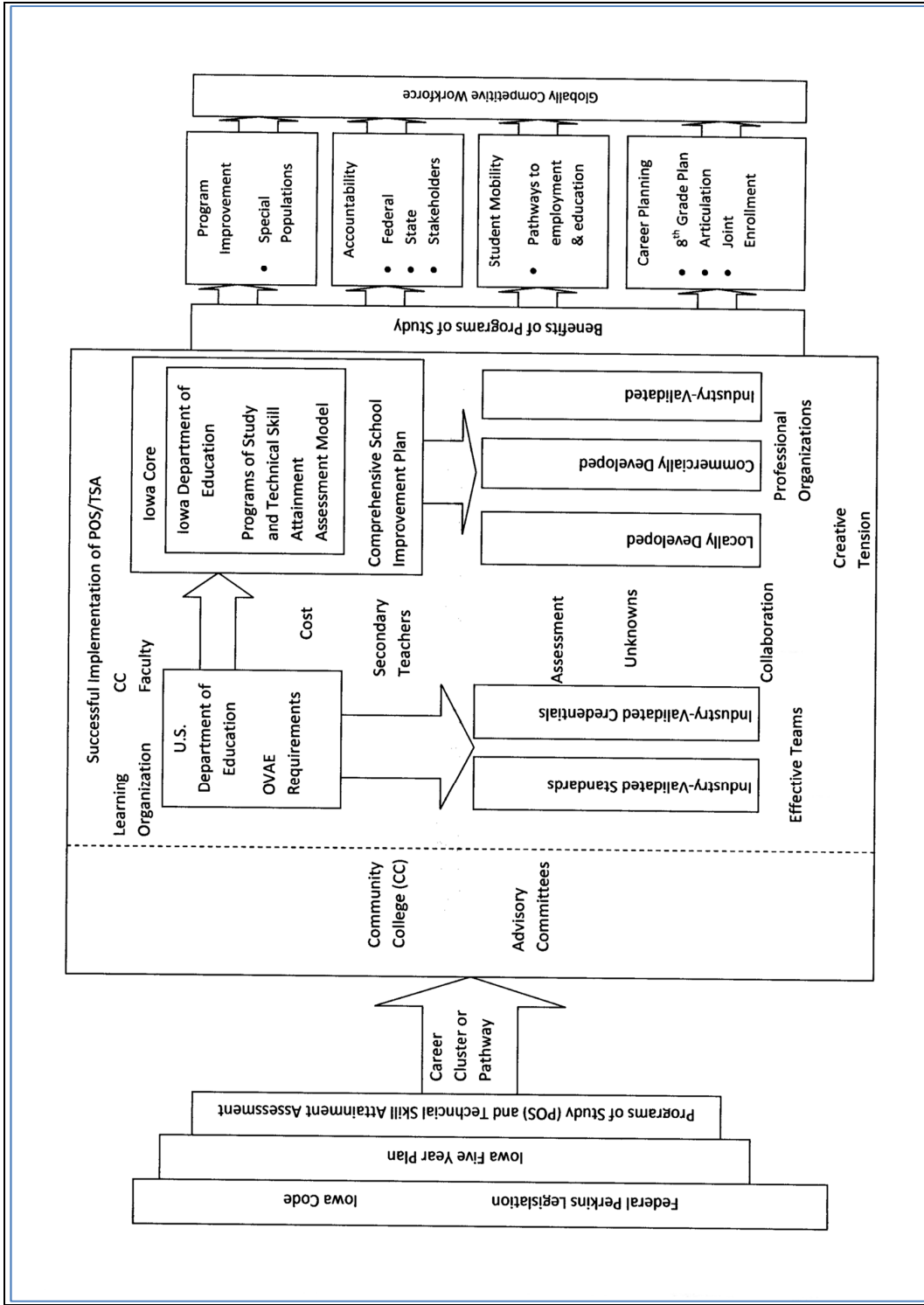
Figure 2. Concept map illustrating the components, roadblocks, and benefits of POS implementation

identified as POS. Again, at least 75% of all CTE programs must be developed as a POS (IDE, 2008).

All LEAs will have to determine how they will work with their advisory committee and the community college in their area. While these two may pose no significant quandary for the LEA, there are other potential issues that the teachers at the LEA will have to address as they develop their POS. Some of these issues could be community college faculty, costs, secondary teachers, assessments, lack of collaboration, ineffective teams, professional organizations, career and technical student organizations (CTSOs), an LEA that is hesitant to adapt, and issues that are unknown. Table 1 provides details for each potential issue.

If schools are able to implement POS/TSA, it should result in program improvement, program accountability, student mobility, and successful career planning for students. Ultimately, the result of the POS/TSA work should be the development of a globally competitive workforce.

CTE discipline areas may have much to do in order to achieve the intended outcomes of this legislation. Some faculty may resist the changes required. CTE staff should emphasize their successes as they move towards their goal. The celebration of these successes will attract new supporters and deter potential opponents (Weick, 1984). There may also be tension as schools work through their new reality. Creative tension is defined by Senge (1996) as "an accurate picture of current reality is just as important as a compelling picture of a desired future" (p. 292). The CTE discipline areas will experience tribulations along the way; creative tension, however, is beyond solving problems (Senge). In problem solving, individuals are trying to avoid their current reality, but with creative tension, there is

Table 1

Potential Issues and Explanations in POS/TSA Work

Potential Issue	Explanation
Community college faculty	Faculty may not have the interest or time to spend with secondary teachers to revise/review curriculum, including standards and assessments. There is fear that the community college will take over the secondary curriculum. There is a feeling that community college faculty do not want to work with secondary teachers.
Costs	Budgets are tight and there is not time nor is there money to pay stipends or substitutes that could allow teachers time to work on their POS/TSA work. Commercial assessments and industry-validated credentials assessments can be expensive.
Secondary teachers	Teachers may not be interested in working with partners to review and possibly change their curriculum.
Assessments	Some teachers are offended that the locally developed assessments are considered on the lowest tier. Commercial assessments and industry-validated assessments can be expensive.
Lack of collaboration	The regional team is a new concept in the work of POS/TSA.
Ineffective teams	Teams may not be able to be effective and therefore will not be able to accomplish their POS/TSA work.
Professional organizations	Professional organizations provide a variety of resources to teachers including standards, competencies, and assessments. There are several professional organizations for each discipline area; it may be difficult to determine which standards, assessments, etc., to use.
CTSOs	CTSOs provide a variety of resources to its members including assessments. Decisions will need to be made if the LEA will choose to use the resources supplied by the CTSO.
Unwilling to adapt	Change is difficult and some LEAs may have trouble accepting the changes in Perkins IV.
Unknowns	Due to local control, each LEA is unique. There may be problems that I have yet to identify.

energy directed towards the vision (Senge). It is hoped that CTE programs will embrace the new vision of POS/TSA.

Minimal research has been conducted on how to implement POS/TSA. Interested individuals could find research about the definition of POS/TSA, the connection to Perkins legislation, problems with implementing POS/TSA, and even sources of assessments and credentials. I, however, have not found any research focused on the process individuals and teams go through as they work collaboratively on the requirements of POS/TSA.

By examining Iowa's secondary and postsecondary collaboration model, we can better understand how collaborations can be used to accomplish state and federal Perkins mandates. With this understanding, state CTE directors have a viable option in POS/TSA implementation in their state. Community college and secondary administrators can plan collaborations to help each meet their CTE goals, and faculty from both sectors can welcome and embrace collaborative relationships in order to meet federal and state mandates and, most importantly, to help students be successful.

Purpose of the Study

This study focused on one Iowa regional team who submitted an application for the POS/TSA RFA. The diverse regional team has been brought together solely for the purpose of accomplishing the tasks set forth in the RFA. Team members bring their own expectations, values, and agendas to the group. The RFA was designed to encourage these members to work together to accomplish the objectives of the RFA. The RFA cannot be accomplished without the partners identified in the RFA.

The participants in the study range from age 29 to 48. The majority of the participants have been with their current employer for at least five years. Their experience

working with Perkins varied from three years to nine years. The districts they represent are as varied as their personal backgrounds. Districts in the study included both rural and urban schools. Enrollment for the 2009–2010 academic year ranged from just over 1,400 students to over 30,000 students. The diversity of enrollment also impacted the amount of Perkins funds each district received. One district received just over $7,000, while another district in the study received over $550,000.

The purpose of this case study was to describe how one regional team addressed, implemented, and managed POS/TSA. The study was bounded by time (FY10) and by a single case (one Iowa regional team).

Research Questions

1. How does a diverse team describe and develop a process to build Programs of Study and assess technical skill attainment?

2. How do team members describe their experiences of the process towards Programs of Study and technical skill attainment assessment development?

3. How do team members propose to change the Programs of Study process in order to improve satisfaction and success?

Theoretical Perspective

Few studies have focused on either POS, TSA, or aspects of the two (Aragon, Woo, & Marvel, 2005; Bartlett, 2004; Castellano, Stone, III, & Springfield, 2005; Lewis & Kosine, 2008). I have not identified any studies that focus on the *actual* work or process of creating POS/TSA within teams. Three theories were used to provide insight to my study. Table 2 highlights each theory and its connection to my study.

Table 2

Connection of Theories to Study

Theory	Connection to Study
McGregor's Theories of Management	Activities and behaviors within the team
Kelman's Social Influence Theory	Explanations for individual behavior
Weick's Small Wins	Outcomes of the team's work

McGregor may be best known for his theories of management "X" and "Y." McGregor continued to develop his management theories by identifying the implications for teamwork within each theory. Implications for teamwork if the philosophy of "X" was used would include narrow span of control, close supervision, and routine work (Blake, 1975). If a team embraced theory "Y," the following characteristics would be apparent: wide span of control, work of group does not ignore "fullness of man," and meaningful tasks (p. 121).

Kelman's 1961 research can be simply defined as attempting to understand individual attitudes and opinions. While McGregor's work focused on the actions and behaviors of the team and its members, Kelman's theory addresses the "why." His theory attempts to explain the attitudes behind the actions and behaviors of individuals. He identifies three processes of social influence: compliance, identification, and internalization. Kelman theorizes that individuals may agree with another person solely because they want the other to like them (compliance), agree with another person because they want to *be* the other person (identification), or agree with someone because it matches their own view and/or value system (internalization) (Kelman). I do not expect the professionals in the regional team to

respond within the identification stage; if they act within the compliance stage, however, this behavior will adversely affect the success of the team.

Weick's small wins aided my identification of the outcomes of the regional team. The issue of implementing POS/TSA across 75% of all programs at each individual school district is daunting. Weick (1984) warns of the perceptions given to events that are viewed on a "massive scale" (p. 40). Regional teams will need to see that their work is successful. They should focus on small, incremental wins throughout their work instead of the overwhelming goal of a completed POS/TSA for a program. One small success (or win) might seem unimportant, but, when combined with other small wins, it can "reveal a pattern that may attract allies, deter opponents, and lower resistance to subsequent proposals" (Weick, p. 43).

Taken together, the three theoretical perspectives enabled me to study several aspects of the POS regional team as well as individual members' contributions to the team. McGregor's theories provided insight into how the team organized and completed the work of POS/TSA. While McGregor's work focused on the team, Kelman's research focused on individual attitudes and opinions. Kelman strived to understand the attitudes behind the actions and behaviors of individuals. Weick's small wins provided insight on the *actual* work of the team. The celebration of each success, or small win, is essential in the sustainability and acceptance of the regional team's work.

Significance of the Study

This study focuses on understanding secondary and postsecondary collaboration and has the potential to impact research, policy, and practice. While much has been written about POS/TSA, little has been written to assist districts in *actually* doing the work. Interested

individuals could find research about the definition of POS/TSA, the connection to Perkins legislation, problems with implementing POS/TSA, and even sources of assessments and credentials. I, however, have not found any research focused on the process individuals and teams go through as they work collaboratively on the requirements of POS/TSA.

This study has the potential to impact state policy in regards to POS/TSA implementation and the development of collaboration models. Iowa's plan for assisting LEA in the development of POS/TSA is unique. Beginning in the summer of 2009, the IDE met with a planning group of CTE faculty, staff, and Tech Prep coordinators to design a Request for Application (RFA) process that awarded community colleges $10,000 for their work with POS/TSA. The IDE (2009) wrote, "The purpose of this funding is to provide technical assistance to secondary and postsecondary institutions to be used in the development of POS and technical skill assessments" (p. 2). The RFA provides a stimulus for LEAs to begin their POS/TSA work. My work may influence other states that are considering the use of regional teams to accomplish the POS/TSA requirement as defined in Perkins IV.

Although the Perkins legislation regarding TSA was first implemented in Perkins IV (2006), secondary and postsecondary schools have struggled with implementation of valid and reliable assessments. Currently, limited research and resources are available to schools to assist them in their navigation through Perkins legislation and TSAs. The only potential resource I found was a study conducted by the U.S. Department of Education, Office of Vocational and Adult Education (OVAE), NASDCTEc, and the ACTE which explored the "feasibility of: (a) establishing a test item bank containing questions submitted by various business, industry, and education sources; and (b) compiling an assessment clearinghouse containing information about industry-recognized national assessments that may be adopted

or adapted for state use" (Derner, Klein, & Hilber, 2008, p. 1). While a test bank may be a viable option for TSAs for many states, the cost may be prohibitive for others. Other viable options are needed to help states implement TSA requirements. My study may illuminate additional options for states.

My study may impact collaborations between secondary and postsecondary institutions. Collaborations can provide numerous benefits to involved parties (Amey, 2010; Amey, Eddy, & Campbell, 2010; Amey, Eddy, & Ozaki, 2007; Azinger, 2000; Bragg & Russman, 2007; Essex, 2001; Gray, 1989; Hoffman-Johnston, 2007; McCord, 2002; Orr, 2001; Russell & Flynn, 2000; Sink & Jackson, 2002; Sink, Jackson, Boham, & Shockley, 2004). One, however, cannot and should not be thrown into collaborative partnerships because of policy decisions. It is essential collaborating partners are educated about appropriate collaborative behavior and roles within a collaboration.

Second, schools need to reconsider the assessments identified as TSA within their CTE programs. One Perkins performance indicator focuses on TSAs. This indicator requires Iowa to annually report on the number of CTE students who took a technical skill assessment that is valid and reliable and the number of students who pass the technical skill assessment (IDE, 2008). Each year, the IDE sets goals related to this indicator. Iowa is judged on the effectiveness of its CTE programs, in part, by this performance indicator. It is essential schools are using appropriate assessments to measure technical skill proficiency of their students; if they are not using appropriate measures, the data the IDE reports to the federal government is not valid.

Definitions

This section defines the terms used in my study:

Career Clusters: Career Clusters identify pathways from high schools to two- and four-year colleges, technical schools, graduate schools, apprenticeship programs and the workplace so that learners can recognize the relationships between what they learn in school and what they can do in the future. This connection to future goals motivates students to work harder and enroll in more rigorous courses (National Association of State Directors of Career and Technical Education Consortium [NASDCTEc], 2008).

Career and Technical Education (CTE): Courses and programs that focus on providing industry recognized skills to students. The Association for Career and Technical Education (ACTE) assert the following benefits of CTE education for students:

- academic subject matter taught with relevance to the real world

- employability skills, from job-related skills to workplace ethics

- career pathways that link secondary and postsecondary education

- second-chance education and training

- education for additional training and degrees, especially related to workplace training, skills upgrades, and career advancement. (2009, para 2)

Community School District (CSD): One Iowa K–12 school district

Diverse Team: For the purposes of my study, a diverse team is defined as a team of individuals from regional secondary institutions, postsecondary institutions, and area education agencies. These teams must include at the minimum three secondary partners who may include instructors, principals, and/or curriculum directors; Perkins contacts for both secondary and postsecondary institutions; CTE deans; and Tech Prep coordinators.

Local Education Agency (LEA): Local public school districts and accredited nonpublic schools

Program of Study (POS): Options outlined for students and parents to be used: (a) when planning for and completing future coursework, for career and technical education areas that incorporate secondary education and postsecondary education elements, include coherent and rigorous content aligned career and technical content in a coordinated, nonduplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education; (b) may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and (c) lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree (Carl D. Perkins Career and Technical Education Improvement Act of 2006, p. 120 STAT 717).

Tech Prep: Consist of a "minimum of 2 years of secondary education . . . with a minimum of 2 years of postsecondary education in a nonduplicative, sequential course of study" (Carl D. Perkins Career and Technical Education Improvement Act of 2006, p. 120 STAT. 739).

Technical Skill Attainment Assessment (TSA): Valid and reliable assessments that measure the technical skill identified within each CTE program.

Vocational Education: The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 defines vocational education as the "organized educational programs offering a sequence of courses which are directly related to the preparation of individuals in paid or unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced degree" (1998). In 2006, the Perkins Act was amended to read as Carl D.

Perkins Career and Technical Education Act of 2006. From this point forward, vocational education was referred to as career and technical education within federal legislation.

Summary

The purpose of this study was to describe how one Iowa regional team addressed, implemented, and managed POS/TSA within one discipline area. The theoretical models of McGregor's theories of management, Kelman's social influence theory, and Weick's small wins provided insight to the workings and successes of the regional team. The contextual findings will illuminate how secondary and postsecondary collaborations can be used to assist districts in their implementation of POS/TSA.

Chapter 2 provides an overview of the literature applicable to CTE and the philosophy of how long-term success can be achieved through small, incremental wins. The chapter begins with the history of CTE, Perkins legislation including definitions of POS and TSA, the use of Career Clusters and Pathways within POS, and aspects of a quality assessment plan. I then discuss the components needed for successful implementation of POS/TSA. These components include individuals developing and operating within effective teams and sharing information acquired from team meetings with their LEA. Next, I review the role of advisory groups within the POS/TSA context. Finally, I provide a review of the theories used to explore the dynamics and activities of the regional team, which include McGregor's theories of management, Weick's small wins, and Kelman's social influence theory.

In Chapter 3, I discuss in detail the qualitative inquiry chosen including the epistemology, theoretical perspective, methodology, and methods selected for this study. In addition, the chapter describes the data collection, analysis procedures, and participants

chosen as well as the steps used to demonstrate trustworthiness of my research including triangulation, member checks, positionality statement, adequate engagement in data collection, and the use of a researcher's journal.

Chapter 4 examines the views and perceptions of POS regional team members as they implemented the POS Model at their districts. Chapter 5 discusses the findings that emerged from the three original research questions guiding this study:

1. How does a diverse team describe and develop a process to build Programs of Study and assess technical skill attainment?

2. How do team members describe their experiences of the process towards Programs of Study and technical skill attainment assessment development?

3. How do team members propose to change the Programs of Study process in order to improve satisfaction and success?

The discussion focuses around three themes that emerged from this study. The themes exemplify how team members from one regional team described their experiences working with the community college and implementing a POS/TSA Model. In addition, the three themes will be discussed within the context of the existing literature. This chapter highlights the implications and recommendations for CTE professionals and state departments focused on CTE. Finally, I will share my personal reflections and recommendations for future research.

Chapter 2. Literature Review

The literature review identifies the literature related to a research topic and provides evidence on how a study will add to the current literature related to the topic of choice (Creswell, 2008). This chapter focuses on the review of literature pertaining to CTE, Perkins legislation, TSA, assessment, effective teams, and collaboration. This literature will enable me to "develop sharper and more insightful *questions* about the topic" (Yin, 2009, p. 14). I will be reviewing these aspects through the lenses of my theoretical framework of Weick's small wins, McGregor's (1975) theories of management, and Kelman's (1961) social influence.

For the purposes of my study, I provide a review of literature that I have identified as influences to my topic of TSA. I will first summarize the history and significance of CTE. Next, I will explain Perkins IV legislation. Then, I will explain the requirements related to TSA and the assessment of technical skills. I will then review the literature related to assessment models and their application to CTE. I will also identify the characteristics of effective teams and collaboration. Finally, I will provide a review of McGregor's theories of management with an emphasis of group processes, Weick's (1984) premise of small wins, and Kelman's theory of social influence.

Career and Technical Education (CTE)

In 1759, Benjamin Franklin proposed an "academy" to assist middle-class youth in their profession choices. Franklin believed that "good morals, temperance, order, industry frugality, and a knowledge of good English, mathematics, commerce, natural philosophy, and mechanics would lead to success in business and the professions" (Reinhart, 1979, p. 23).

Almost one hundred years later, The Morrill Act of 1862 was passed with the purpose of "donating public lands to the several States and Territories which may provide Colleges for the Benefit of Agriculture and Mechanic Arts" (U.S. Congress, 1862). The Act states that "at least one college where the leading object shall be, without excluding other scientific and classical studies . . . to teach such branches of learning, as are related to agriculture and mechanic arts, . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life" (U.S. Congress, 1862).

As early as the 19th century, vocational education was integrated into public education (Castellano, Stringfield, & Stone III, 2003). Some innovative educators took this idea a step further. Calvin M. Woodward established the St. Louis Manual Training School in 1879. This school "provided intermediate-level boys' general education under a new plan that would 'put the whole boy in school'" (Reinhart, 1979, p. 23). The curriculum at the Training School included "pure mathematics, science and applied mathematics, language and literature, penmanship, freehand, and mechanical drawing, and in tool instruction" (Schenck, 1995, p. 12). Schenck (1995) continues,

> It was not assumed that every boy entering the school would be a mechanic. Some would find that they had no interest in the useful arts and would pursue other careers. Some would continue their education and become engineers and scientists. The grand result would be an increasing interest in manufacturing careers, more intelligent mechanics, more successful manufacturers, better lawyers, more skillful physicians, and more useful citizens. (pp. 12–13)

Much of the legislation related to CTE programming focused on maintaining funding for vocational education including The Smith-Hughes Act of 1917 which "continued

appropriation for vocational education in agriculture, in trades and industry" (Rinehart, 1979, p. 24). The George-Reed (1929), George-Ellzey (1934), George-Dean (1937), and George-Barden (1946) Acts all "extended the scope and expanded . . . funding for vocational education" (Reinhart, 1979, p. 24).

The work of the Commission on Reorganization of Secondary Education echoed the support of vocational education. In 1918, the Commission published a document called the *Cardinal Principles of Secondary Education*. The Commission affirmed:

> Vocational education should equip the individual to receive a livelihood for himself and those dependent on him, to serve society well through his vocation, to maintain the right relationships toward his fellow workers and society, and, as far as possible, to find in that vocation his own best development. (Department of the Interior Bureau of Education, 1928, p. 7).

The importance of work experience received continued attention in 1944. The Educational Policies Commission of the National Education Association maintained that:

> All youth need to develop salable skills and those understandings and attitudes that make the worker an intelligent and productive participant in economic life. To this end, most youth need supervised work experience as well as education in the skills and knowledge of their occupation. (Educational Policies Commission as cited in Reinhart, 1979)

Student counseling also received notice in 1958. The National Defense Education Act of 1958 "and its subsequent amendments . . . encouraged expansion of area of vocational education programs and placed increased emphasis on counseling and guidance at all levels" (Reinhart, 1979, p. 24).

The Educational Policies Commission of 1961 warned of the dangers of focusing only on skilled competencies. The Commission stated that ". . . vocational competence requires developed rational capacities . . . the man able to use only his hands is at a growing disadvantage as compared with a man who can also use his head" (Educational Policies Commission of 1961, p. 23, as cited in Reinhart, 1979).

In 1961, President John F. Kennedy created an advisory body to study vocational education (Thompson, 1973). The advisory committee issued a report titled *Education for a Changing World of Work*. Many of the committee's recommendations were added to the Vocational Education Act of 1963 (Thompson, 1973). The committee made the following recommendations:

1. Provide training opportunities to the twenty-one million noncollege graduates who would enter the labor market in the 1960s.

2. Provide training or retraining for the millions of workers whose skills and technical knowledge must be updated, as well as those whose jobs would disappear due to increasing efficiency, automation, or economic change.

3. Meet the critical needs for highly skilled craftsmen and technicians through education offered during and beyond the high school years.

4. Expand vocational and technical education training programs consistent with employment potential and national economic needs.

5. Make educational opportunities equally available to all persons regardless of race, sex, scholastic aptitude, or place of residence. (pp. 37–38)

Perkins Legislation

The resulting work of the advisory committee led to the passage of the Vocational Education Act of 1963. One early supporter of the bill was Carl Perkins of Kentucky. Because of his support, this bill is "referred to as the Perkins Bill" (Thompson, 1973, p. 77).

In 1961, the Area Redemption Act was "designed to establish remedial programs for socially and economically disadvantaged citizens" (Reinhart, 1979, p. 25). This Act was later reaffirmed by the 1962 Manpower Development and Training Act and the 1964 Economic Opportunity Act which were "designed to establish remedial programs for socially and economically disadvantaged citizens" (Reinhart, 1979, p. 25). Ten years later, the importance of serving disadvantaged youth was again emphasized with the passage of The Comprehensive Employment and Training Act of 1973.

Vocational (or CTE) education should not begin in high school nor should it end once students graduate from high school. Elementary students and adults should have opportunities related to vocational education. The Vocational Education Act of 1963 and its Amendments of 1968:

> reemphasized the need for prevocational activity extending into the elementary school . . . expanded the concept of guidance and counseling to include services that facilitate job selection and placement, established new incentives for cooperative and work-study programs, stressed programs for the disadvantaged and handicapped, reasserted the importance of developing new career programs that realistically reflect the changing world of work. (Reinhart, 1979, p. 25)

This Act was evaluated by the Advisory Council on Vocational Education (ad hoc), and their

work assisted the passage of the 1968 Amendments to the Act (Reinhart, 1979). The Council

recommended:

> That all high school students should have access to vocational education programs;
>
> vocational education has a responsibility for service to these young people (youth
>
> with special needs) which many include cooperative (school-work) programs should
>
> be organized wherever possible; diversity and flexibility should be keynote of such
>
> programs; vocational and technical education should be made available to more youth
>
> and adults; technical education should be emphasized, improved, and expanded;
>
> training opportunities for out-of-school youth and adults should be expanded;
>
> apprenticeship programs should be expanded and improved. (U.S. Department of
>
> Health, Education, and Welfare, 1963, pp. 226, 229–230, 232, 235–236)

In the same year, The National Advisory Council on Vocational Education,

"permanently established by the 1968 Amendments, issued a series of short, pungent,

penetrating reports calling for educational reform by incorporating vocational and career

objectives in educational programs" (Reinhart, 1979, p. 24).

The seventies brought vocational education officially to the federal Department of

Education. The Educational Amendments of 1972 "established the National Institute of

Education and charged it with the responsibility of the research of career education . . .

established the Bureau of Occupational and Adult Education, thereby giving more

prominence to the role of vocational education in the U.S. Office of Education" (Reinhart,

1979, p. 25). The Educational Amendments of 1974 provided a "separate authorization for

career education funds" (p. 25). In addition, The Educational Amendments of 1976

"increased significantly the authorization of vocational education funds, provided for broader participation in planning, mandated more rigorous accountability, and gave vocational educators more freedom to develop programs through block grants" (Reinhart, 1979, p. 25).

Perkins II

Perkins II, or the Carl D. Perkins Vocational and Applied Technology Education Act of 1990, mandated several reforms including:

- development of Tech Prep programs, which coordinate courses in the last 2-years of high school with the 2-year community college associate degree

- integration of vocational and academic curricula

- promotion of work-related experience

- accountability as a required element of funding (Castellano et al., 2003, pp. 246–247).

In 1994, The School-to-Work Opportunities Act (STWOA) was passed with the purpose of "encouraging states to develop and implement comprehensive statewide systems to help all young people prepare for high-skill, high-wage careers, using workplaces as learning environments" (Castellano et al., 2003, p. 251).

Perkins III

Perkins III (Carl D. Perkins Vocational and Technical Education Act Amendments of 1998) continued in the direction of Perkins II by "support[ing] the alignment of vocational education with state and local efforts to reform secondary schools, so that CTE might become an integral part of those efforts" (Castellano et al., 2003, p. 247). Like its predecessor, Perkins III placed an increased emphasis on accountability (Stone, III, Kowske, & Alfeld, 2004).

Between 1982 and 1994, CTE enrollments declined by nine percent (U.S. Department of Education, 2000). During this time, the vocational education community initiated several changes aimed at increasing vocational enrollment including:

- infusion of new technologies (i.e., computerized diagnostics in auto repair)

- opportunities of professional development for vocational educators

- expanded academic and vocational curriculum premised on broad career clusters rather than focusing on particular jobs

- better linkages to postsecondary occupational standards (Castellano et al., 2003, p. 244)

Perkins IV

On August 12, 2006, President George W. Bush signed the Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV) as Public Law 109–270. Several common themes identified in the 2006 Act included: "accountability for results and program improvement at all levels, increased coordination within the career and technical system, stronger academic and technical integration, connections between secondary and postsecondary education, and links to business and industry" (ACTE, 2006, p. 9). In addition to other positive improvements from previous legislation, specific changes were implemented in regards to technical skill proficiency. At the postsecondary level, "technical skill proficiency should include student achievement on technical assessments that are aligned with industry-recognized standards when possible" (ACTE, 2006, p. 9).

<div align="center">

Iowa's Five-Year Perkins Plan

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As a result of the reauthorization of the Carl D. Perkins Career and Technical Education and Improvement Act of 2006, the Iowa State Board of Education was required to

approve a state plan that addressed four key changes in the Act including Programs of Study, accountability, Tech Prep, and competitiveness (IDE, 2008). Table 3 illustrates the components of Programs of Study in both the federal legislation and the Iowa Plan.

In addition, the Iowa Plan states that CTE POS will also contain the following elements:

- Integrate general studies (academics) within their scope and sequence.

- Expand career clusters.

- Consider emerging technologies for new CTE Programs of Study.

- Utilize a common statewide template. The standard elements required for a program of study will be addressed in the template.

- Utilize written agreements between educational entities for the career-focused Programs of Study. These agreements will define curriculum, operational policies and procedures, and credit provisions. All secondary and postsecondary courses, both core academic and technical, will include outcomes or competencies (technical skills). Written agreements shall be reviewed annually. (IDE, 2008, p. 18)

The Iowa Plan requires each school district to develop and implement a minimum of 75% of their CTE programs to Programs of Study guidelines (IDE, 2008). In addition, the IDE is responsible to monitor each LEA's progress towards this goal. The IDE is not only required to develop a template for Programs of Study districts to use, but also needs to develop the monitoring processes to ensure it is done (IDE, 2008).

Table 3

Programs of Study Components: Comparison of Federal and State Legislation

Federal Requirements	Iowa Five-Year Plan – Response to Federal Requirements
The IDE must describe the career and technical education activities to be assisted that are designed to meet or exceed the State adjusted levels of performance, including a description of— (a) The career and technical education programs of study, that may be adopted by local educational agencies and postsecondary institutions to be offered as an option to students (and their parents as appropriate) when planning for and completing future coursework, for career and technical content areas that—	Be consistent with Iowa Code for secondary and postsecondary schools. (Iowa Code 256.11(5) h; 258.3A; 258.4; 281-46(258); 281-12(2&6); 281-24.5(3-6); (Requirements for Vocational Education); Chapter 24 (Administrative Rules); 260C.14 and 260.18A 281-47.2 (260C) (Requirements for Career Academies).
Incorporate secondary education and postsecondary education elements;	In accordance with Iowa Code, career and technical programs of study will consist of coherent and rigorous curriculum that: • Includes academic and technical content, • Is a coordinated, non-duplicative progression of courses that align secondary education with postsecondary education, and • Adequately prepares students to succeed in postsecondary education leading to an industry recognized certificate or credential, including the Bureau of Apprenticeship and Training, credit certificate, diploma, Associate of Applied Science (AAS)
Include coherent and rigorous content, aligned with challenging academic standards, and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education;	All Secondary students must meet the same high school graduation requirements per Iowa Code 256.7(26)

Note. IDE, 2008.

Table 3 (continued)

Federal Requirements	Iowa Five-Year Plan – Response to Federal Requirements
May include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits.	The secondary career and technical education programs of study may include concurrent enrollment opportunities for postsecondary credit. As part of the needs assessment process, local school districts and community colleges shall evaluate opportunities for concurrent enrollment.
Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree;	Career and technical education programs of study must include a sequence of at least three units of CTE coursework offered to the secondary level and linked to postsecondary education leading to an industry-recognized certificate or credential, including the Bureau of Apprenticeship and Training, credit certificate, diploma, Associate of Applied Science (AAS) or Associate of Science (AS) with a career option in a specific career field.
	The career and technical education programs of study at the secondary level will include competency based applied learning that contributes to academic knowledge, higher-order thinking skills, reasoning and problem-solving skills, work attitudes, general employability skills, leadership, and knowledge of all aspects of the industry including entrepreneurship.
	Career and technical education programs will have an advisory committee with representation of secondary and postsecondary levels of instruction as well as business and industry as applicable.
	Career and technical programs will be evaluated through an annual review of the Perkins performance requirements for academic and technical attainment, placement and retention data, degree attainment data, and nontraditional career data for secondary and postsecondary programs. In addition, Iowa Code requires a more in-depth review of 20 percent of all CTE programs annually.

Technical Skill Attainment Assessment

The Iowa Plan also addresses technical skill attainment for CTE students. CTE faculty must determine how they will assess their students' technical skill attainment. Perkins IV states the following expectations of public institutions who receive Perkins dollars:

- student attainment of career and technical skill proficiencies, including student achievement on technical assessments, that are aligned with industry-recognized standards, if available and appropriate (The Carl D. Perkins Career and Technical Education Act of 2006, p. 15)

- . . . developing valid and reliable assessments of technical skills (p. 45)

- . . . supports the use of contextual and applied curricula, instruction, and assessments (p. 58)

- . . . assists in accessing and utilizing data, information available pursuant to section 188, and information on student achievement, including assessments (p. 58)

One significant change with the passage of Perkins IV is the expectations related to technical skill proficiency and the assessments used to measure the proficiency have been emphasized. Hyslop (2008) writes, "At both the secondary and postsecondary levels, the technical proficiency measure becomes much more rigorous. It should include student achievement on technical assessments that are aligned with industry-recognized standards when possible" (p. 33). Hyslop continues, "States took a number of approaches to address these issues [technical skill attainment assessments is one]. Related to technical skill attainment, there was already a vast difference in practice across the country" (p. 33).

In response to the federal requirements, the Iowa Plan outlined the plan for Iowa to accomplish this task:

The State [Iowa] has not adopted statewide technical skill assessments for any program area. In 2006, the IDE conducted a survey of high schools and community colleges to gather baseline data on the utilization of industry skill assessments and credentials; however the number of CTE students who take such assessments remains indeterminable. The Department is exploring ways to increase the number of CTE students pursuing and completing industry skills credentials. As a part of this process, IDE personnel are participating in a variety of activities including the Next Steps Working Group's Technical Skills Assessment Study Group, Data Quality Institutes, and other efforts. The technical skills assessed, the instrument utilized to assess those skills, and proficiency level to be attained to pass the assessment must be approved by a third party. The third party may be a nationally or state recognized industry organization, a provider of reliable and valid third party assessment instruments, or a regional or local advisory committee for the career and technical education program being assessed. (IDE, 2008, p. 64)

Nationally, 64% of postsecondary institutions are using state-approved or national assessment to "assess CTE concentrators' technical skill attainment" (Derner, Klein, & Hilber, 2008, p. 4). Iowa postsecondary CTE programs, based on a survey of Chief Academic Officers at each Iowa community college in February 2009, use national assessments for 40% of its programs (IDE, 2009b). In addition, there is also a vast difference of how secondary schools are assessing students' technical skills. Some are using industry credential assessments, while others are using course grades. Perkins IV would require all

CTE programs that are currently not using industry-recognized assessments and standards to review their options and implement industry-recognized and validated standards and assessments if available and appropriate.

Career Clusters and Pathways

The States' Career Clusters Initiative (SCCI) "is a national initiative intended to help states and schools organize their programs and guidance activities around clusters of similar occupations" (SCCI, 2010a). Most simply, career clusters can be defined as the identification of the "pathways from high schools to two- and four-year colleges, technical schools, graduate schools, apprenticeship programs and the workplace so that learners can recognize the relationship between what they learn in school and what they can do in the future" (National Association of State Directors of Career Technical Education Consortium, 2008).

The framework developed by SCCI in concert with secondary, postsecondary, and employers is intended to provide "curriculum integration and contextual learning opportunities that reflect career goals and interests of all learners" (SCCI, 2010a). In turn, this will hopefully create relevancy "for many learners to stay in school longer and enroll in more challenging courses" (SCCI). Career pathways are defined as a "4+2(+2) sequence of courses leading to employment in an occupational field and/or further education" (Hull, 2004, p. 4). Within each Career Cluster there are many career pathways that students may find of interest. As secondary schools develop their POS, they will choose if they will focus on the broad Career Cluster model or if they will focus more narrowly on career pathways. Table 4 provides examples of each item described above.

Table 4

Career Cluster and Career Pathway Examples

Career Cluster	Career Pathway
Agriculture, food, & natural resources	Food products and processing systems
	Plant systems
	Natural resources system
Education and training	Administration and administrative support
	Professional support services
	Teaching/training
Health science	Therapeutic services
	Diagnostic services
	Health informatics
	Support services
	Biotechnology research and development
Marketing	Marketing management
	Merchandising
	Marketing research

Note. SCCI, 2010b

Assessment

Assessment has an increased emphasis in the most recent Perkins Act. CTE faculty

have been required to report on the number of concentrators who took an assessment and the

number of concentrators who passed the assessment. CTE educators now need to consider

the assessments that are used in the classroom and determine if an industry-recognized

credential is available and appropriate for their program.

In Figure 3, Huba and Freed (2000, p. 10) offer a model of the Assessment Process.

This model is representative of the assessment work that will need to be completed as

schools work through their POS/TSA process. Banta, Lund, Black, and Oblander (1996)
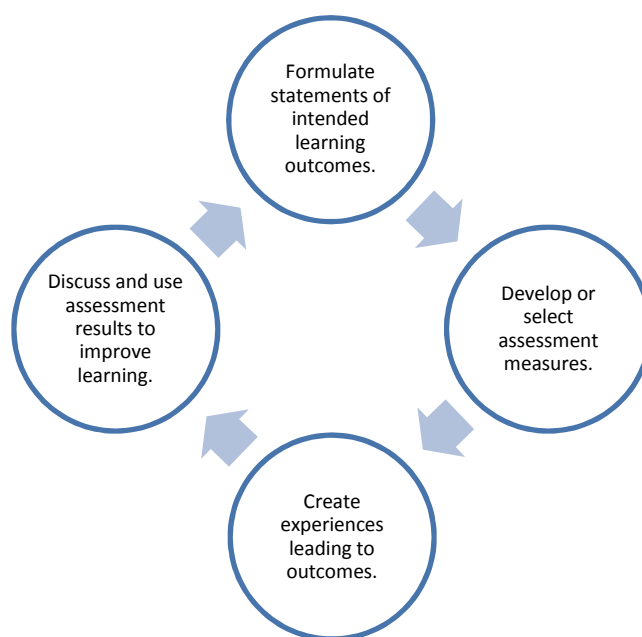
Figure 3. Model of the assessment process

credit the American Association for Higher Education's (AAHE) *Principles of Good*

Practice for Assessing Student Learning for combining effective assessment best practices in

one document. These principles are as follows:

1. The assessment of student learning begins with educational values.

2. Assessment is most effective when it reflects an understanding of learning as

   multidimensional, integrated, and revealed in performance over time.

3. Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.

4. Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.

5. Assessment works best when it is ongoing, not episodic.

6. Assessment fosters wider improvement when representatives from across the educational community are involved.

7. Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.

8. Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.

9. Through assessment, educators meet responsibilities to students and to the public. (American Association for Higher Education, 1992, as cited in Banta et al., 1996, p. 2)

In addition to considering and implementing Perkins requirements regarding technical skill attainment assessments, secondary teachers must also remember good practices for assessments. If teachers do not have quality standards, benchmarks, and critical competencies (performance indicators), they will have difficulty assessing CTE technical skills.

Successful Implementation of POS/TSA

There are many factors that may affect the successful implementation of POS and TSA at secondary schools. Several of these factors, such as assessment good practices and restrictions placed by legislation, have been acknowledged previously. I have identified

several additional roadblocks that may derail the successful implementation of POS/TSA. These factors include community college faculty and/or staff, advisory committees, secondary teachers, costs, and professional organizations including career and technical student organizations. In addition to the factors already mentioned, there are several characteristics of collaborations and effective teams that may derail their POS/TSA work if teams do not create a supportive team environment.

Effective Collaborations

Community colleges organized diverse teams to address technical skill attainment in their region. These teams were full of diverse personalities and viewpoints; all perspectives are important for the success of moving POS/TSA forward in their area. Gray (1989) defines collaboration as "a process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible" (p. 5). According to Gray, collaboration includes the following features: "Stakeholders are interdependent, solutions emerge by dealing constructively with differences, joint ownership of decisions, stakeholders assume collective responsibility for the future direction, and collaboration is an emergent process" (p. 11).

Why would institutions want to collaborate? The benefits of effective collaboration are substantial. The literature discusses several of these benefits including opportunity to solve problems collectively and work together to achieve the best interests of the team (Gray, 1989), execute institutional mission (Russell & Flynn, 2000), increase effectiveness and efficiency (Hoffman-Johnson, 2007), promote access and opportunity to serve constituents (Bragg & Russman, 2007), address demands of federal and state policies and practices (Amey, 2010; Amey, Eddy, & Campbell, 2010; Amey, Eddy, & Ozaki, 2007; Bragg &

Russman, 2007; Essex, 2001; Orr, 2001), create an entrepreneurial spirit among institutions involved (McCord, 2002), encourage educational renewal and instructional improvement (Essex, 2001), share information (Sink, Jackson, Boham, & Shockley, 2004), leverage resources (Amey et al., 2010; Azinger, 2000; Sink et al., 2004), improved image in community (Sink & Jackson, 2002), and other resource sharing opportunities (Amey, 2010).

As collaborations are designed, organizations need to consider selecting the "right" partners (Bracken, 2007; Walters, Peters, & Dress, 1994) and identifying their champion (Amey et al., 2007; Amey et al., 2010; Ozaki et al., 2007).

A champion is the glue that holds the individual partners together. The champion not only leads the collaborative team (Ozaki et al., 2007) but also promotes and markets the team to outside constituencies. Ozaki et al. describes the role of the champion, "Successful partnerships have a champion with sufficient social and organizational capital to draw on" (p. 112). The champion does not have to have formal authority; if the champion has adequate social and organizational capital, however, this will "compensate for any potential lack of formal authority" (p. 112).

Choosing partners for the collaboration is an important part of the collaboration process. Walters et al. (1994) recommends that organizations should identify partners that complement existing partners. In my review of literature, Bracken (2007) found that partnerships should recognize "each member's unique contributions" (p. 41). Walters et al. found that the individual strengths of each partner will assist the collaboration's ability to sustain. In addition, Walters et al. recommend that when partners are first brought together, they discuss what each will bring to the collaboration.

While collaboration is important for team success, partners within collaborations need to set a goal which focuses on developing synergies between partners (Walters et al., 1994, p. 5). Synergy is defined as "the interaction of two or more agents or forces so that their combined effort is far greater than the sum of their individual efforts" (Mears, 1994, p. 4). Mears describes listening and clarifying as elements of team synergy. Examples include team members: (a) paying attention, (b) responding to direction taken by person talking, (c) allowing no interruptions, (d) avoiding judgment, and (e) summarizing and understanding what is said. Active listening is an important part of effective teams:

> The difficulty in listening effectively stems from the fact that the mind thinks three or four times faster than the average person speaks. This creates surplus time with which the brain must deal, which allows extraneous thoughts to creep into the picture. (Mears, p. 5)

In addition to active listening, effective teams should also demonstrate support for team members that could include encouraging others to contribute ideas to the team and exhibiting respect towards team members (Mears, 1994). Effective team members do not automatically agree with everyone in their group. Team members need to feel comfortable presenting ideas to the group even if their views are not popular. Team members also should direct their commentary on facts rather than personal attacks of their team members (Mears).

Effective teams must also exhibit behaviors indicating team members are concerned about the quality of their work. Examples of this could be team members committing to excellence, accepting responsibilities, and/or paying attention to details (Mears, 1994). Team members must also be accepting of each other. Team members should believe that everyone has something of value to contribute to the team (Mears). Feedback is also essential to

effective teams. Even though, at times, it may be difficult; team members must provide open and honest communication (Mears). All of these communication best practices will help partners to begin to develop relationships. After all, these relationships are needed for successful collaborations to occur.

Developing a team. Mears (1994) describes a five phase approach in developing a team which includes initial group meeting, discussion of barriers and gateways, teams versus groups, team development, and reinforcement.

Phase one is identified as the initial group meeting. During this phase, a leader is appointed, and the team begins the process to develop trust and working relationships with each other (Mears, 1994). One important task in this phase is the "establishment of written rules governing the responsibilities of team membership" (p. 90). Reaching a consensus rather than using compromise is important in team meetings. Mears writes, "The beginning point for team development is to avoid voting and instead reach a consensus on issues" (p. 92). Likewise, leaders should be cautious about forcing a vote and then siding with majority (Mears).

Phase two is categorized as the discussion of barriers and gateways. During this phase, team members are learning how to interact with each other. Mears (1994) recommends that teams "learn a process where team members can identify where improvements can be made" (p. 98).

Phase three is described as the time in which the individuals become a group or a team. A group is a "collection of individuals who are in an interdependent relationship with one another" (Mears, 1994, p. 98). A team "goes beyond that, in that members are

encouraged to share in the ownership of the team's function and direction" (p. 98). To become an effective team, team members should discuss:

- team member responsibility

- the team within the organization (or in my study, their region of the State)

- the team and the individual.

- the team and the work performed

- team goals and objectives (p. 99)

Phase four is described as team development. It is during this stage that the team operates effectively and is able to resolve issues as a team. There are five general areas that could be examined to determine how the team is functioning: environmental influences, goals, roles, processes, and interpersonal dynamics (Mears, 1994).

The final phase is described as reinforcement. Mears (1994) warns that newly formed teams may "become mired in detail" (p. 100). It is important for teams to continue to grow and learn. Teams should be addressing the following questions, "'Where have we been?' and 'Where are we going?'" (p. 100). The answers to these questions will help the team target team improvements (Mears).

Four stages of teams. Previous research described phases teams will experience as they complete the tasks required. In addition to the actual tasks or work of the team, team members also go through stages of social interaction with the team. Mears (1994) describes four stages of teams: forming, storming, norming, and performing. The first stage is considered an orientation to each other and the group. Mears writes, "When team members first come together, they are cautious, and there is bound to be some anxiety about what lies ahead" (p. 11). The second stage, storming, is described as a stage of conflict and confusion.

Characteristics of this stage include realizing that the task set before them is difficult, resisting work with other team members, and relying on their own experiences to complete the task (Mears). Stage three is described as norming or when the "team members start to help one another" (p. 12). While there may still be conflict, the team members begin to work together to overcome conflict (Mears). The final stage, performing, is a stage where team members exhibit teamwork. This stage occurs when the "team has matured. Team members understand strengths and weaknesses . . . [are] satisfied with team's progress . . . know how to deal with complex tasks and can handle interpersonal conflicts" (p. 12).

Learning Organizations

Teams may be able to work effectively and accomplish their goals, they may be able to address all of the external forces that are working against them, and they may even be able to create a useable and an effective POS/TSA plan. If teams are not able to convince their schools of the significance and importance of their work, however, then the work completed by the teams will be fruitless. Institutional staff, faculty, and administrators will need to take this new knowledge and implement it at their school.

Garvin (1998) defines a learning organization as "an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights" (p. 51). How do organizations learn? Learning begins with the individuals at the organizations. Transforming individuals' personal knowledge to the knowledge of the organization is critical to the continued growth and learning of the organization (Nonaka, 1996, 1998). Even with the personal knowledge of its employees, organizations do not always know what to do with the information.

Why are organizations concerned about learning? In the case of technical skill attainment, schools are required to implement valid and reliable technical skill attainment assessments. Learning, however, should not be done solely because of a mandate. Learning can be difficult and uncomfortable; one may even feel the system is pushing back against new knowledge (Senge, 1990; Senge et al., 1999). In order to continue to grow, however, organizations are going to have to do their own pushing. Senge et al. (1999) assert, "No progress is sustainable unless innovators learn to understand why the system is pushing back, and how their own attitudes and perceptions (as well as other forces) contribute to the 'pushback'" (p. 26).

The introduction of the technical skill attainment assessment requirement is a significant change for LEAs. For the first time, many of them are going to have to consider the possibility of using industry-validated standards and assessments. Secondary and postsecondary schools were introduced to the change during FY08; many schools, however, have not moved beyond the use of local assessments. According to the work of de Geus (1996), it may take 12–18 months from the point of introduction until individuals will act on an idea. If this is true, it is beyond the time in which institutions need to act.

Advisory Groups

Iowa Code requires all CTE programs to have an active advisory group. Iowa Code Chapter 258 Vocational Education provides specific details about local advisory committees. The Code states:

> The board of directors of a school district that maintains a school, department, or
> class receiving federal or state funds under this chapter shall, as a condition of
> approval by the state board, appoint a local advisory council for vocational education

composed of public members with emphasis on persons representing business, agriculture, industry and labor. The local advisory council shall give advice and assistance to the board of directors in the establishment and maintenance of schools, departments, and classes that receive federal or state funds under this chapter. Local advisory councils may be organized according to program area, school, community, or region. The state board shall adopt rules requiring that the memberships of local advisory councils fairly represent each sex and minorities residing in the school district. Members of an advisory council shall serve without compensation. [C24, 27, 31, 35, 39, §3845; C46, 50, 54, 58, 62, 66, 71, 73, 75, 77, 79, 81, §258.9] 86 Acts, ch 1245, §1431 (State of Iowa, 2009)

Local advisory groups also have the responsibility to approve the following aspects within CTE programs:

- critical competencies/performance indicators
- assessments used to measure critical competencies/performance indicators
- proficiency level required for the assessments

Local school districts embrace the importance of advisory groups but often struggle with community participation. Many districts have very low attendance at local advisory group meetings. Advisory groups are essential to the work in the CTE area. If districts do not have a strong, active advisory group, they will need to address this concern immediately.

Other Potential Roadblocks

There are several other potential roadblocks that could affect the implementation of POS/TSA at the pilot school districts. These factors include relationships with the community college and secondary school, community college faculty, secondary teachers,

costs of POS/TSA development, career and technical student organizations, and other unknowns not identified.

<div align="center">**Theories and Models**</div>

For the purpose of my study, I utilized management, small wins, and social influence theories as the theoretical frameworks used in exploring the dynamics and activities of one regional team's work towards POS/TSA. I desired to understand the activities and behaviors of the team by their roles and tasks within the team, individual attitudes, and the outcomes of the group.

McGregor's Theories of Management

McGregor's theories of management, "X" and "Y," provide management assumptions about motivating the workforce. McGregor's work was influenced by Abraham Maslow's *Hierarchy of Needs* (Lussier & Achua, 2007). Managers who operate under the theory X philosophy believe that:

- Work is inherently distasteful to most people.

- Most people have little ambition or desire for responsibility and prefer to be directed.

- Most people have little capacity for creativity involving organization problems.

- Motivation occurs at a bread-and-butter survival level.

- Most people must be closely controlled and often coerced to achieve organizational objectives. (Blake & Mouton, 1975, p. 121)

Managers who operate under the Y philosophy tend to believe:

- Work is as natural as play if conditions are favourable.

- For achieving organizational goals, self-management is often indispensable.

- Creativity for solving an organization's problems is widely distributed throughout its membership.

- Rewards which satisfy ego and social needs, as well as bread-and-butter needs, conduce to self-control in line with organizational objectives.

- The capacity for creativity is under-utilized in organizations. (Blake & Mouton, 1975, p. 121)

McGregor used his theories of management to develop a list of implications for teamwork and team building. Table 5 identifies the implications of Theory X and Theory Y on teamwork.

Table 5

Implications for Teamwork

Theory X	Theory Y
Authority flows unilaterally from superior to subordinate.	Authority flows from formal and informal sources, up, down, and across the team.
Span of control is narrow and supervision is close.	Span of control is wide, with supervision being general rather than detailed.
The individual is considered as an isolated unit, and work is organized primarily in terms of his physiological being.	The individual is considered as a social-psychological-physiological being and the structuring of his work does not ignore the fullness of man.
Work is routinized.	The task is a meaningful whole, providing some variety and requiring some skill and judgment.

Note. Blake & Mouton, 1975, p. 121

McGregor's management theories are presented as a means to interpret and understand team tasks and behavior. Team members must be able to trust each other. They

also need to arrive to the meetings with an open mind and be willing to work towards the common goal. Teams may experience conflict; conflict will help the team move forward towards their goals. One aspect of my study was the individual impressions of the POS process. If team members do not feel valued or they do not buy into the work of the team, then they will not be authentic in their presentation of their school nor will they be enthusiastic of sharing and implementing team decisions at their own school district.

Weick's Small Wins

The issue of implementing POS and TSA across 75% of all CTE programs at each school district is daunting. Implementation involves many steps including identifying standards and critical competencies, forming an advisory committee, and identifying industry-recognized standards and assessments for each program area. The work that needs to be done is overwhelming, and the thought of completing the work may have prevented some schools from beginning. Weick warns of the perceptions given to events when viewed on a "massive scale" (1984, p. 40). He explains, "When social problems are described this way, efforts to convey their gravity disable the very resources of thought and action necessary to change them" (p. 40). Weick continues by adding, "When the magnitude of problems is scaled upward in the interest of mobilizing action, the quality of thought and action declines, because processes such as frustration, arousal, and helplessness are activated" (p. 40).

Weick (1984) theorizes that individuals are unable to solve problems unless they view the problem as not a "problem." Weick recommends that individuals should "recast larger problems into smaller, less arousing problems, people can identify a series of controllable opportunities of modest size that produce visible results and that can be gathered into

synoptic solutions" (p. 40). The Bureau of Career and Technical Education Services at the IDE identified that the idea of statewide implementation of POS/TSA was overwhelming for the LEAs. The creation of the RFA focused on POS/TSA was one strategy developed to assist the local school districts in this implementation. The RFA is focused on a small group of local school districts. The work of regional teams is considered to be a pilot study. Discoveries and difficulties will be shared with the State once all pilot studies have been completed in the hopes to help other local school districts develop their own POS/TSA.

Weick (1984) advocates that in order "to keep problem-related arousal at modest intensities, people need to work for small wins" (p. 41). A small win is defined as a "concrete, complete, implemented outcome of moderate importance" (p. 43). A small win by itself might be considered unimportant but when combined with a series of other small wins "reveals a pattern that may attract allies, deter opponents, and lower resistance to subsequent proposals" (p. 43). School districts need to see success of the POS/TSA process before they will be supportive. Before region wide acceptance happens, regional teams need to see successes within their team, plans, and eventually the success of their plans being implemented at their school district. Once the team accomplishes one small win, it will set in motion other possible small wins. Weick explains:

When a solution is put in place, the next solvable problem often becomes more visible. This occurs because new allies bring new solutions with them and old opponents change their habits. Additional resources also flow toward winners, which means that slightly larger wins can be attempted. (p. 43)

Each regional team is required to set goals for their work towards development of a POS/TSA model. Weick (1984) cautions of setting goals that are too difficult or easy:

"Extremely easy or extremely difficult goals are less compelling than are goals set closer to perceived capabilities. Learning tends to occur in small increments rather than in an all-or-none fashion" (p. 45). The creation of manageable and doable goals will help the team be successful; it will help create certainty which can continue to lead to positive outcomes (Weick). He provides examples of how group talk can cause the "reappraisals of problems." "A small win reduces importance ('this is no big deal'), reduces demands ('that's all that needs to be done'), and raises perceived skill levels ('I can do at least that')" (p. 46).

Kelman's Social Influence Theory

Kelman's (1961) research can be simply defined as attempting to understand individual attitudes and opinions, focusing on methodological tools used to measure attitudes and opinions. He identified three processes of social influence in which two of the three relate to my study.

One process of social influence is categorized as compliance. Compliance is described as when one person agrees with another member solely because the other person wants others to like him or her or to gain a favorable response from a member in the group (Kelman, 1961). This person may even set aside their own personal beliefs to agree or side with other members. Kelman writes, "Some individuals may compulsively try to say the expected thing in all situations and please everyone with whom they come in contact, out of a disproportionate need for favorable responses from others of a direct and immediate kind" (p. 62).

The second process identified by Kelman is referred as identification. Identification occurs when "an individual adopts behavior derived from another person or a group because this behavior is associated with a satisfying self-defining relationship to this person or group"

(Kelman, 1961, p. 63). Kelman continues by suggesting that a person who resides within the identification role may want to *be* the other person.

Internalization is the final process identified by Kelman. This process is explained as the individual accepts someone's or the group's view because it makes sense to them (Kelman, 1961). The idea matches his or her value system. Kelman explains:

> The individual adopts it because he finds it useful for the solution of a problem, or because it is congenial to his own orientation, or because it is demanded by his own values – in short, because he perceives it as inherently conducive to the maximization of his values. (p. 65)

Kelman (1961) identified three processes of social influence which can be used to understand individual attitudes and opinions. Compliance, process one, is described as when a person agrees with someone because they want to be liked. Identification, process two, is defined as agreement that stems from individuals wanting to *be* the other person. The final process, internalization, occurs when someone agrees with someone else because their opinion makes sense to them. There are no ulterior motives; the individual reflects on the issue and forms an opinion based on his/her own reality.

Summary

This chapter provided a review of literature focused on career and technical education (ACTE, 2006; Castellano et al., 2003; Derner, Klein, & Hilber, 2008; Hyslop, 2008; IDE, 2004, 2008, 2009; Reinhart, 1979; Schenck, 1995; Stone III et al.; Thompson, 1973), assessment (Banta et al., 1996; Huba & Freed, 2000), collaboration (Amey, 2010; Amey et al., 2007; Amey et al., 2010; Azinger, 2000; Bracken, 2007; Bragg & Russman, 2007; Essex, 2001; Gray, 1989; Hoffman-Johnson, 2007; McCord, 2002; Ozaki et al, 2007; Russell &

Flynn, 2000; Sink & Jackson, 2002; Sink et al., 2004; Walters et al., 1994), effective teams (Gray, 1989; Mears, 1994), and theoretical perspectives chosen for my study (Blake & Mouton, 1975; Kelman, 1961; Lussier & Achua, 2007; Weick, 1984).

The literature outlined in Chapter 2 was used to develop my methodology in Chapter 3. CTE, Perkins legislation, POS, and TSA were all important to define and explain in order to provide a context for my study. McGregor's theories of management, Kelman's theory of social influence, and Weick's theoretical framework of small wins enabled me to understand and explain both individual and group behavior.

In Chapter 3, I will discuss the qualitative research design used within my study. This chapter will include the ETMM (epistemology, theoretical perspective, methodology, and methods), data collection procedures including the types of documentation that will be used, participants, data analysis procedures, trustworthiness criteria, member checks, positionality, engagement in data collection, audit trail, and delimitations.

Chapter 4 examines the views and perceptions of POS regional team members as they implemented the POS Model at their districts.

Chapter 5 discusses the findings that emerged from the three original research questions guiding this study:

1. How does a diverse team describe and develop a process to build Programs of Study and assess technical skill attainment?

2. How do team members describe their experiences of the process towards Programs of Study and technical skill attainment assessment development?

3. How do team members propose to change the Programs of Study process in order to improve satisfaction and success?

The discussion focuses around three themes that emerged from this study. These themes exemplify how team members from one regional team described their experiences working with the community college and implementing a POS/TSA Model. In addition, the three themes will be discussed within the context of the existing literature. Furthermore, this chapter highlights the implications and recommendations for CTE professionals and state departments focused on CTE. Finally, I will share my personal reflections and recommendations for future research.

Chapter 3. Methodology

The purpose of this qualitative study was to describe how one regional team addressed, implemented, and managed POS/TSA. Community colleges in Iowa organized regional teams to apply for a $10,000 grant from the IDE. This chapter provides descriptions on the ETMM (epistemology, theoretical perspective, methodology, methods) chosen, participants in the study, data collection procedures and analysis, and the criteria I used to determine trustworthiness of the research.

Qualitative Inquiry

I chose to use a qualitative research design because my goal was to describe how diverse teams work collaboratively to implement POS/TSA at their institutions. Denzin and Lincoln (2000) define qualitative research as a "situated activity that locates the observer in the world" (p. 3). They assert that qualitative research:

> consists of a set of interpretive, material practices that make the world visible. . . . qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them. (p. 3)

My central phenomenon, diverse teams, was the focus of my study. I wanted to discover how diverse teams, with all of their ideologies, perceptions, and biases, come together to work on POS/TSA. It is known what Perkins legislation requires; it was not known, however, how each LEA will choose to implement POS/TSA at their districts. I wanted to identify characteristics and behaviors of the team that encouraged, supported, and implemented their plans for POS/TSA at each LEA participating in the grant.

Esterberg (2002) described how qualitative researchers choose their research:

Often, qualitative researchers begin where they are. That is, they look at their own lives to see if they can find anything interesting to study, an unusual angle or puzzling event or phenomenon. Then they try to refine the topic into a more manageable and researchable form. (p. 26)

As a member of the IDE, my "insider status" was vital to my study. A career change prompted me to explore POS/TSA. I went from employment at a private higher education institution to employment at the IDE. This change in employment introduced me to Perkins legislation and specifically POS/TSA. The IDE had just begun its work on providing tools and resources to Iowa school districts and community colleges to assist their local integration of Perkins legislation. Many questions were asked to the IDE about how LEAs were implementing TSA, but there were few clear answers.

Due to my work at the IDE, I have a professional relationship with each of the participants in the study. As required in my IDE position, I work with districts and colleges across the state on their Perkins and CTE needs. Each IDE consultant is assigned a region in the state that we work with closely. In addition, I am the POS/TSA RFA contact for the CTE Services Bureau. As colleges work on their application and ultimately the implementation of their POS/TSA plan, they will contact me to help them work through any concerns or roadblocks.

The IDE issued a RFA that each community college could apply for in order to secure funding focused on their POS/TSA work. The RFA requested community colleges to form regional teams in which they are the fiscal agents. These teams can consist of (at the minimum) "career and technical education (CTE) deans, Tech Prep coordinators, CTE

faculty, and at least three secondary partners" (IDE, 2009c, p.2). Figure 4 shows the

guidelines requested from each regional team:

A. Identify current progress on the development of POS and technical skill attainment assessments for the schools selected for this pilot study. See Attachment for table to be submitted with application.
    a. Describe your team's plan in developing <u>one</u> POS for at least <u>three</u> secondary school districts by June 30, 2010 (See Attachment H for the steps involved in POS)
    b. Identify school, program, etc. that will be the focus of the RFA
        i. Provide rationale for program and secondary schools selected.
        ii. List of team members and school/college/organization affiliation, including contact information
    c. Identify timetable for work
    d. Provide project implementation plan including goals and benchmarks
    e. Demonstrate readiness to complete proposal
    f. Describe opportunities for collaboration between secondary and postsecondary institutions
B. Describe methods that will be used to collaborate with all partners
    a. Secondary
    b. AEA
    c. Perkins fiscal agents
    d. Department of Education
    e. Community College
C. Describe steps to move entire region to the goal of 75% of all programs being POS by the end of FY12 in applicant's region
D. Describe methods for monitoring performance in meeting benchmarks
E. Describe of evaluation methods
F. Provide budget
    a. Completion of Attachment D
    b. What is the projected cost of the proposal? Provide budget justification or summary of the budget details, as appropriate
    c. Are the funds available sufficient to complete the project
    d. How will the funding be sustained with federal (Perkins) and local resources (IDE, 2009)

Figure 4. POS application guidelines

Epistemology

Epistemology is defined by Crotty (1998) as ". . . the nature of knowledge" (p. 8).

Kemmis and McTaggart (2000) take the definition a step further by explaining epistemology

as the "nature of 'truth' in the human and social sciences" (p. 575). The epistemological

stance chosen by a researcher is embedded in the questions asked, research explored, and the outcomes reached (Crotty). For the purposes of this study and my belief that we construct knowledge using our knowledge gained from personal experiences, I chose to view my research using a constructionism lens. Crotty defines constructionism as ". . . understanding that *all* meaningful reality, precisely as meaningful reality, is socially constructed" (p. 55). Schwandt (2000) asserts:

> Most of us would agree that knowing is not passive – a simple imprinting of sense data on the mind – but active; that is, mind does something with these impressions, at the very least forming abstractions or concepts. In this sense, constructivism means that human beings do not find or discover knowledge so much as we construct or make it. We invent concepts, models, and schemes to make sense of experience, and we continually test and modify these constructions in the light of new experience.
>
> (p. 197)

Perkins legislation may be viewed as vague and abstract; the work of the IDE is intended to assist each region in Iowa to implement requirements of the legislation. The IDE has provided tools and guidance, but ultimately each LEA has local control over its programs. This local control enables them to make decisions about their CTE program areas. Regional teams across the state designed a pilot study based on their own interpretations of the POS/TSA requirements.

Theoretical Perspective

Theoretical perspective is defined as "the philosophical stance that lies behind our chosen methodology . . . provides a context for the process and grounds its logic and criteria" (Crotty, 1998, p. 7). I used the basic interpretative approach in this research. This type of

research can be described as a way to "seek understanding and meaning and seeks how others make sense of their world" (Johnson, 2007). Merriam and Associates (2002) define the interpretive approach as "learning how individuals experience and interact with their social world, the meaning it has for them" (p. 4). By using this approach I was able to "identify the recurring patterns or common themes that cut across the data" (Merriam & Associates, p. 7).

Each regional team was organized differently. Some included only CTE deans while others teams included both faculty and CTE deans from the college. Grant participants have differing views of how the POS/TSA process should be defined and carried out. They may even have opposing views within their teams about the definitions and plans. Regional teams interpreted the requirements of the POS/TSA and determined how they should implement it in their region.

Methodology

Methodology is described by Crotty (1998) as the ". . . strategy or plan of action" (p. 7). Methodology that will be used in this research will be a case study. Case study research is defined by Stake (1995) as "the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (p. xi). In my research, I focused on how one Iowa community college addressed, implemented, and managed POS/TSA with at least three secondary schools within their region. Because of this focus, Stake (2000) would categorize my case study as an instrumental case study. Stake writes:

> I call it instrumental case study if a particular case is examined mainly to provide insight into an issue or to redraw a generalization. . . . it supports a supportive role,

and it facilitates our understanding of something else. The case may be seen as typical of other cases or not. Here the choice of case is made to advance understanding of that other interest. (p. 437)

Stake's viewpoint supports the selection of my case. While the composition of each regional team will be different, their work will lead them all to the same goal . . . implementation of one POS/TSA at three secondary school districts. While each regional team will hopefully reach the same goal, each team will encounter its own set of challenges and successes. I chose to explore how one team's roles, relationships, and responsibilities impacted the POS/TSA goal.

Methods

Methods are the tools used in my research. Crotty (1998) defines methods as "the concrete techniques or procedures we plan to use" (p. 6). In my research, my primary method was interviews. Seidman (2006) asserts that "At the heart of interviewing research is an interest in other individuals' stories because they are of worth" (p. 9). Seidman continues, "The primary way a researcher can investigate an educational organization, institution, or process is through the experience of the individual people, the 'others' who make up the organization or carry out the process" (p. 10). I desired to understand how teams worked through the process of POS /TSA. This process and the experience of the participants are what I needed to uncover and explain. In addition to interviewing, I also used documentation, direct observation, and participant observation.

Data Collection Procedures

The following section outlines the data collection methods I used to gain insights into one Iowa region's attempt to integrate POS/TSA into their CTE discipline area. I used four

of the six types of documentation for case studies recommended by Yin (2009): documents, interviews, direct observation, and participant observation. I had originally decided to use archival records, specifically, the college's Perkins FY09 application and CTE performance data. I decided, however, that these documents were not needed as they did not provide additional insight into my phenomenon.

Documentation

Yin (2009) writes, "Because of their overall value, documents play an explicit role in any data collection in doing case studies" (p. 103). Document collection was vitally important in my study. I used the following documents in my study: (a) an application for POS/TSA RFA; (b) agendas, announcements, and other written reports related to POS/TSA; and (c) POS/TSA documents created by regional team members.

Interviews

Yin (2009) states, "One of the most important sources of case study information is the interview" (p. 106). I used in-depth interviews in my study because I sought to gain knowledge about the happenings within the team as well as their opinion about the events (Yin, 2009). I interviewed regional team members at the conclusion of their grant. The FY10 POS/TSA grant concluded on June 30, 2010.

Although I interviewed all participants in the regional team, I also depended on the leader of the regional team. This informant, the regional team leader, was able to provide me with "insights into a matter and also initiate access to corroboratory or contrary sources of evidence" (Yin, 2009, p. 107). This person allowed me to "see" what I could not see in documentation records. Similar to my interviews with team members, I used a focused interview with my community college participant. The questions used in these interviews are

written in my case study protocol. All interviews took place face-to-face at a location determined by the participant. Interviews were recorded (audio and written) in order to help ensure accuracy of my memory.

Direct Observations

Because of my employment at the IDE, I am in a unique position to attend regional team meetings. The regional team I studied met one time in February 2010 to discuss the requirements of the grant, to determine their course of action, and to develop a timeline of activities. In addition, the regional team invited all districts in the area to participate in joint secondary and postsecondary meetings. I was able to attend, participate, and observe one of these joint meetings.

Participant Observation

I am definitely not a passive observer in my study. I am in the exceptional position to participate in statewide meetings focused on POS/TSA. I organized and planned the statewide meeting focused on POS/TSA that was held in October 2009. I am also responsible to assist one region in the state in their efforts towards successful implementation of the Perkins legislation in their region. Third, I am considered a resource for the districts in the state due to my role at IDE. Because of this, I was often asked questions either to clarify or to provide direction as the regional team completed their POS/TSA work. Finally, I was identified as the lead for questions and presentations in the state pertaining to POS/TSA. My insider status helped me gain access to individuals, events, and documents that I would not have been able to access if I did not work at the IDE.

Participants

Purposeful sampling was used in my study. Creswell (2007) defines purposeful sampling as the "means that the inquirer selects individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study" (p. 125). Stake (2000) also describes how a researcher can select a case:

> The researcher examines various interests in the phenomenon, selecting a case of some typicality, but leaning toward those cases that seem to offer *opportunity to learn*. My choice would be to examine that case from which we feel we can learn the most. That may mean taking the one most accessible, the one we can spend the most time with.   Potential for learning is a different and sometimes superior criterion to representativeness. Isn't it better to learn a lot from an atypical case than a little from a seemingly typical case? (p. 446)

Using Stake's insights, I studied a team in which I have insider status. I have worked closely with the members of the team previously.

Esterberg (2002) defines purposive strategy as the intentional sample of "research participants for the specific perspectives they may have" (p. 93). For this study, I interviewed members of one college's regional team. Secondary regional team members included a high school principal, a high school assistant principal, CTE department chair, and a CTE director. Each team member brought an unique perspective to the study. The regional team was led by a community college representative (my key informant). In the college's application, they agreed to participate in information gathering events including interviews and email requests of information. I also believe my relationship with the regional team leader allowed me to gain unique access to the college's efforts related to POS/TSA.

Data Analysis Procedures

Marshall and Rossman (1995) define data analysis as the process that will "bring order, structure, and meaning to the mass of collected data. It is messy, ambiguous, time-consuming, creative, and fascinating process. It does not proceed in a linear fashion; it is not neat" (p. 111). Marshall and Rossman categorize analytic procedures into five modes:

> organizing the data; generating categories, themes, and patterns; testing the emergent hypotheses against the data; searching for alternative explanations of the data; and writing the report . . . Each phase of data analysis entails data reduction as the reams of collected data are brought into manageable chunks, and interpretation as the researcher brings meaning and insight to the words and acts of the participants in the study. (p. 113)

Marshall and Rossman (1995) recommend that by reading and rereading data, the researcher will become more familiar with the facts they contain. During this reading, Marshall and Rossman also recommend the recording of data on note cards, editing data as necessary, and adding data to the case study management database. I took notes using Livescribe notebook and pen. This pen allowed me to record interviews as I wrote notes.

Contact and Document Summary Documents

I used a Contact Summary Sheet to analyze my data as recommended by Miles and Huberman (1994). Miles and Huberman (1994) define a contact sheet as "a single sheet with some focusing or summarizing questions about a particular field contact" (p. 51). The completed contact sheet provided guidance on "planning for next contact, suggest[ing] new or revised codes, reorient[ing] to the contact when returning to the write-up, and to help with further data analysis" (p. 52). I revised the document to fit my needs as I analyzed data. In

addition to using the Contact Summary Sheet, I created a separate document to organize my theme identification. This second document identified illuminating quotes, theme identification, and connection of potential themes and participant quotes to research questions. The use of both documents assisted in the analysis of the data. For each interview, I completed this process twice.

I also used a Document Summary Form. Miles and Huberman (1994) describe the benefits of this document to include explaining the context, significance, and summary of the document. This document assisted me in determining the significance of the documents that were sent to me by participants.

Marshall and Rossman (1995) declare "the category generation phase of data analysis is the most difficult, complex, ambiguous, creative, and fun" (p. 114). Qualitative researchers do not categorize data as statisticians do but rather "identify the salient, ground categories of meaning held by participants in the setting" (p. 114). Bliss, Monk, and Ogborn (1983) "tell us that a word or a phrase does not 'contain' its meaning as a bucket 'contains' water, but has the meaning it does by being a choice made about its significance in a given context" (as cited in Miles & Huberman, 1994, pp. 56–57).

Analytic Trail

Miles and Huberman (1994) provide a sample analytic trail that I used in my study (see Figure 5). I completed steps one and five twice for each participant interview to ensure that key terms, phrases, clusters, and generalizations were consistent each time I analyzed my data.

Step 1. Underline key terms in the text.

Step 2. Restate key phrases. Remain as descriptive and literal as possible.

Step 3. Reduce the phrases and create clusters.

Step 4. Reduction of clusters, and attaching labels (pattern coding). The decisions involve both implicit and explicit comparisons and thereby move to higher levels of inference.

Step 5. Generalizations about the phrases in each cluster.

Step 6. Generating minitheories: memo writing that poses explanations.

Step 7. Integrating theories in an explanatory framework.

Figure 5. Miles and Huberman's sample analytic trail

Trustworthiness Criteria

Merriam and Associates (2002) define internal validity as the answering of one question; "How congruent are one's findings with reality?" (p. 25). They continue:

In qualitative research we are not interested in how many or the distribution of predefined variables. Rather, it is important to understand the perspectives of those involved, uncover the complexity of human behavior in context, and present a holistic interpretation of what is happening. (p. 25)

Merriam and Associates recommend several strategies to promote validity and reliability including triangulation, member checks, peer review/examination, researcher's position or reflexivity, adequate engagement in data collection, audit trail, and rich thick descriptions.

Triangulation

Triangulation is defined as using multiple investigators, data, theories, or methods to confirm findings (Merriam & Associates, 2002; Patton, 1987; Yin, 2009). Triangulation can be used as a strategy to tell the story of the phenomenon. Stake (1995) writes:

Importance depends on our intent to bring understanding about the case and on the degree to which this statement helps clarify the story or differentiate between conflicting meanings. If it is central to making "the case," then we will want to be extra sure that "we have it right." (p. 112)

While I did not use multiple investigators in my study, I used multiple data collection sources and methods to gain knowledge regarding the workings of the regional team including participant interviews, observations, and document analysis.

Member Checks

Merriam and Associates (2002) define member checks as "taking data and tentative interpretation back to people from whom they were derived and asking if they were plausible" (p. 31). Stake (1995) also supports the use of member checks :

Actors [participants] play a major role in directing as well as acting in case study. Although it is they who are studied, they regularly provide critical observations and interpretations, sometimes making suggestions as to sources of data. They also help triangulate the researcher's observations and interpretations. (p. 115)

Throughout my research, I relied on participants to review my findings. I asked for participants' feedback several times as I worked on analyzing and summarizing the data including after transcription of interviews and the identification of key words, clusters, and themes.

Peer Review

Once I identified potential themes, I shared data with a colleague at the IDE. She was a valued resource because she also works with Perkins grants and assists districts and colleges with their POS/TSA implementation. She reviewed the initial themes I identified and provided feedback for each.

Positionality

Qualitative researchers are intimately connected to their research. Stake (1995) writes, "It is better to give the reader a good look at the researcher" (p. 95). I work at the IDE which awards the grants to the community colleges. I was also involved in the initial planning period of the development of Iowa's model to create POS/TSA. In addition, I wrote the RFA that was released to the community colleges inviting them to apply for the grant.

Esterberg (2002) encouraged readers to discover what personal connections they have of their setting:

What do you already know about this place? What kinds of stereotypes might you have about the place and the people in it? Do you already know people in the setting? Do they know you? What do you think they think about you? Does the setting have any personal meanings for you? Does it evoke any particular emotions or feelings? (p. 64)

I have addressed each of Esterberg's (2002) questions. *What do I already know about this place?* As I think about the community college and the districts involved in the study, my knowledge is mostly limited to their Perkins activities. I had worked closely with the districts for about six months before the RFA was released. In addition, 10 years ago I did work as a business education teacher at one of the districts participating in the grant. *What*

kinds of stereotypes might you have about the place and the people in it? As I reflect on my interactions with the college and districts, I cannot identify any stereotypes that may impact my work. When I began my work with this region, colleagues did share their opinions about the districts and the college with which I would be working. It has been my experience with the districts and the college, through my work at the IDE and through this grant, however, that their opinions are unfounded. *Do I already know the people in the setting?* Yes, I do know the participants in the study through interactions focused on Perkins and CTE. I do not know any of the participants outside of our professional relationships. *Do they know you?* Yes, they do know me through my role as a Perkins consultant. I have strived to achieve strong professional relationships with districts and community colleges in the State. These relationships provided the groundwork that enabled me to work with them for this research. *What do you think they think about you?* I have been told that they respect and trust me. I have also been told that they appreciate our professional relationship. *Does the setting have any personal meanings for you?* The setting of the meetings varied depending on participants' districts. The settings did not have any personal meanings for me. *Does it [the setting] evoke any particular emotions or feelings?* No; the interviews and observation locations did not evoke any feelings from me.

Adequate Engagement in Data Collection

Merriam and Associates (2002) also refer to this as "the data and emerging findings must feel saturated" (p. 26). I studied the regional team the entire length of the grant period which concluded at the end of FY10, or June 30, 2010. This unique opportunity allowed me to follow the regional team from their initial planning meeting through the implementation of their pilot study.

Audit Trail

An audit trail is defined as the details in one's research study. These details should include "how data were collected, how categories were derived, and how decisions were made throughout the inquiry" (Merriam & Associates, 2002, p. 27). To provide details about my research, I used a researcher's journal to record my reflections, joys, frustrations, questions, and decisions made throughout the study.

Delimitations

All Iowa school districts must have 75% of their CTE programs developed as POS (including TSA) by FY13. Many schools have already started their work on POS/TSA. For my research, I restricted the scope of my research to one area in the state. I further limited my research to focus on one discipline area within one region.

A second delimitation of the study is that I used a single-case design. Yin (2009) cautions the use of single-case designs: "Single-case designs are vulnerable if only because you will have put 'all your eggs in one basket'" (p. 61). Although I focused on one regional team, the team was diverse; it consisted of a community college representative and four LEA members.

A third delimitation was the number of secondary schools I studied in my research. The community college in this region selected four LEAs. Although there are many more LEAs in this region, I limited my study to those identified in the college's POS/TSA application.

Summary

The purpose of this study was to describe how one regional team addressed, implemented, and managed POS/TSA. This chapter provided the ETMM (epistemology,

theoretical perspective, methodology, and methods) that I used in my study. I also provided

reasoning for choosing qualitative inquiry; trustworthiness criteria, data analysis, and

collection procedures; and the participants that were involved in my study.

The following chapter will examine the views and perceptions of POS regional team

members as they implemented the POS Model at their districts.

Chapter five discusses the findings that emerged from the three original research

questions guiding this study:

1. How does a diverse team describe and develop a process to build Programs of
   Study and assess technical skill attainment?

2. How do team members describe their experiences of the process towards
   Programs of Study and technical skill attainment assessment development?

3. How do team members propose to change the Programs of Study process in order
   to improve satisfaction and success?

The discussion focuses around three themes that emerged from this study. The themes

exemplify how team members from one regional team described their experiences working

with the community college and implementing a POS/TSA Model. In addition, the three

themes will be discussed within the context of the existing literature. Furthermore, this

chapter highlights the implications and recommendations for CTE professionals and state

departments focused on CTE. Finally, I will share my personal reflections and

recommendations for future research.

Chapter 4. Findings

The purpose of this study was to describe how one regional team addressed, implemented, and managed POS/TSA. Three research questions guided this study:

1. How does a diverse team describe and develop a process to build Programs of Study and assess technical skill attainment?

2. How do team members describe their experiences of the process towards Programs of Study and technical skill attainment assessment development?

3. How do team members propose to change the Programs of Study process in order to improve satisfaction and success?

An analysis of the interviews, observations, and document review identified three primary themes regarding participants' views about POS/TSA: (a) absence of regional team in POS Model development and implementation, (b) building a culture of collaboration, and (c) cultivating collaborative relationships. Each primary theme had several subthemes which were used to further classify the data (see Figure 6).

Demographics

Study participants were invited to participate in the college's regional POS/TSA team. Once team members were selected by the college, I invited them to participate in my study. All regional team participants agreed to participate in my study (see Table 6).

I asked each participant to describe their current job responsibilities. Jacob described his responsibilities including the "oversight of UCC's Perkins and Tech Prep grant activities." As a high school principal, Jackson described his primary responsibilities as staff development, discipline, budget, and curriculum issues. Mary described many responsibilities at her district. She is responsible for writing and managing her district's

Perkins grant, curriculum alignment for CTE courses, and curriculum revisions/adoptions in CTE service areas. In addition to Mary's work with CTE, she is also a member of her district's Core Curriculum Team. Laura is the CTE Department Chair as well as a business and marketing teacher at her district. Mick is an assistant principal at his district. His responsibilities include working with English as a Second Language (ESL), academic departments other than CTE, new teacher orientation, and his district's foreign exchange programs.

```
Theme 1: Absence of regional team in POS Model development and implementation
        Subtheme 1:  Establishing partnerships
        Subtheme 2:  POS steps
        Subtheme 3:  Secondary impressions and implementation of the POS Model

Theme 2: Building a culture of collaboration
        Subtheme 1:  Human capital investments
        Subtheme 2:  Alignment of secondary to postsecondary curriculum to create
                     seamless transitions for students entering community colleges

Theme 3: Cultivating collaborative relationships
        Subtheme 1:  Expand collaboration opportunities
        Subtheme 2:  Resource allocation
```

Figure 6. Themes regarding participants' views about POS/TSA

Table 6

Study Participants

Pseudonym	Age	Race	Years with Current Employer	Years Working with Perkins	Sector
Jacob	40	Caucasian	5	5	CC
Jackson	40	Caucasian	5	9	K12
Mary	48	Caucasian	5	5	K12
Mick	29	Caucasian	3	3	K12
Laura	42	Caucasian	15	8	K12

The districts that are represented by participants varied in size from 1,400 students to more than 30,000 students. Participants from local districts were from both rural and urban communities. Table 7 shows the demographic information for the study participants. Urban Community College reported over 18,000 total enrollment in fall 2007 and 2008 (IDE, 2009c). This number jumped to over 22,000 in fall 2009 (IDE, 2009c).

Table 7

Secondary District Demographic Information

	Certified Enrollment (2009-2010)	Certified Enrollment (2008-2009)	Certified Enrollment (2007-2008)	Licensed full-time teachers (2007)	High school graduation rate (Class of 2007)	Amount of Perkins funds received (FY07)
District R	8,342.7	7,947.9	7,702.6	380	96.89%	38,842
District G	5,987.6	5,966.20	5,775.1	283	93.85%	37,167
District U	30,953.9	30,783.0	31,218.8	2176	73.85%	556,518
District M	1,408.9	1,395.8	1,424.1	85	90.91%	7,015

Note. Iowa Department of Education, 2010a, 2010b, 2010c, n.d.

Thematic Findings

The following section discusses the findings of the study.

Absence of Regional Team in POS Model Development and Implementation

The development and use of regional teams was stipulated in the RFA which described the requirements of the POS/TSA grant. In addition, community colleges were asked to invite at least three secondary districts to participate in the POS/TSA regional team. The intent of the regional team requirement was to encourage collaboration among community colleges and local districts in their area.

Urban Community College (UCC) has a history of consistently working with districts in its area. The college did not have any difficulty identifying and inviting secondary partners to participate in the grant. In fact, the college decided to invite four districts instead of three in order to adequately meet the needs of the diverse districts in its area. The college invited all partners to a planning meeting in October 2009 to discuss the POS/TSA RFA and grant. This planning meeting was also intended to provide time for colleges and local districts to work together on the development of their regional POS/TSA Model. The regional team also met in February 2010 to discuss the grant and the roles and responsibilities of each regional partner.

UCC complied with all RFA requirements regarding secondary district participation and regional team development. The regional team for this area, however, did not play an active role throughout the grant. Once the timeline and responsibilities were identified, discussed, and agreed to at the February 2010 meeting, each local district went back to their district and implemented the regional plan based on their districts' unique needs and characteristics. In retrospect, regional team members reflected that they would have liked to have met as a group to discuss their local districts' progress; at the time, however, participants were busy at their districts implementing the plan. No team member requested additional collaboration time as the regional team.

Rather than organizing separate regional team meetings, the college decided to invite all districts in its area to joint secondary and postsecondary meetings. UCC felt that all districts in its area should benefit from the opportunities created from the grant rather than just the districts that happened to be members of the regional team.

Three themes—establishing partnerships, POS steps, and secondary impressions and implementation of the POS Model—emerged from my data collection. Establishing partnerships emerged from my interviews with my informant. He described his connection with the districts and used these already established relationships to begin the POS/TSA work. The POS steps theme emerged from my interviews with my participants. Each described their understanding of the steps involved in POS/TSA completion. Secondary impressions and implementation of the POS Model theme also emerged from interviews with participants. Each described their impressions of the POS Model and described their comfort level in bringing the POS Model back to their districts to implement.

Establishing partnerships. Jacob described how he determined which secondary districts he wanted to invite to be involved in the grant process:

> So, because we've done some work in the past, and had some conversations about this topic, when the grant came out, I talked with those two districts first [Districts R and G] about whether or not they would be interested in partnering for the project. At the same time, I was having a lot of communication with District M about their business program and them wanting to more closely align it with some things that we were doing here at UCC. So, they became a pretty natural, easy partner in the whole process as well.

Local districts expressed gratitude at the POS/TSA invitation. Two districts described participation in the POS/TSA grant as an opportunity to learn more about POS/TSA and to meet the POS/TSA requirement set by Perkins. Laura explained:

> Well, first he communicated through an email. He explained the grant. He had written a grant and explained he was going to work with our POS and match up with

technical skill attainment. So, then he had been out here to meet regarding some

concurrent credit so we just visited. I was more than optimistic to be just a part of it

because that's where we felt where our gap was.

Jackson had a similar experience. He struggled identifying what his responsibilities were in

regards to POS/TSA. Jackson felt that by participating in the grant, "multiple minds

[working] together learning through it was going to help us all to learn this process a lot

better."

       POS steps. Once the regional team members were selected, Jacob invited all

members to a meeting to discuss requirements of the grant, roles of the secondary districts,

responsibilities of the community college, and timeline for the POS activities. The regional

meeting was held on February 10, 2010. The community college shared the approved POS

application submitted to the IDE.

       Jacob began by describing the purpose of the meeting: "Basically, we need to put

together a process . . . for the business area . . . Programs of Study technical skill attainment

assessment to take place this spring." Many of the aspects of the POS/TSA plan were

already in place or proposed by the college. For example, the majority of funds allocated to

faculty and instructor stipends ". . . what we've done with that ten thousand grant is to

earmark it to pay K12 instructors and pay UCC faculty to be able to come in and meet a

couple of nights this spring."

       Jacob also addressed the responsibilities of the secondary regional team members:

       As we work through here this is going to be a kind of our core group for planning

       what we do and when we talk about research you know that we will kind of work

       with you people and instructors at your schools to be able to do that.

The college also intended to invite all interested area high schools to be involved in the work of the grant. Jacob commented, "When we actually go hold meetings, we are going to include everybody . . .and invite everybody in the region to be able to come and participate in those."

The community college identified several steps needed to be completed by local districts in order to accomplish POS/TSA by the end of FY10.

Step one. The first step was "to have each school district complete the Self-Assessment." Jacob explained the Self-Assessment as a "combination of best practices and . . . really within Perkins legislation and within your district's Perkins plans . . . wherever you are right now." He also reassured the districts that the Self-Assessment was not intended to be punitive in nature. He shared, "This is nothing you will get dinged for. But we want to identify where we are right now."

The regional team members had few questions after the introduction of the Self-Assessment. District U wanted clarification on what programs should be completing the Self-Assessment. The districts discussed how many business programs should be included in the grant, and, in the end, districts decided to include all local business programs in the study. Instructors of each separate business program (e.g., accounting, administrative assistant/ secretarial, etc.) would need to complete their own Self-Assessment, strategic plan, drawing board, and TSA identification.

Step two. Step two of the regional POS plan was to complete a strategic plan. Jacob explained the strategic plan as a written plan to "start moving yourself from wherever you are at towards the exemplary. [Be]cause every district is going to be in separate places." Local districts did not have any questions regarding strategic planning.

Step three. Step three focused on curriculum. Jacob explains:

The next required component deal[s] with standard benchmarks and critical

competencies. So what we are going to do as a group is that we are going to review

standards, benchmarks, critical competencies at the high school level to determine the

placement in the programs. Really, what we are going to do . . . the only way we can

really do this as a group, if as a group, we are identifying some common core

competencies. . . . what I believe is the easiest way to do this is to start by identifying

the strands you have within your business area. . . . look at some of the . . . from my

perspective, the easiest way to pull together some common . . . is to look at some of

the entry level UCC courses in those areas, the courses essentially many of the

schools, especially the three of you, have as dual credit classes.

Jacob continues:

And identify those competencies that are taught within those classes, and hopefully

we can agree upon which of those core competencies within those classes then are the

competencies that each of your districts are going to agree to adopt. Then this gives

us a common place to start discussions about curriculum because everyone is talking

about the same set of things. We'll talk about curriculum, POS, technical skill

attainment assessment if we are all teaching some of the same things as a base and

then you are doing your own local spin from there what you are teaching or not

teaching.

The local districts did not have any concerns or questions about Jacob's proposal.

Step four. Once the courses and competencies are identified, community college

faculty will become involved. Jacob explains:

. . . we'll take those back to our instructors and say, "Okay, now within these

[college] courses, identify core competencies . . . the most important ones. That we

can really focus in on at the secondary level. So you know if schools are teaching

these things, they are preparing students for postsecondary education in the area of

business.

During my one-on-one interview with Jacob, he described his meeting with

postsecondary faculty. He met with department chairs to explain the process of the grant and

the conversations that were taking place at secondary districts. Once secondary districts

identified the primary courses, Jacob shared these with the department chairs in a second

meeting. Jacob explained:

I met again with those department chairs and said these are the areas that they're

interested in and what they would like to do is identify a subset of core competencies

from some of our introductory level courses and they [UCC faculty] were all for that.

Once core competencies were identified for the introductory level courses, they were

shared with the participating districts in the region. Local districts were then to ensure that

these competencies were taught in their programs.

Step five. Once core competencies are identified, the regional team followed a

similar process to identify technical skill attainment assessments. Jacob shared:

We'll try to work with each primary partner and UCC to share assessment tools. We

can share what we've got, but that may need to be tweaked to be used at the

secondary level, so we'll take a look at that. Teachers will be paid to look at the TSA

that are out there, and then what you are going to want to do locally is to go back to

your local advisory committee . . . to say, "Hey, this is the competencies within the

business area that we think are critical and get approval of those. And here is the TSA that we want to use and get approval for that." And have that advisory committee set what is considered to be proficient for your district.

Secondary impression and implementation of the POS Model. During my one-on-one interviews with the secondary regional partners, I asked about their impressions of the process the college developed. All participants were satisfied with the process. Mary from District U commented:

I actually appreciated it because I think one of the big things we have been doing in our department is looking at industry types of validations. It was great to go straight to the competencies, and we met with our teachers and matched up our competencies and then sent them to Jacob. I really think it was a great process. I mean, just because, for once, we were looking at competencies for what we teach and how we match those to UCC or to the next level. So, it was nice to have a timeline. There were very specific dates that things had to be . . . very accomplishable. And, I think they [UCC] returned things in a timely manner.

Laura, District G, shared Mary's views; "And, I think they [UCC] did a good job of laying out the timeline, getting us all involved, and providing us with the necessary information without making it too drug out."

Mick, District R, shared that he liked the regional plan:

Typically, I appreciate the approach, to be honest with you, at least in this arena. I feel like there's so much that changes, that I'm not always in the loop, and found that there's a lot of things going on that this is one of these things that if it's not done that way it eats up hours and hours and hours of time trying to stay on top of it. I

appreciate just being told, "Here's the requirements." I've spent the time going through the stuff; this is what we should do. If you want to give me a chance to think about it, and give us your feedback, that's fine, if you don't, that's fine, too. I've either got the option to participate, or I don't have to. I guess I kind of like that approach. I like being told, "This is the way we feel like it's best, and if you want to play ball, that's fine, go ahead, and if you don't, that's fine, too."

Jackson, District M, echoed Mick's viewpoint:

. . . it's confusing for us, and Jacob works with it all the time. So, for him, it's easier for you guys. When I say you guys, I mean DE, UCC, just to tell us what you need.

. . . just tell us what you need, and we will put it in place.

Each district approached the steps of the process a little bit differently. Below, each participant described how they brought information about the grant and process back to their district. To accomplish the activities identified in the grant, each district had to bring additional secondary teachers on board with the plan. And, most importantly, secondary teachers needed to actually implement their district's plans.

District U. Mary had the largest number of secondary teachers to bring on board. She invited business teachers to several face-to-face meetings to discuss the grant and the district responsibilities. Mary commented, "I was thrilled that many teachers could sit down, and they were excited about it!" Mary was as excited as her teachers:

I was real excited how that group of teachers sat down and [reviewed] not just business courses but all courses in the curriculum. That really makes sense. They [students] need to take this [course]. And, make it [sequence of courses] flow logically.

This district not only had several face-to-face meetings, but they also used technology to encourage and collaborate with each other:

> And then we had a wiki set up, and a teacher typed up UCC's lists and said look at this and now look at our course competencies. What are your top five [competencies]? If you could only have five big standards, five big power standards . . . what would be those things. . . . the *I can statements* and how our district is doing that and you incorporate everything UCC has said. . . . So they worked really hard on that and they all came to . . . after we did this through the wiki, and every person came with their five ideas on each course they taught, and we came together several times to flush that out.

This district was also able to involve their advisory committee in their planning and work. Mary shared, "The advisory people had recommendations and made sure we were including soft skills. . . . And, so, we tried to put some more of those in."

Mary was very satisfied about the progress her district made in regards to their business POS:

> . . . we went from a kazillion courses in one program . . . all together, scrambled, making no sense. And what will be four nice and neat POS that seem to flow. It's a huge improvement. It may not be perfect yet, but it's just really getting in the right direction.

District G. Laura felt her teachers were ahead of the "game on understanding the POS because . . . it is not new to them." She continued, "You can talk to any of the teachers in my department, the CTE department, and they know what a POS is. [Be]cause they have done them." Laura's districts started the process by comparing standards: "We first started

with standards to make sure we were finding what the standards were [as recommended by UCC]." Once the district completed this step, they sent the courses they teach to UCC. UCC's faculty identified the core competencies and then returned them to the district.

One unique aspect of this district was their invitation to nonCTE secondary instructors and staff to be a part of their POS work. For example, Laura invited the counselor to their POS/TSA discussion. Laura felt it was vital to the success of POS/TSA at her district that her counselors understand the purpose and benefits of POS/TSA. Furthermore, CTE teachers who were working on POS solicited advice from nonCTE instructors. Laura commented, ". . . what I found on our POS [is that] our web design teacher actually met with our art teacher." These teachers collaborated to determine the art courses students should take if they are interested in careers in web design.

District G was one of the two districts in the study to make progress on their TSA. Laura first described UCC's role: ". . . like in our computer . . . marketing . . . accounting [programs], they [UCC] gave us an assessment that would allow us [to] measure technical skill attainment based on upon those competencies from that program." The district appreciated the UCC assessments shared. They were also pleasantly surprised that they did not have to dramatically change their curriculum. Laura explained:

> Probably if anything, we were surprised that the technical skill attainment assessment that would come from UCC we would have to change our curriculum quite substantially, . . . we didn't have to. We thought the computer one was pretty basic. I mean, it was pretty good. The marketing one we'll have to filter in a unit on personal selling, but that's okay.

District R. Mick approached the POS process a little bit differently. Mick reflected:

I came back, and I put together a document that summarized the expectations of the

grant. I rolled it out to them on Wednesday morning after the meeting with the

department. . . . so I met with those three instructors and walked them through

everything and just kind of gave them the option to participate or to not participate,

but we walked through the implications of not participating, what it would entail and

suggested strongly that they participate, and they have.

Mick felt that there were many similarities to his district's competencies and those

sent to him by UCC. The sharing of curriculum and competencies created opportunities for

discussion. Mick commented, "We looked through our competencies and identified things

we had in common. So, therefore, those have been talking points and discussion points."

District M. Jackson felt the POS process "was easy." He explained, "I think it's

because our business classes are very, very similar with UCC is already doing. So . . . as we

went through it, we were able to say that yea, we were doing this here, doing that there." His

business teachers reviewed the list of classes sent to him by UCC and identified the classes

they currently teach. The remaining step for this district was to review competencies.

Jackson explained, "Jacob sent us those competencies, and I have given them to my teachers,

and they have checked them off."

Building a Culture of Collaboration

While the RFA required the development and use of regional teams, the team I

studied chose a different path. Instead of meeting regularly throughout the grant period, the

team met once early in the grant process. All activities of the grant were done at the local

level without the interaction, support, or collaboration of the regional team collectively.

Local district participants used the information shared with them during the initial regional team meeting to implement change at their districts. Participants shared with me the impact of the POS/TSA Model at their local districts. Although regional team members had limited contact with each other, the POS/TSA process, steps, and collaboration opportunities created and identified through the grant positively impacted participants and their districts.

Through my data analysis, two subthemes emerged within the theme of building a culture of collaboration. Human capital investments was the first subtheme identified. Secondary participants were immersed in the data and POS process. This immersion, in their opinion, increased their knowledge about Perkins in general. In addition, secondary participants felt more comfortable addressing Perkins issues within their districts. The second subtheme identified was the alignment of secondary to postsecondary curriculum to create seamless transitions for students entering community colleges. Through organized meetings between secondary and postsecondary faculty, curriculum alignments were created and/or strengthened.

Human capital investments. The regional secondary partners who participated in the study had varying levels of comfort towards POS/TSA and Perkins in general. Several participants reported, as a result of the grant, they have increased their knowledge about Perkins and, in return, feel more comfortable addressing Perkins issues and assisting teachers in their districts with Perkins requirements. Mick explains:

I also think as I've gotten more familiar with this whole picture, of what everything looks like, not only have I been able to articulate it better myself, but I've also been able to become more organized, in terms of my roll out or my ability to articulate the expectations of not just the grant, but also the bigger picture of what the career tech

world looks like. . . . Additionally, having an administrator who is more familiar with the process as well has worked out well for them [secondary teachers].

Mary has spent a tremendous amount of time immersed in Perkins, CTE, and POS/TSA. Because of her participation in these activities and meetings related to POS/TSA, she is able to address questions and concerns addressed to her by her teachers, administrators, and community members. Mary described an advisory committee meeting,:

> One common thing that happened was that so many of the advisory committee people from business [who] wanted soft skills in every course, which they are there, but the focus of them in every course [there] just isn't time for that. . . . That was something that we had to pull them back in and say that, yes, we will address those, but I don't think it should be one of the power [five].

Mary's confidence of POS/TSA and the curriculum needs of her students enabled her to confidently address community members' concerns.

Jackson, on the other hand, did not have the same opportunities to immerse himself in Perkins, CTE, and POS/TSA as did his counterparts in the regional team. He described some of his frustrations related to the grant. Jackson explains:

> . . . that's very defining of this job. Once in a while we'll do this, and then do other things; the time you get back to this, you have to relearn what is done. And then we have these meetings along the way, and I'm thinking I'm not sure I remember . . .

Jackson described his desire to share resources with the community college and other regional secondary districts:

I am the guy that gets it. So, I was hoping to learn more from them and what they did and kind of copy what they do instead of trying to build and develop exactly our own . . . program.

UCC had arranged two meetings between secondary and postsecondary teachers. The primary purpose of the first meeting was to introduce secondary faculty to postsecondary department chairs. Department chairs shared postsecondary information with the districts including potential majors; requirements for the class; and what knowledge, skills, and abilities students would need to be successful if they enter their programs. Jacob described the first meeting:

The purpose of that was to, first of all, talk specifically about the core competencies that were identified within each strand, and clarify what . . . what should be expected of students within each of those areas for those core competencies. In addition to that we also discussed other skills that were important for students entering postsecondary programming for each of those strands.

Jacob continued:

. . . the ability then for students to transition smoothly from secondary to postsecondary, they provided for . . . and our instructors provided for the secondary instructors, . . . some general program information, you know; these are the expectations for students entering the postsecondary program in addition to the technical skills, that they'll . . . course work they'll take here at UCC, this is the additional coursework that will be expected of them. Here's how this course worked, and how this program transitions to 4-year schools, if that's an interest of students. So they talked about that transition component, as well.

The second meeting was designed to encourage one-on-one conversations between secondary and postsecondary faculty. Postsecondary faculty were then to "sign off" on the drawing boards submitted by secondary instructors. Jacob describes the second meeting's focus was drawing boards and TSA. Jacob explains:

> At the second meeting the secondary schools were to have brought with them their draft of their drawing board, which then really, that second meeting was really just individual meetings. Each of our instructors kind of setup an area, the secondary instructors then went to whatever UCC faculty member they needed to speak to regarding their specific strand, shared with them the drawing board, our people were able to look at the drawing board that they had put together, discuss with them the curriculum that was being offered, discuss with them the other coursework that they had identified in their drawing board to make sure that students were taking the correct classes in all of the areas and then reviewed and made sure that the postsecondary portion of the drawing board was complete.
>
> Jacob described the conversations focused on TSA:
>
> . . . The other aspect of it was that the postsecondary faculty provided for the secondary instructors, a technical skill attainment assessment. So, they gave them copies of that assessment, went over the assessment with them, made recommendations for what would be a proficiency level on that assessment.

While there were no other joint secondary and postsecondary meetings scheduled, secondary districts had additional responsibilities before they were able to complete the POS/TSA process:

. . . We had a check-off sheet for the secondary instructors as well, outlining, it was
about seven steps; that they were to have gone through. Some of which were done in
their own district that they were signing off on, but we signed off on the drawing
board and the technical skill attain assessment, saying that you know, we had
reviewed their drawing board and that we had provided a tech skill attainment
assessment that was directly related to the core curriculum. So, we signed off on that
and then the final step for the school districts, they were to go back, take those
assessments back to their school district to their advisory committees, have them
review that assessment and set for their district, what they were gonna use as a
proficiency level.

Participants in the study spoke positively about both meetings but seemed to
appreciate the second meeting the most. When I asked why the second meeting was more
beneficial to the districts, I received a variety of responses. District U's Mary shared:

. . . I think they [district teachers] appreciated it a little bit more, or they felt they got
more out of it. Because that is really when the teachers sat down and looked at the
POS, and they [community college faculty] had input on what they [secondary
instructors] should do.

Mary elaborated, "I think the majority of my group kind of felt it [meeting one] was
disappointing. . . . they were just kind of standing up and saying their expectations of
students when they come into their programs." Laura, on the other hand, thought the first
meeting was beneficial: "I just think that the first meeting was great because we heard from
the teachers, the professors."

Mick shared his teachers' perspectives of the second meeting:

The thing our instructors appreciated the most was just the ability to sit down to fulfill

the requirements of the grant that we'd written. But the opportunity to speak with not

only the CIML [Central Iowa Metropolitan League] area instructors, but also to get to

speak with UCC instructors.

Laura echoed Mick's views. She shared:

So, that was really special to talk with them [community college faculty]. They gave

us some ideas . . . hey, we could do this, we could do that. So, just to have that, just

to know who the professor or that teacher is.

Not all of the interactions between faculty and instructors were positive. Mary described a

problem with a community college faculty member:

I think they [community college faculty member] wanted them in general business to

steer them in one of these four general directions. I didn't know what to do. Where

the UCC teacher wanted them to [go] . . . but I think they [UCC faculty] wanted them

in [go] in general business. . . . I didn't know what to do.

Mary disagreed with the direction the UCC faculty member was steering her towards but

could not get the UCC faculty member to see her point of view. As a result, she did not have

her drawing board signed and approved by this faculty member.

Alignment of secondary to postsecondary curriculum to create seamless

transitions for students entering community colleges. One key aspect of POS is the

drawing boards that districts created. These drawing boards outline the courses a student will

take beginning in their freshmen year. The drawing boards outline the courses they will take

throughout high school and the community college. This alignment was addressed during the first joint secondary and postsecondary meeting. Jacob explained:

> In addition to that we also discussed other skills that were important for students entering postsecondary programming for each of those strands. For some of them it might have been math skills, presentation skills, some of those things that people sometimes call soft skills. They're not necessarily the technical skills, but they are skills that students need to be able to be successful in the postsecondary program. So they talked about those skills, and the ability then for students to transition smoothly from secondary to postsecondary . . .

Jackson described this process as "easy"; he clarified:

> . . . I mean, our business . . . I think it's because our business classes are very, very similar with UCC is already doing. So as we go, as we went through it, we were able to say that yea, we are doing this here, doing that there. There were only a couple of small things that we weren't necessarily doing that we can incorporate into our program.

Mick described the appreciation felt by his teachers because they had the opportunity to realign their curriculum with postsecondary programs.

Cultivating Collaborative Relationships

UCC created several opportunities for secondary and postsecondary teachers to collaborate. The collaboration events were aimed at accomplishing the goals of the grant. Secondary teachers cherished the time collaborating with both postsecondary and secondary teachers. All participants interviewed were thankful and grateful for the opportunity to

participate in the grant. While there were many positive outcomes of the POS/TSA grant, districts felt there were opportunities for growth and improvement.

In order to sustain the budding relationships between secondary and postsecondary teachers, UCC needs to identify ways to nurture these beginnings. These relationships need resources, training, and opportunities to grow the relationship in order to develop into sustainable relationships that support both secondary and postsecondary goals.

Two subthemes emerged from my theme, cultivating collaborative relationships: expand collaboration opportunities and resource allocation. The identification of subtheme, expand collaboration opportunities, emerged from participant interviews. All participants were thrilled with opportunities to collaborate with both secondary and postsecondary faculty. They wanted more of these types of opportunities. The second subtheme, resource allocation, addressed the participants' concerns about the lack of resources to build and nurture cross-institutional relationships.

Expand collaboration opportunities. Through my conversations with participants, increased collaboration was emphasized over and over again. Secondary participants expressed satisfaction of the opportunities given to collaborate with secondary and postsecondary teachers. Although participants were thankful for the collaboration opportunities, they also felt that additional opportunities would be beneficial to the success of POS at their districts.

Secondary districts rely on the community college faculty for their expertise and resources. Through the POS process, the community college created two opportunities for secondary and postsecondary teachers to interact. Secondary district participants felt increasing these type of opportunities would improve the success of their POS work. Mary

shared, "The teachers, their dream, was to have total one-on-one time with UCC faculty."
Laura echoed Mary's viewpoint, "I just think that the first meeting was great because we
heard from the teachers, the professors. I just think it would be better to have some time to
collaborate with teachers."

Two of the participants felt that UCC faculty would be uninterested in attending
additional secondary events. Jackson shared his concerns:

So, for them [UCC faculty] to . . . open up, and say, yeah, we would love to work
with them [secondary teachers] because we would get better quality kids that know
more. We [UCC] can get more in-depth with our knowledge then. I think they [UCC
faculty] feel unsecure about that. I don't know what it is. That concerns me greatly.

Jackson elaborated:

Well, if I'm a college professor, teaching a class, I want a solid, a group of kids with a
solid background knowledge. Coming into my course we can cover things more
quickly if it's there. Formative assessments . . . do you already know it? Great, then
let's move on to the next. We can get more in-depth and have a much . . . better
educated person coming out of UCC and becoming more successful which looks
good on them then. . . . but, now all of a sudden we have this crevice between us
because they don't want to work with us, we are just a public education institution.

Mick also commented on the hesitation of UCC faculty to work with secondary
districts, ". . . there's a fair amount of autonomy at the community college level, in terms of
how much they want to cooperate with us. So, it's been different based on the willingness of
the community college department to participate." He continued, "I think the community

college sees the high schools as a nuisance at times." Laura commented, "Unless you have a concurrent program, you really, you're not talking direct with the UCC people."

Although participants shared these concerns, all wanted to increase the collaboration opportunities with the community college. Even though Jackson had some of the most vocal concerns about the community college, he also freely admitted that secondary districts "are looking for guidance from them [community college faculty]." He continued,

> . . . because we really don't want to develop that stuff locally. We don't have the resources to do it. We don't have the time. We don't have a committee to do all that stuff and the knowledge to do it. So, they have it all, we'll take it. So, we're hoping that UCC can provide us with the information we need to be able to meet the criteria we have to have. We're really hoping a lot on that.

Not only did secondary districts request additional collaboration time with postsecondary faculty, they also felt additional collaboration time with other secondary districts would be beneficial. Laura commented:

> That probably is the one thing through this that might have been nice to even have a third meeting where you [secondary district teachers] could sit down with districts and say this is our POS, and these are the courses we take. Because when we were doing the computer one, District U was there, so we were like, why don't you have this class concurrent credit? So we were kind of like comparing with each other.

Mary echoed Laura's suggestion, "I think it would be interesting to see courses other people are teaching, what sequences they are recommending . . . " Jackson took it one step further and recommended sharing POS, specifically drawing boards, with districts. Jackson described his vision:

. . . having a district that has done it so we can see what we are doing would be great, because then we could just use their model and how they did it. And then put our information into it. I know that kind of [is] cheating and copying, but if somebody's already done it, I would love to see it so we could do it. [Be]cause I would like to take, you know, drafting and design, and this is the front page, these are the competencies and where they are with UCC and how we aligning with them and then the assessment tool on the back as one packet. Here is our whole program for it. And, you can see what you get for this course [program].

Jacob recognized secondary districts' desire for increased opportunities to collaborate with postsecondary faculty. He shared:

I will probably, just because we have another grant, probably meet with our business folks again in the fall and see if there's anything they want to do as a follow-up, and if there's something that we can do as a follow-up, bring the high school instructors back in again . . .

Jacob continued to brainstorm opportunities for secondary and postsecondary collaboration:

The one area that it might happen is that we might be able to spark some interest in our faculty in doing some summer staff development—more staff, summer staff development for high school instructors and hopefully that will help to improve or increase and continue the relationships that we've built.

Resource allocation. In addition to providing opportunities for increased UCC faculty and secondary teacher collaboration, secondary districts requested additional resources from the community college. One resource requested by several districts were

examples of TSAs. Mick felt UCC faculty sometimes resist sharing of personally created resources. He commented, ". . . at times when it comes to teacher created materials, there's a resistance to share those types of things." Jackson agreed,

> . . . what I would really like to see is above and beyond this is a list of assessments. What do they look like, and what do we have to do for the assessments? Because it would be easy for me to say hey, business guy. Here's your thing . . . your POS, and here are the assessments you have to give ,and this is how we report on the DE website Project Easier for it. But, right now we are still chunked and missing pieces. And we are confused on what we do and what is approved by our committee.

A timeline was also mentioned as a much needed resource for secondary districts. Jackson commented, "A timeline would be wonderful. But we have to have all that other information in order to know what we are supposed to do on the timeline." He elaborated, ". . . to say okay, on these dates you should be doing something within this range. In May, you should be assessing for these so we can have that reporting information ready to go." Mary agreed the timeline which listed the responsibilities of both the secondary and postsecondary institutions supported the POS/TSA work.

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Summary

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In this chapter, I was able to examine the views and perceptions of POS regional team members as they implemented the POS model at their districts. Through my conversations with regional team members, I was able to provide rich, thick descriptions that led to the theme identification in my study. The three themes that emerged from my data analysis included: (a) absence of regional team in POS Model development and implementation, (b) building a culture of collaboration, and (c) cultivating collaborative relationships.

In Chapter 5, I will discuss the findings that emerged from the three original research questions guiding this study:

1. How does a diverse team describe and develop a process to build Programs of Study and assess technical skill attainment?

2. How do team members describe their experiences of the process towards Programs of Study and technical skill attainment assessment development?

3. How do team members propose to change the Programs of Study process in order to improve satisfaction and success?

The discussion focuses around three themes that emerged from this study. The themes exemplify how team members from one regional team described their experiences working with the community college and implementing a POS/TSA Model. In addition, the three themes will be discussed within the context of the existing literature. Furthermore, this chapter highlights the implications and recommendations for CTE professionals and state departments focused on CTE. Finally, I will share my personal reflections and recommendations for future research.

Chapter 5. Discussion, Conclusion, and Implications

This chapter is dedicated to discussing the findings that emerged from the three original research questions guiding this study:

1. How does a diverse team describe and develop a process to build Programs of Study and assess technical skill attainment?

2. How do team members describe their experiences of the process towards Programs of Study and technical skill attainment assessment development?

3. How do team members propose to change the Programs of Study process in order to improve satisfaction and success?

The discussion focuses around three themes that emerged from this study. The themes exemplify how team members from one regional team described their experiences working with the community college and implementing a POS/TSA Model. In addition, the three themes will be discussed within the context of the existing literature. Furthermore, this chapter highlights the implications and recommendations for CTE professionals and state departments focused on CTE. Finally, I will share my personal reflections and recommendations for future research.

Discussion

This section synthesizes the findings in relation to the existing literature. The three major themes that emerged from data analysis were (a) absence of regional team in POS Model development and implementation, (b) building a culture of collaboration, and (c) cultivating collaborative relationships. Discussions of the findings are presented in context of related literature.

Theme 1: Absence of Regional Team in POS Model Development and Implementation

When team members arrived to the regional meeting between team members, they were given the RFA, UCC's proposed POS Model, and steps that would assist the districts in accomplishing their POS/TSA requirements. Two regional team members participated in a state wide planning meeting with the college in which the POS/TSA Model was developed for the region. Although, the regional team did not develop the POS/TSA Model as a complete team, this meeting did provide an opportunity for all regional team members to discuss the Model, propose/answer any questions related to requirements of the POS/TSA, and identify benchmarks for each step within the Model. After the regional team meeting, team members were responsible to implement the Model at their district. Each team member accomplished this and in return, invited other key district personnel to joint secondary and postsecondary evening meetings focused on the POS/TSA model.

Establishing partnerships. Kisner et al. (1997) describes the importance of selecting appropriate partners to assist the team in achieving its goal; in particular, partners should be selected based on what they can bring to the partnership. Walters et al. (1994) described these strengths as "unique" and ultimately, the goal should be to "develop synergies between the contributions of the partners, resulting in a win-win situation for both, or all" (p. 5). However, Amey et al. (2007) suggests that personal relationships might also dictate partnerships. These personal relationships could be further developed by entering into partnerships (Amey et al., 2007).

This literature, when applied to my study, suggests that the community college valued personal relationships to secondary participant unique strengths. During my interviews with the regional team members, I asked them why they were selected to participate in this pilot

study. Their answers varied from being asked to participate in the collaboration to expanding a relationship already established through concurrent enrollment conversations. When asked about how he chose secondary partners, Jacob explained that he chose partners based on close relationships already established.

A second characteristic needed to build effective partnerships is the development of trust between team members (Kisner et al., 1997; Essex, 2001; Bracken, 2007). Trust among partners is needed in order for partners to feel comfortable sharing personal and institutional sensitive information (Kisner et al., 1997). One strategy to begin to develop trust is to share relevant information about each of the partner institutions. Examples could include assessment data and completion, dropout, placement, and graduation rates (Kisner et. al., 1997).

This research highlights the absence of trust development during the regional meeting. During the first regional team meeting, team members did not share any introductory information about their institution other then when they were directly asked a question by another regional member. Jackson shared that he didn't even know who was in the room, ". . . I didn't know anyone that was there so it makes me a little uncomfortable."

A second strategy to develop trust among partners is to first partner in small projects before jumping into large endeavors (Walters et al., 1994; Kisner et al., 2007). The community college used this strategy in their partner identification. Jacob chose partners that he had already established stable relationships with through Perkins interactions.

Although the regional team did not purposely identify their activities as "setting goals," they did model this behavior. As a team, they established benchmarks and dates of completion for various components of the POS model. Goal setting is supported by research

by Kisner et al., (1997); Sink and Jackson, (2002), and Essex, (2001) who assert goal setting is an essential component in accomplishing the team's goals within the given timeframe.

One theory used in my research was Kelman's Social Influence Theory. This theory attempts to describe individual attitudes and opinions. My intent was to observe regional meetings to identify examples of the three processes of social influence modeled. However, since there was only one regional meeting, the opportunity did not present itself to do this. However, I think there was evidence that group members operated under the internalization social process. Internalization is defined as when the individual accepts someone's or the group's view because it makes sense to them (Kelman, 1961). Kelman (1961) continues by writing, "The individual adopts it because he finds it useful for the solution of the problem" (p. 65). During the regional meeting, Jacob shared the POS/TSA Model with his partners. All secondary partners viewed this Model as an appropriate way to implement POS/TSA in their districts. Many of them had struggled with POS/TSA implementation at their districts; this was a reasonable solution to their problems. Therefore, there was not a perceived need to question the college's Model. Furthermore, each district implemented the Model as presented at the regional team meeting.

POS steps. The community college participant used the POS/TSA Model provided to him by the IDE to develop his region's POS Model. Using the IDE Model as a guide, the community college and two secondary partners identified activities that would need to be completed in order to accomplish the requirements of POS/TSA. During the regional meeting, Jacob shared the steps with his secondary partners. As they worked through their regional application together, he addressed how their Model was aligned to the IDE POS/TSA Model.

In January 2010, the Office of Vocational and Adult Education (OVAE) through their Perkins Collaborative Resource Network (PCRN) released a document outlining 10 components ". . . that, taken together, support the development and implementation of effective programs of study" (U.S. Department of Education, 2010). Table 8 contains a brief description of each component.

The intent of this framework is not to require states and local districts to implement all components in a particular order. Instead, states and local districts need to identify the components that should be addressed first according to their needs (U.S. Department of Education, 2010). Many of these components are addressed, at least partially, by the regional team's POS Model. However, there are several areas that would warrant additional research and modification due to the guidance provided by the POS Framework.

Secondary impression and implementation of POS Model. Amey and Brown's (2005) Interdisciplinary Collaboration Model describes team collaboration behavior. Applied to this study, I identified the stage the regional POS team began and ended. Table 9 shows the categories in which the team began their work. In italics are the categories in which they concluded their work.

Amey and Brown (2005) describe the dominant discipline orientation as one "paradigm dominates and provides direction and meaning for change" (p. 24). In the case of the regional team I studied, the community college provided direction to the secondary institutions. When secondary participants went to the first meeting, the POS Model was shared with secondary partners. Secondary participants had the opportunity to provide suggestions and modifications if they chose. No revisions were suggested by secondary partners during this first meeting that impacted the regional team's POS/TSA Model.

Table 8

Programs of Study Components: A Design Framework

Component	Description
Legislation and Policies	Federal, state, and local legislation or administrative policies to promote POS development and implementation.
Partnerships	Ongoing relationships among education, business, and other community stakeholders are central to POS design, implementation, and maintenance.
Professional Development	Sustained, intensive, and focused opportunities for administrators, teachers, and faculty foster POS design, implementation, and maintenance.
Accountability and Evaluation Systems	Systems and strategies to gather quantitative and qualitative data on both POS components and student outcomes are crucial for ongoing efforts to develop and implement POS.
College and Career Readiness Standards	Content standards that define what students are expected to know and be able to do to enter and advance in college and/or their careers comprise the foundation of a POS.
Course Sequences	Non-duplicative sequences of secondary and postsecondary courses within a POS ensure that students transition to postsecondary education without duplicating classes or requiring remedial coursework.
Credit Transfer Agreements	Credit transfer agreements provide opportunities for secondary students to be awarded transcripted postsecondary credit, supported with formal agreements among secondary and postsecondary education systems.
Guidance Counseling and Academic Advisement	Guidance counseling and academic advisement help students to make informed decisions about which POS to pursue.
Teaching and Learning Strategies	Innovative and creative instructional approaches enable teachers to integrate academic and technical instruction and students to apply academic and technical learning in their POS coursework.
Technical Skill Assessments	National, state, and/or local assessments provide ongoing information on the extent to which students are attaining the necessary knowledge and skills for entry into and advancement in postsecondary education and careers in their chosen POS.

Note. Adapted from: U.S. Department of Education, Office of Vocational and Adult Education. (2010). Career and technical programs of study: A design framework. Retrieved from http://cte.ed.gov/file/POS_Framework_Unpacking_1-20-10.pdf

Table 9

Interdisciplinary Collaboration Model

Dimensions	*Stage One*	*Stage Two*	*Stage Three*
Discipline orientation	*Dominant*	Parallel	Integrative
Knowledge engagement	*Expert*	Coordinated	Collaborative
Work orientation	*Individual*	Group	Team
Leadership	*Top Down*	Facilitative, inclusive	Weblike, servant

Note. Adapted from Interdisciplinary Collaboration and Academic Work: A Case Study of a University-Community Partnership by M. J. Amey & D. F. Brown, 2005, *New Directions for Teaching and Learning, 102,* p. 25.

Expert knowledge engagement is described by Amey and Brown (2005) as how participants use knowledge within the team. The POS regional team operated within the expert level of engagement. Although Jacob often used "we" or "they" to describe the POS activities in the first regional meeting, the secondary partners believed that the community college was in charge of the initiative. The RFA reinforced this perception by including the stipulation that the community college was to be the fiscal agent for the grant. When asked about his impressions of the first regional meeting, Jackson expressed that the goal of the meeting was to ". . . to really understand what was being asked of us." He did not perceive himself to have an active role within the regional team. Mary echoed Jackson's viewpoint. Mary shared that Jacob ". . . tell [told] them what to do." Again, these types of comments identify Jacob as the expert in this process.

Individual work orientation is described by Amey and Brown (2005) as how group members work with each other. As group members work together, their interactions evolve from individual goals to group goals. Unfortunately, the regional team did not evolve past

stage one in work orientation. Once the first meeting was held, the regional team did not meet, as a group, again for the duration of the grant. Each team member used the knowledge gained during the initial regional meeting and implemented the POS/TSA Model at their districts.

The final dimension of the Interdisciplinary Collaboration Model is leadership. This dimension focuses on the ". . . behaviors of the person administratively responsible for group and meeting its contractual obligations" (Amey & Brown, 2005, p. 25). In the regional team I studied, the leadership style was top down. Mary described Jacob's leadership, "Jacob seemed to take the lead and tell us what to do." Mick described his impression of the regional meeting, ". . . it was pretty much laid out, this is what's gonna happen, this is what we're going to do. . . " These comments indicate that secondary districts had the impression that the community college was in charge and responsible to make decisions. As a participant observer, I noted that the college asked many times for feedback and input from the secondary district about the plans and timeline suggested by the college. In addition, two districts were involved in the initial planning meeting in October 2009 in which the college first began to lay out the work of the regional POS/TSA Model.

Theme 2: Building a Culture of Collaboration

Although the regional team studied did not impact POS work at local districts, the work initiated and carried forward as a result of the POS/TSA grant <u>did</u> impact local districts.

Human capital investments. Any organization can decide to collaborate; many collaborations, however, fall short of their goals. Sink et al. (2004) stated that working "collaboratively also requires a heavy investment in human capital" (p. 329). Sink et al.'s (2004) research provides credibility to the community college's decision to invest in human

capital by organizing two joint secondary and postsecondary meetings. Participants praised the joint secondary and postsecondary meetings held at the community college during the grant period. These meetings created opportunities for secondary teachers and postsecondary faculty members to collaborate; for some of them, it was the first time they had met.

Interestingly, participants described they had increased their knowledge of Perkins, POS, and TSA requirements as a result of the POS/TSA grant. In addition, participants reported that they felt more confident in discussing Perkins, POS, and TSA with staff, colleagues, and administrators. If the regional team functioned as a collaborative team, I would not be surprised with these findings. In essence, however, the team members took the information they learned from the first regional meeting and implemented the Model at their home districts in isolation. There were not any other organized or planned opportunities to collaborate with other regional team members.

These study findings support research from Russell and Flynn (2000) that asserts that in order to be an effective collaboration, the activities of collaborate groups must provide an "improved mechanism" (p. 200). This improved mechanism should enable the groups involved to receive a benefit from the collaboration such as greater efficiency or time reduction than they would have been able to accomplish individually (Russell & Flynn, 2000). Although the regional team did not meet more than once, the activities set in motion by UCC enabled the districts to operate more efficiently. Instead of contacting UCC faculty individually to organize meetings, they were able to go through Jacob to plan these meetings. In addition, the joint secondary and postsecondary meetings enabled multiple districts to meet with postsecondary faculty in order to align curriculum. These meetings, in return, allowed community college faculty to effectively use their time as well. Instead of meeting

with individual districts one-on-one, they met with 20+ districts at the joint evening meetings all at once.

POS/TSA is not a new initiative in Iowa. It has been a requirement for several years prior to the release of the POS/TSA grant in 2009. There were multiple resources available on the IDE's website outlining the requirements of POS/TSA. In addition, regional Perkins consultants had been touring the state to educate local districts and community colleges on the POS/TSA requirements and to provide suggestions on how to implement POS/TSA in their regions. Even with all of this information, the message was still not getting out. District staff may have heard of POS/TSA but had not thought about how to implement it. Or, if they tried to implement the requirements, they left out essential aspects in their POS/TSA Model. For example, some secondary districts did not review and analyze their standards, benchmarks, and critical competencies before identifying the courses that should be planned within their POS.

A possible explanation for their perceived increase in knowledge and confidence could be attributed to Weick's Theory of Small Wins. The massive scale of POS/TSA requirements, in a sense, crippled the districts. They were not able to synthesize the large amount of information and put it into action at their districts. Jackson confessed that he did not know much about POS before the initial POS regional meeting. I think districts were overwhelmed with the requirements of POS/TSA and, therefore, did not consider the requirements a high priority. Weick (1984) explains, "When the magnitude of problems is scaled upward in the interest of mobilizing action, the quality of thought and action declines, because processes such as frustration, arousal, and helplessness are activated" (p. 40).

Unintentionally, the IDE pushed many districts to this point which, in return, caused inaction towards the goal.

The POS grant acted as the impetus for districts to move forward. They felt more confident moving forward because they knew the community college was committed to their success. Throughout the process, the districts experienced several successes. Weick (1984) describes small, incremental successes as small wins. To be specific, "A small win is a concrete, complete, implemented outcome of moderate importance" (p. 43). Weick (1984) continues, "By itself, one small win may seem unimportant. A series of wins at small but significant tasks, however, reveals a pattern that may attract allies, deter opponents, and lower resistance . . ." (p. 43). Participants described several small wins such as multiple teachers agreeing to courses within programs; identification of standards, benchmarks, and critical competencies; meeting with postsecondary teachers about alignment of curriculum; introduction of TSA to their districts; and completion of drawing boards. These small wins enabled and encouraged districts to continue moving forward with the POS Model.

Alignment of secondary and postsecondary curriculum. Secondary and postsecondary coordination first appeared in vocational education reform literature with the passage of Perkins II. One reform identified in Perkins II was the development of Tech Prep. Castellano et al. (2003) defines Tech Prep as ". . . programs, which coordinate courses in the last 2-years of high school with the 2-year community college associate degree" (p. 246). Tech Prep programs are considered the precursors to POS (Lewis & Kosine, 2008). Perkins III continued promoting secondary and postsecondary cooperation by requiring Perkins recipients to create "better linkages to postsecondary occupational standards" (Castellano et al., 2003, p. 244). Perkins IV clearly outlined the requirements of secondary and

postsecondary institutions including ". . . increased coordination within the career and technical system, stronger academic and technical integration, connections between secondary and postsecondary education, and links to business and industry" (ACTE, 2006, p. 9). Iowa's Five-Year Plan, written in response to Perkins IV, emphasized the need of career-focused POS. Iowa required local districts to provide written agreements documenting cooperation with other educational entities to focus on POS work (IDE, 2008).

The grant encouraged districts to continue to collaborate with postsecondary programs. Mick described the improvement in his district as a result of the POS/TSA grant by explaining, "We have plans in place for creating a much better program in alignment with what the expectation looks like, because of those meetings." Laura also had success aligning their secondary program to the community college; she shares, "I mean, just because, for once, we were looking at competencies for what we teach and how we match those to UCC or to the next level." The interactions with the community college prompted program alignment between the educational institutions that might not have occurred if the POS/TSA grant did not exist.

Theme 3: Cultivating Collaborative Relationships

Participants were pleased with their success during the grant's duration. All desired to see the work of the grant extended into the next fiscal year. Although secondary participants shared sometimes frustrating interactions with UCC faculty, they also expressed their desire to connect and build relationships with them. If the grant achieved nothing else, it did ignite the collaborative spirit between secondary and postsecondary institutions. I know the secondary institutions hope that these relationships are continued beyond the life of the grant.

Expand collaboration opportunities. The desire for increased collaboration opportunities was articulated by all participants. Literature is clear on the characteristics of effective collaboration. In order to improve and expand on collaboration opportunities between secondary and postsecondary institutions, involved parties will need to address how to improve communication. Furthermore, they need to have a champion that will advocate for the collaboration.

Bragg and Russman's (2007) research recognized that as "communication broke down, collaborative endeavors struggled" (p. 101). This research highlights the regional team's struggle with communication. The regional team lacked consistent and meaningful communication between team members. Jacob sent email communications to districts to invite them to two evening meetings that brought secondary and postsecondary teachers together. Other conversations that took place between the college and secondary districts were initiated and carried out through the course of other initiatives related to CTE programming. Likewise, secondary team members did not initiate discussions with the college unless directed by the college or to meet a goal provided to them during the first regional meeting. Individually, team members reported that they sent Jacob information to review or to forward to postsecondary faculty.

Collaboration literature describes the need of a champion to advocate for the collaboration (Amey et al., 2007; Amey et al., 2010). In essence, the RFA tried to mandate the champion role by the identification of the community college as the fiscal agent. Research clearly describes the difficulty of creating buy-in if collaborations are mandated or short-term (Amey et al., 2007; Ozaki et al., 2007). The rules and activities of the POS/TSA were definitely mandated by the state, and, therefore, limited the college's flexibility.

McGregor's Management Theories of X and Y and his subsequent development of Theories X and Y for teamwork provided insight into the regional team I studied. Although the team did not meet as I had expected, McGregor's Theories can explain the team's behavior. Theory X in regards to teamwork describes teams that operate under this premise as having a formal authority pattern (superior to subordinate), a narrow span of control, individuals are viewed as isolated units, and work is routinized (Blake, 1975). Theory Y describes authority stemming from both formal and informal sources, little supervision, work completed does not isolate itself from the individual, and work completed is meaningful (Blake, 1975).

As I review both theories, I can see examples of both in the work of the regional team. From the outside, it may appear that the community college had unilateral authority; secondary districts, however, could have been more involved in the POS/TSA process if they chose. There was an initial state meeting in which all regional teams were invited to learn about the POS/TSA RFA. During this meeting, two of the four secondary partners attended. During any point of the process, the community college would have welcomed increased input from their secondary partners. Once the team met in February, however, there were no other planned meetings or conversations. Each partner operated within their own district performing the work of the regional team.

The regional team also displayed characteristics of Theory Y for teamwork. For example, each district was encouraged to use the POS Model and implement it in the way that best meet the needs of their district. Jacob recognized that secondary districts needed to be given freedom and encouragement to implement the Model. Because of this guidance,

each district was able to implement the Model a little bit differently, and, according to each district, they all thought their work was successful.

Resource allocation. Without the proper resources, specifically personnel and monetary, collaborations have difficulty sustaining themselves. Amey et al. (2010) suggest that unless a "broader base of commitment in personnel, resources, time, and motivation" is given, "long-term viability" of collaboration is in jeopardy (p. 345). The POS/TSA RFA took into account the limited resources available to education institutions. The RFA was intended to provide monetary assistance to assist community colleges in compensating individuals to work with the region's POS/RFA Model. While teachers appreciated the stipends, they also wanted increased opportunities to meet with both secondary and postsecondary teachers.

Even though the initial benefit of the evening meetings was the introduction of secondary teachers to postsecondary faculty in their discipline areas, secondary district participants were hopeful these meetings would open doors between secondary and postsecondary teachers. To encourage participation in these meetings by both groups, UCC provided stipends and reimbursed travel to the meetings. Mick agrees with UCC's use of grant funds; "I think that it was a good way to get the financial support for the teachers to do something that they had drugged [*sic*] their heels on doing." These meetings were an excellent example of how UCC provided resources to encourage POS/TSA discussions between secondary and postsecondary teachers.

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Conclusion

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The purpose of the study was to describe how one regional team addressed, implemented, and managed POS/TSA. The study took place at several locations in UCC's

region over the FY10 POS grant period. Four secondary members and one postsecondary member participated in my study of one regional POS team. Data were collected through five individual interviews, observation at one regional meeting, observation at one joint evening meeting with secondary and postsecondary faculty, and document collection. All of the individual interviews and observations at the regional meeting were audio-taped and transcribed.

McGregor's Theory X and Y, Kelman's Social Influence, and Weick's Small Wins served as the theoretical framework guiding this study of one regional team's POS Model, processes, and implementation. In addition, Weick's Small Wins served as a model which enabled me to understand the successes each secondary institution had as they worked on the POS Model.

Through the analysis of data, I was able to answer each of the research questions I asked at the onset of my research.

1. **How does a diverse team describe and develop a process to build Programs of Study and assess technical skill attainment?**

When I began my research, I anticipated that the regional team would come together and discuss, create, and implement their regional POS/TSA Model. While the regional team did meet to discuss their plans, the Model and design were primarily the design of the community college and two secondary districts. One major decision at this first regional meeting was that all participating districts agreed to a common set of core competencies for business programs. This was a radical idea proposed by the community college; the secondary districts, however, wholeheartedly embraced the idea. This decision set the tone for all other decisions made by the team during this meeting. Secondary district participants

implemented the POS/TSA Model discussed during the regional meeting at each of their districts. Each secondary district did this a little bit differently; all, however, were successful. One feature of the POS/TSA Model that had varying levels of secondary success was TSA. Not all districts were able to implement TSAs within their CTE programs. This is an area they will need to continue to address during the next fiscal year.

2. **How do team members describe their experiences of the process towards Programs of Study and technical skill attainment assessment development?**

Although the regional team did not impact individual district work, team members were motivated by the regional meeting, the POS/TSA RFA, and evening meetings with postsecondary faculty. All participants were satisfied with their progress and proud to have been part of the POS/TSA Model work. As participants reflected on their progress, it became evident that their confidence and knowledge about Perkins and POS had improved.

Participants could not say enough about how much they and their teachers appreciated the evening meetings with postsecondary faculty. For many of them, this was the first opportunity to meet postsecondary faculty in related disciplines. These meetings were one of the most talked about positive outcomes of the POS grant. Not only did teachers have the opportunity to meet and talk, but many of them were able to have meaningful conversations about curriculum alignment between their two institutions. One participant mentioned that after talking with the postsecondary faculty and aligning the two programs, she realized that she needed to add a unit on selling to one of her business classes. She knew that students needed to have a certain skill set to be successful at the community college program, and she wanted to ensure that students leaving her program would have the needed knowledge base.

3. How do team members propose to change the Programs of Study process in order to improve satisfaction and success?

Overall, team members were delighted with the success of the POS/TSA Model at their districts. When asked how the POS/TSA grant should be modified for the next round of funding, two suggestions quickly rose to the top. One, secondary districts would like to expand the number of collaboration opportunities between them and postsecondary faculty. The meetings with postsecondary faculty were invaluable to the participants and their teachers. In addition, the secondary participants enjoyed meeting and working with secondary faculty and staff from other regional secondary districts. Many teachers are the lone discipline teacher at their district; they enjoyed the opportunity to "talk shop" with other discipline teachers. Two, secondary districts would like to see additional resources provided by the community college. This not only includes monetary but also teaching resources. Districts yearned for community college faculty created teaching materials. They view the postsecondary faculty as experts in their field. Secondary teachers want to learn from them.

Limitations and Strengths

One limitation to my study was the activities of the regional team. Due to the nature of the work requested in the POS/TSA RFA, I expected the regional team would meet several times to successfully implement their Model. I anticipated attending several regional meetings to observe their individual and team behavior. The team, however, chose (either purposefully or indirectly) not to meet regularly over the period of the grant. Although participants feel that they successfully accomplished the requirements of the grant, I cannot help but wonder what could have been. What could have been achieved if the team met

consistently, shared their individual successes and challenges, or relied on each other to talk through some of the issues they were encountering locally?

I also believe there were several strengths of my study. One, my insider status allowed me to gain access to participants, meetings, and documents that I would not otherwise have the privilege of viewing. Two, the results of this study have the potential to impact other state regional teams. I will be disseminating the findings and recommendations from this study to the IDE and, more specifically, to other regional teams. The recommendations discovered through my study have the potential to positively impact other teams and their struggle to implement POS/TSA in their regions.

Implications for Policy and Practice

The findings from this study provide various implications for policy and practice for secondary districts, community colleges, and state education departments.

First, collaboration literature clearly shows the benefits of collaborations to participating parties (Amey, 2010; Amey et al., 2010; Amey et al., 2007; Azinger, 2000). I urge secondary districts to seek collaborations with not only community colleges but other educational institutions and businesses to help them achieve their goals. Before jumping into any collaboration, interested parties should reflect on the reasons for joining, context of partnership, communication factors, and outcomes and benefits of the collaboration (Amey et al., 2007).

Second, as collaborative unions are recommended and encouraged, institutional and state leaders should question each decision point to determine its effectiveness. The collaborative team must examine the collaborative partners' cultural differences and determine its impact on the collaborative work. This examination is important because if

decisions are made that inadvertently impact one of the collaborating partners negatively, this could deflate the momentum of the collaboration. Collaboration leaders need to determine how to best blend the sometimes conflicting values and belief systems to benefit the entire collaboration team (Walters et al., 1994).

Three, if states continue to encourage academic partnerships (Amey et al., 2007), then education and training must be provided to the partners in order to increase the collaboration's possibility of success. The entities involved need to be educated on benefits of collaboration, understanding partnerships, skills to lead, characteristics of effective collaborations, best practices, and even the sharing of collaboration development and process models should be shared. Examples include Amey et al.'s (2007) Partnership Development Model and Amey and Brown's (2005) Interdisciplinary Collaboration Model.

To review, the following are implications for practice for secondary institutions, community colleges, and state departments of education:

1. Ask questions. Do not jump into collaborations with your eyes shut.

2. Consider institutional cultural differences when choosing collaborative partners.

3. Support mandates with formalized technical assistance.

Recommendations for Future Research

There are several opportunities to expand the work of this study. One, with the release of OVAE's POS Design Framework (2010), there would be an opportunity to revise IDE's POS/TSA Model (and the subsequent regional models) to reflect their recommendations. Two, I chose one regional team in the state to study. There are 13 other regions who applied for the FY10 POS/TSA grant. They each implemented their own

POS/TSA Model. There would be opportunities to study each of these regions and their

successes and challenges with secondary collaboration and their POS/TSA Model.

Opportunities also exist to include other populations in the study. In my study, I

focused on interviewing regional team participants only. However, other possible sources of

data could include secondary teachers, postsecondary faculty, secondary and/or

postsecondary students, and secondary administration. Each group would bring an unique

perspective to the study of the POS/TSA grant.

The design of the study was limited to the design of the RFA. The RFA stipulated

that the community college would be the fiscal agent of the grant. One opportunity for future

research would be if the RFA for future POS/TSA grants stipulated that secondary partners

were the fiscal agents of the grant. It would be interesting to see how they would accomplish

the requirements of the grant. How would they encourage secondary and postsecondary

collaboration with POS/TSA?

A second opportunity exists if the RFA was changed to a competitive grant. The

FY10 grant was available to all community colleges in the state. All colleges, regardless of

their plan, were awarded $10,000 to accomplish POS/TSA work. If the RFA was changed to

a competitive grant, this may impact the quality of the applications received. In addition,

colleges that have ambitious or unique plans would be able to request more than $10,000 to

assist them in accomplishing their goals.

Other states might also want to consider opportunities to build upon Iowa's POS

Model. If they seek to understand the how or the why related to POS, a case study might be

the appropriate method to use. States might consider using a multiple-case study to discover

how multiple K12 districts understand and implement the POS/TSA requirement.

Furthermore, states do not have to limit their study participants to secondary and postsecondary participants. Many sectors and individuals are impacted by the work of POS/TSA; states could consider the insight they could provide to this topic.

Personal Reflections

As I reflect and read my researcher's journal, I identified several personal viewpoints that impacted my research. I think highly of the participants involved in the study. Through my work at the IDE, I had previously developed professional, working relationships with each of them. It is my perception that all of them, witnessed through my interactions at the IDE and this grant, enjoy their work and do their best to positively impact student success. It was a pleasure to continue to develop and nurture these relationships. I was the principal writer of the POS RFA. I spent a great deal of time researching best practices and collaborating with state work teams and colleagues at the IDE and around the state to develop the best RFA to clearly identify the steps needed to develop a POS Model.

Assumptions

I had many assumptions as I began my research. First, I thought that secondary districts had limited amount of time to complete the work and the additional requirements of POS/TSA would negatively impact them. I would not say they had a bountiful amount of time to dedicate to POS/TSA work; once they bought into the impact and importance of the Model, however, they whole heartily embraced the grant. Several of them had already bought into the importance of the work. Second, I was told that there were strained relationships between the community college and some of the secondary districts. This assumption was inaccurate. While there are definitely no hard feelings between secondary participants and the postsecondary participant, there are concerns about existing connections

between UCC faculty members and secondary teachers. Secondary teachers desire strong relationships with UCC faculty. Third, I also assumed that there were plenty of quality IDE resources focused on POS/TSA available. Even though these resources were available to districts, many districts did not know about them, did not know how to access them, were not sure how to use them, or did not think they would help their districts. Finally, my last assumption focused on how the regional team would function. On June 26, 2010, I wrote in my journal, "I am worried that the regional team did not function as they should have . . ." I assumed the regional team would meet multiple times throughout the study. They met once in February to discuss the grant and individual responsibilities but did not meet again as a team to discuss their progress.

Personal Experiences

I thoroughly enjoyed my time with the POS regional team. I knew each of them before, but the grant allowed me to get to know each of them better. Anytime I asked for information, clarifications, or details, they warmly provided me the information. They even sent encouraging emails along the way to help me stay motivated and on track. I could not have asked for a better team to observe and study.

One presupposition I had before my study was that I hypothesized that participants would need to set aside their personal biases and work together to accomplish the work of the POS grant. Due to the limited interactions of the regional team, any individual biases, if they existed, never came to light.

How Did I Change?

As I reflect on how I have changed as a result of my experiences in this research, I identified two important realizations. One, secondary institutions struggle to satisfy all of

their stakeholders. Every district I worked with shared with me the amount of pressure they, their building, and their district are under. All of them are trying to do what is best for students and their academic success. Several years ago, I was a business teacher in Iowa. I remember the pressures placed on secondary teachers and administration. Currently, however, there seems to be a high level of uncertainty related to the Iowa Core and its impact on Iowa districts. As I continue my work as a consultant for the IDE, this renewed realization will impact my work. As my division identifies additional data needed by districts, I will encourage the division to look at what the districts are already doing. How can we streamline the data received? How can we connect CTE with other state initiatives . . . specifically the Common Core? The Common Core was just recently approved by the State Board of Education in July 2010; how does this impact CTE work? These are questions my division needs to identify and explore so we can adequately assist districts.

Two, postsecondary institutions also struggle to satisfy all of their stakeholders. Through my interactions with UCC, I realized, at times, the community college is placed in an awkward position by the Division of Community Colleges and Workforce Preparation. The division often asks community colleges to assume a leadership role with secondary districts to assist the districts in accomplishing state and federal mandates. However, the community college has no authority over the districts. The division's designation of the community college as the leader (often called the fiscal agent) places the colleges in a quandary. How can community colleges assist the districts in meeting state and federal mandates without harming or destroying their institutional relationships? It can be a no-win situation for community colleges. The division encourages secondary and postsecondary collaboration. How can the division encourage collaboration without the increased burden

on the community college? Or if the division continues this practice, how can they assist the colleges in developing, maintaining, and sustaining successful collaborations? As the literature shows, we cannot mandate *champions*. These questions will impact my work at the IDE. Specifically, if community colleges are identified as the best fiscal agent for division initiatives, then the division must also provide training and resources to colleges. We cannot assume that they know how to perform the skills and tasks we ask of them. We need to provide training and resources so they can be successful.

Surprises

I was truly surprised the regional team did not meet more than once. The POS/TSA grant did not specify the number of times regional teams needed to meet; however, to accomplish the work of the grant, I thought they would be meeting several times. I wonder what work could have been accomplished if participants collaborated more often. As I think about what they accomplished, I am not sure if the grant helped them at all. I find myself wondering if they did anything differently than they would have if there would not have been a grant available. In addition to their successful work related to POS/TSA, the grant did provide opportunities to collaborate across sectors. Secondary teachers relished the opportunities to meet, interact, and learn from postsecondary teachers. I hope these opportunities continue for this region.

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Appendix A

State of Iowa
Department of Education
Division of Community Colleges and Workforce Preparation
Grimes State Office Building
Des Moines, Iowa 50613

Request for Application

Due Date: November 13, 2009

Title: Program of Study/Technical Skill Attainment Assessment Grant

Eligible Recipients: Iowa Community Colleges

Period of Performance: December 1, 2009, through June 30, 2010

Funding Sources: PL 109-270, Title 1, Section 112 (C) Perkins Reserve Account

I. General Information:

With the reauthorization of the Carl D. Perkins Career and Technical Education Improvement Act of 2006 local recipients of the funds were required to incorporate Programs of Study (POS) and strengthen the alignment of the assessment of students' technical skills with industry recognized skill credentials. These new requirements included the following:

(a) The career and technical education activities to be assisted that are designed to meet or exceed the State adjusted levels of performance, including a description of –
   i.   Incorporate secondary education and postsecondary education elements;
   ii. Include coherent and rigorous content, aligned with challenging academic standards, and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education;
   iii. May include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and
   iv. Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree
(b) Link career and technical education at the postsecondary level and career and technical education at the postsecondary level, including by offering the relevant elements of not less than 1 career and technical program of study (Carl D. Perkins Career & Technical Education Act of 2006 (Perkins IV) Section 135 (B)(2))
(a) Eligible recipients will foster the development and implementation of programs of study within their respective districts to benefit students and stakeholders. Each will develop and implement a minimum of 75% of their CTE programs to align with the Iowa program of study template requirements. Eligible recipients will describe their plans to meet this goal within the application for funding. Eligible recipients will demonstrate

incremental progress toward this goal throughout the implementation of the Carl D. Perkins Act of 2006. (Iowa Perkins Five-Year Plan)

Section 135(b)(2) of the Perkins Act of 2006 and/or Section 134(b)(3)(A)

II. Purpose:

The Iowa Department of Education (DE) will award $10,000 to each of the 15 Iowa community colleges to support and extend college's efforts related to developing POS and technical skill attainment assessments. POS lead to a community college degree, award, or industry recognized certification. The purpose of this funding is to provide technical assistance to secondary and postsecondary institutions to be used in the development of POS and technical skill assessments.

III. Targeted Population:

The targeted populations include students from both secondary schools and postsecondary colleges.

IV. Funding Provisions:

The intent of the RFA is to promote collaboration between secondary and postsecondary institutions. To this end, regional teams shall be developed to promote and encourage institutional collaboration. At the minimum, regional teams shall include career and technical education (CTE) deans, Tech Prep coordinators, CTE faculty, and at least three secondary partners.

The Department of Education is issuing this RFA to be used by each of the 15 Iowa community colleges to draw down a maximum of $10,000 each to be used to further their efforts related to POS and technical skill attainment assessments.

Each community college will submit a plan to DE for the use of the funds in its region to be approved prior to the college incurring costs for their project or initiative. To be included in the plans:

- Detailed plan outlining goals, benchmarks, and timeline for the project
- Itemized budget (See Attachment D)

Each community college shall collaborate with DE regional consultants (who will work with discipline consultants) and secondary Perkins fiscal agents before writing and developing their application for the grant. When regional teams decide the POS on which to focus for the application, they are asked to contact their regional DE consultant. It is recommended that regional teams choose POS from state approved programs. In part, this conversation will assist the DE in ensuring that a variety of career clusters (www.careerclusters.org) are represented.

Partners shall engage in monthly "Communities of Practice" conversations. These conversations will focus on successes, concerns, and other topics that are submitted by grant participants to the DE. Regional teams may be asked to participate in other information gathering forums including but not limited to: interviews, surveys, focus groups, and artifact collection.

It is anticipated that a second year of funding will be available subject to the sole discretion of DE. This second year of funding will be focused on region-wide implementation of the plan developed by community colleges during this initial funding period.

V. Eligible Recipients:
Iowa community colleges

VI. Requirements for Reporting and Requesting Reimbursement:
Each community college shall submit a plan to the DE for the use of funds in its region to be approved prior to the college incurring costs for their project or initiative. To receive funds, the community college shall submit the reimbursement form (Attachment G).
No expenditures made prior to the award date may be included as project costs.

Deliverables

The approval and the reimbursement of expenditures are contingent upon the rules and regulations per the U.S. Department of Education General Administrative Rules, EDGAR and the submittal of two reports. In the first report, the recipient should include evidence or progress toward meeting the first-year deliverables. First-year deliverables shall be submitted to the DE no later than December 31, 2009. Information included in the report must consist of evidence showing:

1. **Mid-year**

- Regional meetings held (minutes, agendas)
- Progress towards meeting regional objectives

2. **Final report**

The final report (due no later than July 1, 2010) must include:
- Final reporting of how funds were used
- Advisory committee meeting minutes for the program documenting approval of technical skill attainment
- Description of
    - POS/technical skill attainment assessment findings
        - How goals and objectives were attained
        - Strengths and weaknesses of the project
        - How the information will be used for future POS work
- Work with secondary partners and specifically, the secondary Perkins fiscal agents, collaboration with each high school in the region to complete POS table (see below)
    - Current progress of development of POS in region for each school
    - The following table for schools and programs in the region
- Plan to develop and implement POS/technical skill attainment assessment throughout region
- Evidence that POS(s) is saved to www.ihaveaplaniowa.gov site
- A complete financial accounting of expenditures incurred at the object purpose level per the State of Iowa Accounting procedures as outlined in the I-3 accounting manual

The Department's guidelines for reimbursement of expenditures incurred by the fiscal agent of this grant allow the issuance of partial payments in addition to a final payment at the conclusion of the project. All expenditures paid for with grant funds must be incurred during the grant's funding period from December 1, 2009, through June 30, 2010. Requests for partial payment for expenditures incurred must be submitted to the Department prior to June 1, 2010, and may not

<u>exceed 80% of the grant's approved budget.</u> The final payment will be paid upon receipt of the final report.

Requests will be processed on a quarterly basis and must be mailed to:

> Attn: Brenda Patrick
> Bureau of Career and Technical Education Services
> Iowa Department of Education
> Grimes State Office Building
> 400 East 14th Street
> Des Moines, IA 50319-0146

Requests may also be submitted via email to brenda.patrick@iowa.gov. Claims may be requested quarterly. All claims must be submitted no later than July 31, 2010. Reimbursement requests must include Attachment G. <u>The balance of funds expended will be reimbursed (on or before August 30, 2010) upon receipt of the final report, which is due July 1, 2010.</u>

VII.   Procedure for Submitting Proposals

Proposals must be submitted to the Department by **November 13, 2009**, in order to receive funding considerations. Submit two copies of the proposal to:

> Attn: Brenda Patrick
> Bureau of Career and Technical Education Services
> Iowa Department of Education
> Grimes State Office Building
> 400 East 14th Street
> Des Moines, IA 50319-0146

Each community college application will be reviewed by a Steering Committee of Education Consultants.

VIII.   Assistance:

An mandatory informational meeting will be held at the Airport Holiday Inn in Des Moines on October 14, 2009. The intent of this meeting will be to explain and answer questions related to the RFA, provide guidance related to POS and technical skill attainment, and provide time for teams to work on their plans.

Questions concerning the guidelines should be directed to Jenny Foster, Education Consultant for Career and Technical Education, Bureau of Career and Technical Education Services, via e-mail at jenny.foster@iowa.gov or telephone at 515-281-8488.

IX. Guidelines and Format for Submitting Proposals:

A. Cover Page (Applicant Information)
   a. Community college name, city, contact person and title, telephone, mailing address, and e-mail address (Attachment A)
B. Identify current progress on the development of POS and technical skill attainment assessments for the schools selected for this pilot study. See Attachment for table to be submitted with application.

      a. Describe your team's plan in developing **one** POS for at least **three** secondary school districts by June 30, 2010 (See Attachment H for the steps involved in POS)

      b. Identify school, program, etc. that will be the focus of the RFA

            i. Provide rationale for program and secondary schools selected.

            ii. List of team members and school/college/organization affiliation, including contact information

      c. Identify timetable for work

      d. Provide project implementation plan including goals and benchmarks

      e. Demonstrate readiness to complete proposal

      f. Describe opportunities for collaboration between secondary and postsecondary institutions

C. Describe methods that will be used to collaborate with all partners

      a. Secondary

      b. AEA

      c. Perkins fiscal agents

      d. Department of Education

      e. Community College

D. Describe steps to move entire region to the goal of 75% of all programs being POS by the end of FY12 in applicant's region

E. Describe methods for monitoring performance in meeting benchmarks

F. Describe of evaluation methods

G. Provide budget

      a. Completion of Attachment D

      b. What is the projected cost of the proposal? Provide budget justification or summary of the budget details, as appropriate

      c. Are the funds available sufficient to complete the project

      d. How will the funding be sustained with federal (Perkins) and local resources

H. Provide Minority Impact Statement (Attachment E)

I. Provide signatures of all team members (Attachment F)

Items to be Submitted with Completed Application:

☐ Cover page (Attachment A)

☐ Completion of POS Pilot Summary Table (Attachment B)

☐ Plan to develop one POS for at least three secondary school districts including:

    ☐ Rationale

    ☐ List of team members

    ☐ Timetable

    ☐ Goals and benchmarks including methods to monitor performance (Attachment C)

    ☐ Readiness to complete proposal

    ☐ Opportunities and methods for collaboration

    ☐ Description of strategy to move region towards 75% of all programs to be POS

    ☐ Description of evaluation methods

    ☐ Completion of Required Components Activities (Attachment J)

☐ Budget (Attachment D)

☐ Minority Impact Statement (Attachment E)

☐ Regional team members' signatures (Attachment F)

☐ Assurances (Attachment I)

Attachment A

Program of Study/Technical Skill Attainment Assessment Grant
RFA COVER PAGE

Community College Name _____

Grant Contact Person _____

(Official grant contact person who received all grant inquiries and information)

Street Address _____

_____
City   State   Zip

Phone Number (___) _____ Fax Number (___) _____

E-Mail Address _____ _____

Proposal Submission Deadlines: Must be received by
4 P.M. CST, November 13, 2009

This cover sheet MUST be complete and used as the cover sheet for the RFA.
The original and one copy of the Proposal must be included.
The signatures on each copy must be original. Signature stamps are not acceptable.

Copies should be mailed to the individual listed below.

Attn: Brenda Patrick
Bureau of Career and Technical Education Services
Iowa Department of Education
Grimes State Office Building
400 East 14th Street
Des Moines, IA 50319-0146

THIS PAGE IS REQUIRED FOR THE APPLICATION.

Attachment B

POS Pilot Summary Table

Directions: Please indicate in the table the school/college that will be collaborating on the POS/Technical Skill Attainment Assessment grant. Then, indicate the program of focus. Next, indicate if the school/college uses an advisory council or committee. Then, record the contact person for each school/college. Finally, use the codes described in Attachment B.

School/College	Program	Advisory Council or Committee	Contact	Current State of POS (Codes 1-6: Choose all that apply)	Current State of Technical Skill Attainment

Sample POS Pilot Summary Table

School/College	Program	Advisory Council or Committee	Contact	Current State of POS (Codes 1-6: Choose all that apply)	Current State of Technical Skill Attainment (Description of standards and assessments used.*)
Farmland CSD	General Business	Advisory Committee	Steve Miller, H.S. principal	1	Most standards and assessments used are locally developed. Farmland CSD does use one commercial assessment from NOCTI. Standards, assessments, & proficiency levels are not approved by advisory committee or community college.

*Items to consider when describing the current state of technical skill attainment shall include:
a. Type of standards, benchmarks, critical competencies (performance indicators) used (local, state recommended, industry-validated)
b. Type of assessments used (locally developed, commercially developed, industry-validated)
c. Are assessments approved by advisory committee or council? Are standards approved by advisory committee or council? Are proficiency levels approved by advisory committee or council?
d. Are assessments approved by community college if POS? Are standards approved by community college if POS? Are proficiency levels approved by community college if POS?

Attachment B

POS Pilot Summary Table Codes

Directions: Use the following codes to complete the POS Pilot Summary Table.

Current State of POS

1. Work has not been started
2. Work has started but Self-Assessment is not complete
3. Self-Assessment has been completed
4. Strategic plan are written and implemented
5. One or more areas that were in need of improvement have been improved
6. Drawing Board(s) are completed

Attachment C

Goal 1:

      Benchmark 1:
            Evaluation 1:
            Evaluation 2:
      Benchmark 2:
            Evaluation 1:
            Evaluation 2:

Goal 2:

      Benchmark 1:
            Evaluation 1:
            Evaluation 2:
      Benchmark 2:
            Evaluation 1:
            Evaluation 2:

(Add or delete titles as appropriate for your application.)

Attachment D

POS/Technical Skill Attainment Assessment Budget Summary		Total
Budget Categories		
Personnel Services		
Contracted Services		
Purchased Services		
Travel		
Supplies		
Books/Periodicals/Audio Visual/Software		
Equipment		
Other		
Other Description		
Total		
TOTAL BUDGET		

(Add or delete rows as appropriate for your application.)

Attachment E

Minority Impact Statement

Pursuant to 2008 Iowa Acts, HF 2393, Iowa Code Section 8.11, all grant applications submitted to the State of Iowa which are due beginning January 1, 2009, shall include a Minority Impact Statement.   This is the state's mechanism to require grant applicants to consider the potential impact of the grant project's proposed programs or policies on minority groups.

Please choose the statement(s) that pertains to this grant application. Complete all the information requested for the chosen statement(s).

☐ The proposed grant project programs or policies could have a disproportionate or unique positive impact on minority persons.

Describe the positive impact expected from this project

Indicate which group is impacted:
__ Women
__ Persons with a Disability
__ Blacks
__ Latinos
__ Asians
__ Pacific Islanders
__ American Indians
__ Alaskan Native Americans
__ Other

☐ The proposed grant project programs or policies could have a disproportionate or unique negative impact on minority persons.

Describe the negative impact expected from this project.

Present the rationale for the existence of the proposed program or policy.

Provide evidence of consultation of representatives of the minority groups impacted.
Indicate which group is impacted:
__ Women
__ Persons with a Disability
__ Blacks
__ Latinos
__ Asians
__ Pacific Islanders
__ American Indians
__ Alaskan Native Americans
__ Other

☐ The proposed grant project programs or policies are not expected to have a disproportionate or unique impact on minority persons.

Present the rationale for determining no impact.

I hereby certify that the information on this form is complete and accurate, to the best of my knowledge:

Signature of Executive Officer:_____,

Date:_____

Title: _____

Definitions

"Minority Persons", as defined in Iowa Code Section 8.11, mean individuals who are women, persons with a disability, Blacks, Latinos, Asians or Pacific Islanders, American Indians, and Alaskan Native Americans.

"Disability", as defined in Iowa Code Section 15.102, subsection 5, paragraph "b", subparagraph (1):b. As used in this subsection:
"Disability" means, with respect to an individual, a physical or mental impairment that substantially limits one or more of the major life activities of the individual, a record of physical or mental impairment that substantially limits one or more of the major life activities of the individual, or being regarded as an individual with a physical or mental impairment that substantially limits one or more of the major life activities of the individual.
"Disability" does not include any of the following:
    (a) Homosexuality or bisexuality.
    (b) Transvestism, transsexualism, pedophilia, exhibitionism, voyeurism, gender identity disorders not resulting from physical impairments or other sexual behavior disorders.
    (c) Compulsive gambling, kleptomania, or pyromania.
    (d) Psychoactive substance abuse disorders resulting from current illegal use of drugs.

"State Agency", as defined in Iowa Code Section 8.11, means a Department, board, bureau, commission, or other agency or authority of the State of Iowa.

It is the policy of the Iowa Department of Education not to discriminate on the basis of race, creed, color, sex, sexual orientation, gender identity, national origin, gender, disability, religion, age, political party affiliation, or actual or potential parental, family or marital status in its programs, activities, or employment practices as required by the Iowa Code sections 216.9 and 256.10(2), Titles VI and VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000d and 2000e), the Equal Pay Act of 1973 (29 U.S.C. § 206, et seq.), Title IX (Educational Amendments, 20 U.S.C.§§ 1681 – 1688), Section 504 (Rehabilitation Act of 1973, 29 U.S.C. § 794), and the Americans with Disabilities Act (42 U.S.C. § 12101, et seq.).   If you have questions or grievances related to this policy, please contact the Legal Consultant, Department of Education, Grimes State Office Building, Des Moines, Iowa 50319-0146, 515/281-5295.

Attachment F

Regional Team Members' Signatures

Each of the undersigned members of the regional team certifies their institution will abide by the assurances during the period of the grant award and, to the best of their knowledge; the information contained in this application is correct and complete

Regional Team Fiscal Agent

_____

Name of Community College

_____

Signature Fiscal Agent   Date

Team Members

_____

School/Agency Name

_____

Superintendent or Perkins Contact Signature   Date

_____

School/Agency Name

_____

Superintendent or Perkins Contact Signature   Date

_____

School/Agency Name

_____

Superintendent or Perkins Contact Signature   Date

_____

School/Agency Name

_____

Superintendent or Perkins Contact Signature   Date

(Copy signature lines as needed.)

Attachment G

Reimbursement Request

Date:
To: Brenda Patrick, brenda.patrick@iowa.gov
From (fiscal agent):
RE: POS/Technical Skill Attainment Assessment Request for Partial Payment

Please issue a warrant for $

For partial payment to (community college):

Please complete the table below to indicate RFA expenditures. Categories listed below should match your application.

POS/Technical Skill Attainment Assessment Budget Summary		Total
Budget Categories		
Personnel Services		
Contracted Services		
Purchased Services		
Travel		
Supplies		
Books/Periodicals/Audio Visual/Software		
Equipment		
Other		
Other Description		
Total		
TOTAL BUDGET		

_____

Program Consultant

_____

Bureau Chief

Attachment H

Developing Programs of Study (POS)
POS Checklist

Program:	
Date: **For academic year:**	
☐	Identify the individuals from each of the partners that will be included in the discussions for the POS
☐	Develop a timeline for which the program will be made into a POS by 2013
☐	Determine resources needed to complete POS
☐	Review current programs and determine if focus will be cluster level or pathway level
☐	Complete CTE Program Self-Assessment and identify the current status for each criterion statement
☐	Develop a strategic plan and time to move non-exemplary items on the self-assessment to the exemplary level.
☐	Review of standards, benchmarks, and critical competencies
	☐ Modify if appropriate
	☐ Determine placement of standards, benchmarks, critical competencies into programs and courses
☐	Develop drawing board
	☐ Provide drawing board to stakeholders
	☐ Place drawing board in student handbook
	☐ Download drawing board to www.ihaveaplaniowa.gov
☐	Start Implementation of strategic plan
☐	Review/update self assessment as appropriate
☐	Complete technical skill attainment assessment worksheet
☐	Using the results of the self-assessment, determine how each program will be assessed
☐	Research and implement appropriate technical assessments
☐	Advisory council/committee should approve the following – Date of approval:
	☐ Competencies to measure
	☐ Type of assessment used
	☐ Proficiency level
	☐ Community college approval – Date of approval:
☐	Continue review of strategic plan
☐	Continue implementation of strategic plan
☐	Update self-assessment

Attachment I

Assurances

1. The community college acting as the fiscal agent over this application agrees to maintain financial records and provide such information to the Iowa Department of Education as may be required for fiscal audit.
2. The eligible recipient agrees to provide two reports: one mid-year report to be submitted on December 31, 2009 and the final report is due no later than July 1, 2010.
3. The eligible recipient certifies the agency and its principal officers are not suspended or debarred.*(98-III-USDE-282-7).*
4. Funds will not be used to acquire equipment, including computer software, in any instance in which such acquisition results in a direct financial benefit to any organization representing the interests of the purchasing entity, its employees, or any affiliate of such an organization. *PL 109-270 (Perkins Act), Title III Section 122(c)12)*
5. Funds will not be used for the purpose of directly providing incentives or inducements to an employer to relocate a business enterprise from one state to another state if such relocation will result in a reduction in the number of jobs available in the state where the business enterprise is located before such incentives or inducements are offered. *PL 109-270 (Perkins Act), Title III Section 322*
6. No federal appropriated funds have been, or will be paid by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress in connection with making of any federal grant, the entering into any grant or cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal grant or cooperative agreement. Sec. 1352, Title 31
7. I CERTIFY that, to the best of my knowledge, the information contained in this Request for Application is true, accurate, and complete.

The undersigned certifies their institution will abide by these assurances during the period of this grant and to the best of his/her knowledge; the information contained in this application is correct and complete.

Signature of Executive Officer:
☐**Dr.**☐**Mr.**☐**Ms.** _____

Date: _____

Institution: _____**County-District No:**_____-_____
             (Community College)

Attachment J

<u>Required Components</u>: A

- Identify the individuals from each of the partners that will be included in the discussions for the POS
- Develop a timeline for which the program will be made into a POS by 2013
- Determine resources needed to complete POS
- Review current programs and determine if focus will be cluster level or pathway level
- Complete CTE Program Self-Assessment and identify the current status for each criterion statement
- Develop a strategic plan and time to move non-exemplary items on the self-assessment to the exemplary level.

			Enter the estimated amount of grant funds that will be utilized to conduct the activity for *Enter an X if funds other than grant funds will be utilized to conduct the activity.*
Activity(s)	Measurable Outcomes	Assigned Staff	Grant Funds FY10
		Totals	
Description of the Activity(s) to be conducted:			

Attachment J

Required Components:

- Review of standards, benchmarks, and critical competencies
  - o Modify if appropriate
  - o Determine placement of standards, benchmarks, critical competencies into programs and courses

			Enter the estimated amount of grant funds that will be utilized to conduct the activity for *Enter an X if funds other than grant funds will be utilized to conduct the activity.*
Activity(s)	Measurable Outcomes	Assigned Staff	Grant Funds FY10
		Totals	

Description of the Activity(s) to be conducted:

Attachment J

<u>Required Components:</u>

- Develop drawing board
  - o Provide drawing board to stakeholders
  - o Place drawing board in student handbook
  - o Download drawing board to www.ihaveaplaniowa.gov

			Enter the estimated amount of grant funds that will be utilized to conduct the activity for *Enter an X if funds other than grant funds will be utilized to conduct the activity.*
Activity(s)	Measurable Outcomes	Assigned Staff	Grant Funds FY10
		Totals	

Description of the Activity(s) to be conducted:

Attachment J

<u>Required Components:</u>

- Implement strategic plan
- Review/update self assessment as appropriate

			Enter the estimated amount of grant funds that will be utilized to conduct the activity for *Enter an X if funds other than grant funds will be utilized to conduct the activity.*
Activity(s)	Measurable Outcomes	Assigned Staff	Grant Funds FY10
		Totals	

Description of the Activity(s) to be conducted:

Attachment J

<u>Required Components:</u> B

- Complete technical skill attainment assessment worksheet
- Using the results of the self-assessment, determine how each program will be assessed
- Research and implement appropriate technical assessments

			Enter the estimated amount of grant funds that will be utilized to conduct the activity for *Enter an X if funds other than grant funds will be utilized to conduct the activity.*
Activity(s)	Measurable Outcomes	Assigned Staff	Grant Funds FY10
		Totals	

Description of the Activity(s) to be conducted:

Attachment J

Required Components:

- Advisory council/committee should approve the following (competencies to measure, assessments used, proficiency levels)
- Community college approval of the competencies to measure, assessments used, and proficiency levels
- Update self-assessment

			Enter the estimated amount of grant funds that will be utilized to conduct the activity for *Enter an X if funds other than grant funds will be utilized to conduct the activity.*
Activity(s)	Measurable Outcomes	Assigned Staff	Grant Funds FY10
		Totals	

Description of the Activity(s) to be conducted:

Appendix B

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office of Research Assurances
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

DATE: February 10, 2010

TO: Jenny Foster
5207 SE 31st Street
Des Moines, IA 50320

CC: Frankie Santos Laanan
N243 Lagomarcino

FROM: Office for Responsible Research

TITLE: **Iowa career and technical education: A case study of secondary and postsecondary collaboration on Programs of Study and technical skill attainment assessment**

IRB ID: 09-596

Approval Date: 9 February 2010   Date for Continuing Review: 8 February 2011

Submission Type: New   Review Type: Expedited

The project referenced above has received approval from the Institutional Review Board (IRB) at Iowa State University. Please refer to the IRB ID number shown above in all correspondence regarding this study.

Your study has been approved according to the dates shown above. To ensure compliance with federal regulations (45 CFR 46 & 21 CFR 56), please be sure to:

- Use only the approved study materials in your research, including the **recruitment materials and informed consent documents** that have the IRB approval stamp.

- **Obtain IRB approval prior to implementing any changes** to the study by submitting the "Continuing Review and/or Modification" form.

- **Immediately inform the IRB of (1) all serious and/or unexpected adverse experiences** involving risks to subjects or others; and (2) **any other unanticipated problems involving risks** to subjects or others.

- **Stop all research activity if IRB approval lapses,** unless continuation is necessary to prevent harm to research participants. Research activity can resume once IRB approval is reestablished.

- **Complete a new continuing review form** at least three to four weeks prior to the **date for continuing review** as noted above to provide sufficient time for the IRB to review and approve continuation of the study. We will send a courtesy reminder as this date approaches.

Research investigators are expected to comply with the principles of the Belmont Report, and state and federal regulations regarding the involvement of humans in research. These documents are located on the Office for Responsible Research website [www.compliance.iastate.edu] or available by calling (515) 294-4566.

Upon completion of the project, please submit a Project Closure Form to the Office for Responsible Research, 1138 Pearson Hall, to officially close the project.
ORR 09/09

INFORMED CONSENT DOCUMENT

Title of Study: Iowa career and technical education: A case study of secondary and postsecondary collaboration on Programs of Study and technical skill attainment assessment

Investigator: Jennifer Foster, BA, MAT

This is a research study. Please take your time in deciding if you would like to participate. Please feel free to ask questions at any time.

INTRODUCTION

The purpose of this case study is to describe how one regional team addresses, implements, and manages POS and TSA. The study is bounded by time (FY10) and by a single case (one Iowa regional team). You are being invited to participate in this study because you are a member of a POS regional team.

DESCRIPTION OF PROCEDURES

If you agree to participate in this study, there are three methods in which I will gather information about your POS experiences.

1. Interviews (two) – Interviews will last for approximately one hour each.
2. Observation (multiple) – I will be observing during the POS regional team meetings. I will be recording notes as participants participate in the meeting. During the observation, I will be observing or looking for examples of:
   a. Characteristics of effective teams (collaboration; team synergy including listening and clarifying, paying attention, responding to direction taken by person talking, not interrupting, avoiding judgment, summarizing what is said) active listening, demonstration of support for team members; concern about quality of work; characteristics of the five phases of team development (initial group meeting – developing trust; discussion of barriers and gateways – how to interact; become a group or team – shared ownership; team development – operate effectively; reinforcement – continue to grow and learn); four stages of teams (forming, storming, norming, and performing); characteristics of Theory X and Y related to team development, identification of small wins (using Weick's research); and characteristics of social influence (using Kelman's research)
3. Audio recordings (multiple) – I will audio record the regional meetings and participant interviews. The purpose of these recordings will assist the researcher in gathering accurate and complete data.

During the study you may expect the following study procedures to be followed: The interview will consist of open-ended questions based on your personal experiences within the POS regional team. Follow-up questions will be asked to clarify a point or follow a related tangent. At no point will your name, title, or other directly identifying information be used in this research project. You will be assigned a pseudonym in all written records. I will tape record our interviews and

regional team meetings. Your name will not be included on the interview tape recordings and all recordings will be erased at the completion of the research project. During the audio recording of the regional team meeting, your name may be used by other participants; however, I will not be using participant names in the transcripts. I will be using pseudonyms in all written records. You will be asked to review transcripts of the interviews and regional meetings, as well as any other instances where you are portrayed. At any point during the interview process you may skip any question that you do not wish to answer or that makes you uncomfortable. You may also end the interview or observation at any point, no questions asked.

RISKS

Risk in this study is minimal. However, there is a slight chance that you may feel uncomfortable talking about experiences related to your participation in the POS regional team. You will be asked your candid opinions of the regional team. Your name and identifying characteristics will not be linked to your comments.

BENEFITS

It is hoped that the information gained in this study will benefit you by reflecting on your experiences within the regional team and thus, positively impacting the individual's work on Programs of Study at their local community school district. In addition, Iowa's model of regional teams is unique. The work accomplished during the regional team meetings may assist other regions in the state and country in their own POS development.

COSTS AND COMPENSATION

You will not have any costs from participating in this *study*. You will not be compensated for participating in this study.

PARTICIPANT RIGHTS

Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time. If you decide to not participate in the study or leave the study early, it will not result in any penalty or loss of benefits to which you are otherwise entitled.

CONFIDENTIALITY

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, federal government regulatory agencies and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy your records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by law, the following measures will be taken: At no point will your name, title, or other directly identifying information be used in this research project. You will be assigned a pseudonym in all written records. Your name will not

be included on the interview tape recordings and all recordings will be erased at the completion of the research project. Frankie Santos Laanan (supervising faculty member) and myself will have access to study records. They will be kept on a personal flash drive. Written files will be destroyed as soon as legally possible. If the results are published, your identity will remain confidential.

QUESTIONS OR PROBLEMS

You are encouraged to ask questions at any time during this study.

- For further information about the study contact Jennifer Foster at 515-283-0856 or by email at jfoster773@mchsi.com. To speak to the supervising faculty member contact Frankie Santos Laanan at 515-294-7292 or by email at laanan@iastate.edu.
- If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, Iowa State University, Ames, Iowa 50011.

****

PARTICIPANT SIGNATURE

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered. You will receive a copy of the written informed consent prior to your participation in the study.

Participant's Name (printed) _____

_____   _____
(Participant's Signature)   (Date)

INVESTIGATOR STATEMENT

I certify that the participant has been given adequate time to read and learn about the study and all of their questions have been answered. It is my opinion that the participant understands the purpose, risks, benefits and the procedures that will be followed in this study and has voluntarily agreed to participate.

_____   _____
(Signature of Person Obtaining   (Date)
Informed Consent)

Research Questions

1. How does a diverse team describe and develop a process to build Programs of Study and assess technical skill attainment?

    a. Interview questions

        i. Take me through the regional meeting...goals of meeting, discussions, decisions, activities...

        ii. Describe the outcomes of the meeting

        iii. Describe team's plan for developing POS.

        iv. Describe methods to collaborate with each other, other LEAs, and region

2. How do team members describe their experiences of the process towards Programs of Study and technical skill attainment assessment development?

    a. What was the regional meeting like for you?

    b. How is the partnership understood by others?

    c. How are problems resolved?

    d. How do members understand and interpret the relationships?

    e. What is role of the CC in this process? Role of IDE? LEAs? Who am I missing?

    f. As you leave the regional meetings and you return to your LEA, what happens? How would you describe the meeting and the group to a colleague?

Follow-up Questions (These questions may be used in the event that I do not get the information needed during the initial interviews.)

1. Was the regional meeting successful? If applicable, describe the successes. Why is this important to the success of regional team and its goals?

2. How did the team work together?

3. Describe the responsibilities of regional team members.

4. How have you implemented what has been decided by the regional group at your local school district?

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