

Analysis of Impact of Youth Apprenticeship Programs on Students Enrolled in  
Manitowoc County Youth Apprenticeship Programs

By

Kari L. Krull

A Research Paper

Submitted in Partial Fulfillment of the

Requirements for the

Master of Science Degree

With a Major in

Career and Technical Education

Approved: 2 Semester Credits



Dr. Urs Haltinner

The Graduate School  
University of Wisconsin-Stout  
December, 2009

**The Graduate School  
University of Wisconsin-Stout  
Menomonie, WI**

**Author:** Krull, Kari L.

**Title:** *Analysis of Impact of Youth Apprenticeship Programs on Students  
Enrolled in Manitowoc County Youth Apprenticeship Programs.*

**Graduate Degree/ Major:** MS Career and Technical Education

**Research Adviser:** Urs Haltinner

**Month/Year:** December, 2009

**Number of Pages:** 58

**Style Manual Used:** *American Psychological Association, 5<sup>th</sup> edition*

ABSTRACT

The purpose of this study was to determine the career outcomes of Manitowoc County Youth Apprenticeship students in relation to career choices before and after completion of the program.

The objectives of the study were to evaluate career cluster retention rate of enrolled students in the Manitowoc County Youth Apprenticeship programs to determine the extent that students refined their career objectives and educational goals based on their experiences, and to determine if participation in the youth apprenticeship programs contribute to a prepared and educated workforce. Data was collected during the fall of 2009. Data was analyzed and used to determine the success of the Manitowoc County Youth Apprenticeship programs and improve programming. The study's results determined that the Manitowoc County Youth Apprenticeship Program is successful in preparing students for high skill careers and for the education necessary to pursue those careers.

The Graduate School  
University of Wisconsin-Stout  
Menomonie, WI

### Acknowledgments

I would like to thank Dr. Lee for his guidance, support, and constant reminders that “life is too short”. I greatly appreciated his leadership and guidance throughout my process of becoming a Career and Technical Education Coordinator. I would also like to thank Dr. Urs Haltinner for his continued support and guidance in the process of writing this research paper, but for also having a true passion for Career and Technical Education.

I would like to thank my family, especially my parents for their continued support and encouragement throughout my process of changing careers and pursuing my master’s degree. And Finally, I dedicate this paper to the Manitowoc Public School District who took a chance on me and have supported me throughout the past two years. I am currently living my dream as a Career and Technical Education Coordinator because they took a chance on a young professional who they continually support the development of. I would not be where I am today without their support and encouragement.

## TABLE OF CONTENTS

	Page
.....	
ABSTRACT.....	ii
List of Tables .....	vi
List of Figures .....	vii
Chapter I: Introduction.....	1
<i>Background Information</i> .....	1
<i>Statement of the Problem</i> .....	4
<i>Purpose of the Study</i> .....	5
<i>Research Questions</i> .....	5
<i>Importance of the Study</i> .....	5
<i>Limitations of the Study</i> .....	6
<i>Definition of Terms</i> .....	7
Chapter II: Literature Review .....	8
<i>History of Career and Technical Education</i> .....	9
<i>Career and Technical Education in the 21<sup>st</sup> Century</i> .....	12
<i>History of Youth Apprenticeship</i> .....	13
<i>Career Clusters and Pathways: What They Are and Why We Need Them</i> .....	14
<i>Career and Technical Education: The Connection</i> .....	16
<i>Benefits to the Students Involved in the Youth Apprenticeship Program</i> .....	18
<i>Benefits and Challenges to the Employers Involved in the Youth     Apprenticeship Program</i> .....	19

Chapter III: Methodology .....	21
<i>Subject Selection and Description</i> .....	21
<i>Instrumentation</i> .....	23
<i>Data Collection Procedures</i> .....	23
<i>Data Analysis</i> .....	24
<i>Limitations</i> .....	25
Chapter IV: Analysis of Findings .....	26
<i>Introduction</i> .....	26
Chapter V: Discussion .....	40
<i>Introduction</i> .....	40
<i>Conclusions</i> .....	40
<i>Limitations of the Study</i> .....	46
<i>Recommendations to Youth Apprenticeship Leaders</i> .....	46
<i>Recommendations for Further Research</i> .....	48
References.....	50
Appendix A: Survey .....	54

## List of Tables

Table 1. <i>Demographics</i> .....	26
Table 2. <i>Program Area Demographics</i> .....	27
Table 3. <i>Career Cluster Retention Rate</i> .....	28
Table 4. <i>Educational Plans Prior to Youth Apprenticeship Participation</i> .....	29
Table 5. <i>Educational Plans After Completion of Youth Apprenticeship Participation</i> .....	30
Table 6. <i>Change in Education Goals of Youth Apprenticeship Respondents</i> .....	32
Table 7. <i>How Knowledge of Program Gained</i> .....	33
Table 8. <i>Respondents Impact of Youth Apprenticeship Program on Future Career Plans</i> .....	36
Table 9. <i>Respondents Influence of Youth Apprenticeship Program on Further Educational Plans</i> .....	37
Table 10. <i>Overall Satisfaction with Manitowoc County Youth Apprenticeship Program</i> .....	38

## List of Figures

Figure 1. Educational plans prior to youth apprenticeship participation .....	30
Figure 2. Educational plans after completion of youth apprenticeship participation .....	31
Figure 3. How respondents gained knowledge of youth apprenticeship participation .....	34
Figure 4. Respondents impact of youth apprenticeship program on future career plans.....	36
Figure 5. Respondents influence of youth apprenticeship program on further educational plans.	37
Figure 6. Overall satisfaction with Manitowoc County youth apprenticeship program.....	38

## Chapter I: Introduction

### *Background Information*

The Wisconsin Youth Apprenticeship program was authorized in 1991 by the Wisconsin Legislature as part of Governor Jim Doyle's Wisconsin GROW initiative. According to the Department of Workforce Development Youth Apprenticeship programs give high school juniors and seniors the opportunity to explore their chosen career while still attending high school (2006). Students enrolled in these programs receive on the job training and occupational instruction in their selected career choice. Doyle (2006) stated that "besides giving high school juniors and senior's job training and experience, this program helps meet the increasing needs of employers for skilled workers" (p. 1).

Youth apprenticeship programs are designed to place students in a community of expert practitioners where they have an opportunity to learn the work and social skills needed to become effective and productive workers in today's competitive market place (Evanciew & Rojewski, 1999). Upon successful completion of the program students are able to gain a certificate of occupational proficiency according to the Department of Workforce Development.

Evanciew states that "students often exit high school with little or no formal training to prepare them for life in an adult world" (Evanciew, 1994, p. 3). Youth Apprenticeship programs give students the opportunity to explore and work in a career of interest while earning a wage and participating in hands on learning. The connection between the school district and businesses are important to the success of all Youth Apprenticeship Programs.

Manitowoc Public School District located in Eastern Wisconsin Lake Michigan, encompasses the City of Manitowoc and the surrounding areas for a total of 93 square miles (Manitowoc Public School District, 2008). The Manitowoc Public School District has the 25<sup>th</sup>



largest enrollment among the 426 public school districts in the state of Wisconsin. In 2007, the Manitowoc Public School District had a total enrollment of 5,629 students with a 21 percent minority enrollment rate. The district employs approximately 975 employees and includes one early childhood center, six elementary schools for grades first to sixth, two junior high schools for grades seventh to ninth, and one high school for grades tenth through twelfth. Manitowoc Public School District has a mission to provide rigorous learning for all students within a safe and orderly environment. They will educate pupils in educational basics and help them develop as self-reliant citizens.

Manitowoc Public School district is the home for the Manitowoc County Youth Apprenticeship program. A Career and Technical Education Coordinator (CTEC) is housed at Lincoln High School and is responsible for the coordination of the Youth Apprenticeship program for the consortium. Schools that participate in the Manitowoc County Youth Apprenticeship program include Lincoln High School, Mishicot High School, Two Rivers High School, Valders High School, Roncalli High School, and Reedsville High School.

Manitowoc County has 52 youth apprentices for the 2008-2009 school year. Apprentices attend courses at Lakeshore Technical College while also working on the job directly with a mentor. Students participate in auto collision, auto technician, drafting and design, financial services, health services, production agriculture, welding, manufacturing, welding, woods, and lodging management employment opportunities.

Students enrolled in Youth Apprenticeship programs are assigned a workplace mentor who assumes the responsibility for the student. Mentors may also serve as teachers, role models, friends, or helpers as they assist in the cognitive, personal, and professional development of apprentices (Evanciew & Rojewski, 1999).

Hamilton calls direct teaching of apprentices “coaching” and “mentoring” (Hamilton & Hamilton, 1990). Coaching refers to teaching apprentices about their work tasks and job responsibilities. Hamilton and Hamilton contend that coaches perform the instructional behaviors such as demonstrating task performance by doing the task while the apprentice observes, explanations on how to perform a task correctly, explanations of why a task is performed a certain way, monitor and critique the apprentice’s attempts at the task, and model problem solving by thinking aloud and demonstrating problem- solving strategies (1994).

Hamilton and Hamilton (1994) distinguished three primary functions of a mentor. Mentors should initiate the apprentice to the workplace culture, advise the apprentice on career directions and opportunities, and help resolve problems (Hamilton & Hamilton, 1990). Although mentors have a large part in the youth apprenticeship program there are several other factors of success to consider when reviewing the program.

A 2001 research report to America on School-to-Work, compiled by the Institute on Education and the Economy, found that Wisconsin’s youth apprenticeships were successful in several important measures (Black, 2007). Measures consisting of apprentices increased their attendance and had higher attendance than non apprentice students, apprentices earned up to 12 course credits at state technical colleges, employers rate apprentices better than other entry-level workers in computer skills; company understanding; technical skills; and acting responsibly and professionally, most apprentices were offered full or part-time work from their apprentice employer, and many apprentices enroll in post-secondary programs.

There are several benefits to the employers participating in the program as well. Workforce Development Secretary Roberta Gassman as quoted by Lupardus (2006) stated “The Youth Apprenticeship Program is a critical part of our overall strategy to ensure Wisconsin has a

workforce that is second to none” (p. 1). “Youth Apprenticeship, one piece of this larger system-building effort, attempts to bolster this transition between secondary education and careers (Scribner & Wakelyn, 1997). “The School Districts of Wisconsin need to take the initiative to connect education and job training so that the schools may produce highly effective workers for the future” (Katzenberger, 2004, p. 2). “Overall, Wisconsin’s Youth Apprenticeship Program serves as a powerful example of the educational potential inherent in well integrated programs that connect education and future careers (Scribner & Wakelyn, 1997, p. 12).

Employers participate in the Youth Apprenticeship program in hopes that apprentices will meet their needs for skilled workers. According to the United States Department of Labor and Education, 80 percent of all the new jobs now being created have specific, high skills requirements (2008). Research shows that most companies jump on the work-based learning bandwagon because it profits them (Vo, 1996).

There are problems that exist within the youth apprenticeship programs. Critics warn that apprenticeships could possibly narrow opportunities for students by channeling them into job-specific training and deny them “the kinds of general intellectual skills they need most, both at work and in social life” (Kantor, 1993, p. 26). There also exists no strong evidence to date that guarantees that participation in youth apprenticeship programs broadens, not narrows, future career opportunities (Hamilton, 1993). Another problem exists between the retention of youth apprenticeship students in their selected careers choices. Do youth apprentices continue in their career choice after their experiences with the youth apprenticeship program?

### *Statement of the Problem*

Manitowoc County in Wisconsin has had a Youth Apprenticeship program, serving just under 500 students since 1993. However, there exists a lack of follow-up data on Youth

Apprenticeship completers. There is an absence of data that currently looks at the Youth Apprenticeship completer students and their level of satisfaction with the program nor follow-up data to determine if they still have the same career goals as they did at the start of the apprenticeship program.

### *Purpose of the Study*

The purpose of this research study is to determine the career outcomes of Manitowoc County Youth Apprenticeship students in relation to career choices before and after completion of the program. With this information, the Manitowoc County Youth Apprenticeship program will focus on long term improvements and changes based on the results of this study.

### *Research Questions*

The researcher sought out to address the following questions in the study: Do Youth Apprenticeship completers continue, refine, or revise their career pathway as a result in the Manitowoc county youth apprenticeship programs? The following questions were formed to guide the data collection.

1. What is the career pathway retention rate of students enrolled in the specific youth apprentice program?
2. To what extent does the Youth Apprenticeship Program refine career objectives and educational goals of the students involved?
3. To what extent does student participation in a Youth Apprenticeship programs contribute to a prepared and educated workforce?

### *Importance of the Study*

This study is important to businesses and Career and Technical Education professionals for the following reasons:

1. This study reinforces the need for businesses, schools, and community partnerships in Manitowoc County. Businesses and community members can utilize the study to grow relationships with schools and promote other businesses to partake in the programs.
2. This study can serve as useful research to promote the Youth Apprenticeship Programs in the state of Wisconsin. The Department of Workforce Development can utilize data and research to update the success rates and statistics on Youth Apprenticeship in brochures and other advertising materials.
3. This research will add to the present state of knowledge related to the topic of Youth Apprenticeship programs in both Manitowoc County and in the state of Wisconsin.
4. This study will serve as local statistics of success rates in the program which can be utilized to promote the program to upcoming and interested Youth Apprenticeship students.
5. This research can be utilized by schools, businesses, and school board members to define the validity and success of the programs should the need to validate the program ever arise.

#### *Limitations of the Study*

1. The study will be restricted to Youth Apprenticeship programs in Manitowoc County in that state of Wisconsin. Youth Apprenticeship students outside the participating county will not be surveyed as part of the research.
2. The researcher performing the study is a novice researcher. The researcher is also just starting to work with the Youth Apprenticeship programs in Manitowoc County.

3. The findings of the research will be limited to the participating school districts and businesses in Manitowoc County as they are not generalizable.
4. The sample size is limited to those in the Manitowoc County Youth Apprenticeship program.
5. The survey results are limited to the opinions and answers revealed by the Youth Apprenticeship students.

### *Definition of Terms*

*Apprentice.* A person who learns a trade by working under the guidance of a skilled master (Husted, Mason, & Adams, 2003).

*Apprenticeship.* A training program authorized by the National Apprenticeship Act of August 16, 1937, and administered by the Bureau of Apprenticeship (Husted, Mason, & Adams, 2003).

*Career and Technical Education (CTE).* The process of educating and training individuals for occupational competency (Husted, Mason, & Adams, 2003).

*Consortium.* An agreement, combination, or group (as of companies) formed to undertake an enterprise beyond the resources of any one member (Consortium, 2008).

*GROW Initiative.* A comprehensive agenda of action to get Wisconsin's economy moving again, producing the kind of good paying jobs that permit people to support their families, buy a home, and enjoy the great life Wisconsin has to offer (Department of Workforce Development, 2008).

*Mentor.* A trusted counselor or guide (Mentor, 2008).

## Chapter II: Literature Review

Employers commonly find themselves with students that are inadequately prepared for life after high school. Our current educational system has failed to recognize the gap between instructional practices that emphasize abstract rather than contextual learning methods (Evanciew, 1994). Youth Apprenticeship programs are designed to give students the opportunities to learn in the workplace setting at the same time as providing for meaningful and contextual learning practices. It is through these and other work-based programs that employers are able to create the skilled workforce of the future and apprentices are able to become skilled in a career of interest.

A 2007 study by the Department of Workforce Development found that the Wisconsin Youth Apprenticeship program, authorized in 1991 by the Wisconsin Legislature, and part of Governor Doyle's GROW Initiative, provides high school juniors and seniors with the opportunity to explore their chosen career while still in high school. Students receive occupational related instruction and on-the-job training as part of their regular high school schedule and they leave high school with a state certificate and career related work experience. The program prepares students for all options after high school, whether it's directly into the workforce, a technical college, or a university.

Wisconsin Youth Apprenticeship programs extend into over 70 percent of Wisconsin's school districts (Department of Workforce Development, 2007). These schools have chosen to extend a great opportunity for their students and to employers inside their communities. It is through Career and Technical Education programs that these schools are able to offer the youth apprenticeship programs.

### *History of Career and Technical Education*

“Career and technical education (CTE) provides technical knowledge and skills aligned with academic standards that are needed to prepare for further education and careers in current or emerging professions” (2006 Carl D. Perkins Career and Technical Education Improvement Act, P.L. 109-270). Career and Technical Education spans secondary, postsecondary, and adult education levels. CTE at the secondary level encompasses family and consumer sciences education, agricultural education, business and information technology education, marketing education, health science occupations education and industrial technology education. At the postsecondary level, CTE is linked to preparation for employment in specific occupations or careers. CTE is found through formal education at the adult educational level. There has been a long progression from vocational education to today’s career and technical education. Many acts by legislation have helped influence and change vocational education to career and technical education.

“Since the beginning of federal support for public vocational education as mandated by the Smith-Hughes Act of 1917, the federal government had been a predominant influence in determining the scope and direction of vocational and technical training” (Rojewski, 2002, p. 13). “Vocational education, as implemented through the Smith-Hughes Act, emphasized job-specific skills to the exclusion of the traditional academic curriculum” (Rojewski, 2002, p. 15). Vocational education at this time encompassed home economics, agriculture, trade and industrial technology, business, and health occupations. The Smith-Hughes Act, from the 1920s through the 1950s focused on preparing individuals for entry-level employment and adult life, similar to today’s career and technical education.



“The passage of the Vocational Education Act of 1963 is typically heralded as signifying a major change in federal policy and direction for vocational and technical education in the United States from an exclusive focus on job preparation to a shared purpose of meeting economic demands that also included a social component” (Rojewski, 2002, p. 15). This was also one of the first pieces of legislation that established public special education.

“The dual themes of responding the economic demands for a trained workforce with marketable skills and social concerns for making vocational programs accessible to all students, including individuals with special needs, were firmly embedded in the Carl D. Perkins Vocational Education Act of 1984” (Rojewski, 2002, p. 16). “Congress set aside 57 percent of all federal funds to serve six identified areas of special need, including disability, economic and academic disadvantage, displaced homemakers, limited English proficiency, incarcerated youth, and adults in need of training or retraining” (Rojewski, 2002, p. 16).

In 1990 the third prominent theme emerged with the passage of Perkins II. Rojewski stated that “the third broad theme- academics- emerged with the passage of the Carl D. Perkins Vocational and Applied Technology Education Act of 1990” (Rojewski, 2002, p. 16). Several components of this act focused on academics as well as occupational skills. “An important component of the 1990 Perkins legislation, and a direct result of the renewed emphasis on academics, was the initiation of “tech-prep” (i.e., “2+2”) programs structured articulation and coordination efforts between secondary and postsecondary education institutions designed to provide vocational students with a two year high school program that is academically challenging, followed by a non-duplicative and sequenced two year postsecondary vocational program” (Rojewski, 2002, p. 16).

“The School-to-Work Opportunities Act (STWOA, PL 103-239) was enacted in 1994 within the context of education reform and the notion that American youth were not adequately prepared to meet the demands of an ever-increasing technological and globally competitive workforce” (Rojewski, 2002, p. 16). Rojewski states that work-based learning connects activities that integrate classroom and work-based (on-the-job) instruction, mentorships, and other means of bridging the gap between school and work.

“The signing of the Carl D. Perkins Vocational and Technical Education Act was signed into law in 1998. Perkins III continues the emphasis on improving academic achievement and preparing young people for postsecondary education and work” (Rojewski, 2002, p. 17). In 2006 the United States Department of Education’s Carl D. Perkins Career and Technical Education Improvement Act of 2006, otherwise known as Perkins IV. “Perkins IV is a cost effective way to transform the current 20<sup>th</sup> Century skills-based program offerings of many schools into programs providing skills for the 21<sup>st</sup> Century career tech jobs” (National Education Foundation, 2006, p. 1). The president signed this bill into law on August 12, 2006.

The mission of career and technical education is to serve individuals and the nation through direct lifelong preparation for work, family, and community roles and distinguishes itself from other educational programs by its direct attention to work, family, and community roles and responsibilities; other educational programs may and should make contributions to preparation for work, family, and community roles and responsibilities, but it is not central or only purpose. Career and technical education provides preparation for work, family, and community roles and responsibilities over the entire lifespan- from early childhood to late adulthood (Wolff, 2002, p. 16).

“The goal of CTE should be for all students to finish high school prepared either to enter the workplace (which had come to demand strong academic skills and other “new basic” skills) or to begin postsecondary education” (Stone, 2005, p.5). “This broader mission challenges vocational educators to teach beyond the confines of specific occupations and, instead, to prepare students for a more demanding world of work” (Stone, 2005, p. 5).

### *Career and Technical Education in the 21<sup>st</sup> Century*

“In the context of technology changes and economic challenges, it appears to be the most important changes that need to be supported is to increase the academic skills of career and technical education (CTE) students, erase the stigma attached to vocational education, and see that all students meet appropriate academic and industry standards” (Stone, 2005, p. 5). The Partnership for 21st Century Skills (2009) cited that 21<sup>st</sup> century learning environment as an aligned and synergistic system of systems that:

- Creates learning practices, human support and physical environments that will support the teaching and learning of the 21<sup>st</sup> century skill outcomes.
- Supports professional learning communities that enable educators to collaborate, share best practices, and integrate 21<sup>st</sup> century skills into classroom practice.
- Enables students to learn in relevant, real world 21<sup>st</sup> century contexts (e.g., through project-based or other applied work).
- Allows equitable access to quality learning tools, technologies, and resources.
- Provides 21<sup>st</sup> century architectural and interior designs for group, team, and individual learning.
- Supports expanded community and international involvements in learning, both face-to-face and online.

Such an environment fosters learning tailored to the needs and wants of the individual. This sort of learning occurs anytime and anyplace, when and where the learner desires. It takes place in a context of relevance, “just in time,” rather than “just in case.” And such learning offers “just what I need”- that is, the opportunity to acquire knowledge and skills through learning strategies that are personalized and adapted to the learner’s own learning styles and preferences (Partnership for 21st Century Skills, 2009, p.5).

With current technological advances, the influence of career and technical education has never been more important. The 21<sup>st</sup> century will require a greater connectivity between career and technical education and academics. “As technology evolves, our society is going to become so complex that we will have some form of CTE imbedded in all of our education” (Reese, 2009, p. 17). “In the 21<sup>st</sup> century, you don’t have the right to be uneducated. If you are not doing what you can to become a better educated, you will lose the future” (Reese, 2009, p. 15).

### *History of Youth Apprenticeship*

Youth Apprenticeship is the ultimate school-business partnership (Hamilton, 1994). It is a partnership based on the intention to create a workforce of successful students for the future of America. The Wisconsin Youth Apprenticeship program is modeled off the German model of youth apprenticeship.

In Germany at 11 years of age, students are guided into one of three kinds of schools. According to Haynsworth and Persealy (1994) those students that are deemed capable of succeeding at the university level are enrolled in Gymnasium. Those with above average academic aptitude, but who are interested in “practical” occupations, enter a Realschule, whereas those who have demonstrated only modest academic skills are directed to a Hauptschule. The graduates of a Gymnasium usually enter a university and graduate into such professions as

medicine and law, the typical graduate of Realschule or Hauptschule enters an apprenticeship in one of literally hundreds of occupations.

Although there is a large difference in the offerings to apprentices in Germany as there are to apprentices in the United States the overall concept remains the same. Americans would be very unlikely to support an educational system that determined at an age 14 or under whether or not a young person could pursue a college degree (Haynsworth & Persealy, 1994). The Youth Apprenticeship program in the United States begins at the student's junior and senior years of high school and not at age 14. Regardless of how the program is implemented and run, one thing remains the same. Both of these models of Youth Apprenticeship focus on the relationships between educational system and the labor market. The transition from school and education to the workforce is the basis and background for the apprenticeship system in both Wisconsin and Germany.

*Career Clusters and Pathways: What They Are and Why We Need Them*

“A Career Cluster is a grouping of occupations and broad industries based on commonalities. The sixteen career clusters provide an organizing tool for schools, small learning communities, academies, and magnet schools” (Careerclusters.org, 2009). “Occupations/career specialties are grouped into the Career Clusters based on the fact that they require a set of common knowledge and skills for career success” (Careerclusters.org, 2009). The Office of Vocational and Adult Education (U.S. Department of Education, 2002) had identified 16 career clusters that high schools can choose from, depending on local labor market opportunities. The States' Career Clusters Initiative (SCCI) (Careerclusters.org, 2009) has identified sixteen different career clusters:

- Agriculture, Food & Natural Resources

- Architecture & Construction
- Arts, A/V Technology & Communications
- Business Management & Administration
- Education & Training
- Finance
- Government & Public Administration
- Health Science
- Hospitality & Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections & Security
- Manufacturing
- Marketing
- Science, Technology, Engineering & Mathematics
- Transportation, Distribution & Logistics

A career pathway is an educational road map outlining an aligned sequence of courses that prepares students for college and career transition in a specific industry area. A career pathway leads to multiple options for students such as early college credit beginning in high school, industry certification requirements, certificate or associate degrees, employment, and in some cases preparation for transfer to a university (Careerclusters.org, 2009, p. 1).

“A career pathway is a coherent, articulated sequence of rigorous academic and career and technical courses, commencing in the ninth-grade and leading to an associate degree, baccalaureate degree, or industry certification” (Whitaker, 2008, p. 22).

“A program of study is a sequence of instruction (based on recommended standards and knowledge and skills) consisting of coursework, co-curricular activities, work-site learning, service learning, and other learning experiences” (Careerclusters.org, 2009, p. 1). Junior high and middle school students are able to utilize career pathways to begin exploring career paths and create a course of study for their high school years. “As students enter high school and become more sophisticated, they can focus their coursework in a specific career cluster” (Whitaker, 2008, p. 22). A Program of study further breaks down one career option for students and provides a select career path to get to one selected career.

“This latest Career Pathways Initiative makes the discussion about career development clear and tangible to young people. It makes sense to all students, includes all careers and all levels of education, and demonstrates that all education is career education. Career pathways validate the entire educational enterprise” (Whitaker, 2008, p. 23). Students are able to see all their viable options through career pathways. This gives students options and they begin to see the connection between education and their future work opportunities. “The elements of these structures are pedagogically and theoretically sound. One possible reason for success might be the focus on all students, and not simply those not deemed “college material” (Stone, 2005, p. 9).

#### *Career and Technical Education: The Connection*

Looking at high schools in America today, one must wonder what happens to the two-thirds of young people who successfully complete high school. We must also wonder what happened to the one-third of young people that didn't complete high school. Research shows that most of these students are inadequately prepared for life after high school to fulfill their roles as students in a post secondary setting or employees in the workplace today. Part of this inadequacy may be a direct result from the programs and curriculum used in high schools around America

that focus solely on preparing students for college rather than work. The pursuit of a college credential is driven by the belief that the high school degree holds little value to employers.

Kantor stated that early advocates of vocational education maintained that by linking education more closely to the work place, vocational education would keep young people in school, increase wages and job opportunities for poor and working-class youth, and make the American economy more competitive in the battle for international markets. Today's youth seem to be more "hand-minded" or "finger-minded" (Kantor, 1994). Many researchers have suggested that one solution to the problem of poor student preparation for work is simply to increase the requirements of academic courses and to make those courses longer and more rigorous (Hamilton, 1990). Most schools would argue that the average student doesn't need more rigorous and longer courses but needs more hands on courses to prepare them for the world outside of high school.

Career and Technical Education (CTE) is in a curious position as the nation moves into the 6<sup>th</sup> year of No Child Left Behind (NCLB) school reform era (Stone, 2005). Stone stated that studies have shown CTE helps increase students outcomes and achievements. For most of CTE this would be good news however, secondary CTE is increasingly under pressure as schools try to address the perceived education gaps by adding more academic courses to the school day squeezing out time for electives and especially CTE.

James R. Stone (2005) stated the goal of Career and Technical Education should be for all students to finish high school prepared either to enter the workplace (which had come to demand strong academic skills and other "new basic" skills) or to begin postsecondary education. The broader mission challenges vocational educators to teach beyond the confines of specific occupations and, instead, to prepare students for a more demanding world of work.



Hamilton notes, however, that while these high school students may see the abstract world of academics as pointless, they almost always put a high value on work. Many will switch to a vocational curriculum simply because they see courses as more “real” than studying Shakespeare or struggling through algebra (Powers, 1997, p.2). Therein lies the key to success of apprenticeships. Youth Apprenticeship allows for students in Career and Technical Education courses to apply learned skills in class to the workplace. Career and Technical Education can induct students into the workplace and help the develop workplace skills and make the real world connection to their futures.

#### *Benefits to the Students Involved in the Youth Apprenticeship Program*

There are many benefits of the Youth Apprenticeship Program to the students or apprentices involved. “By choosing an apprenticeship, students are not opting out of attending a four-year college,” says Mary Agnes Hamilton. “They can stop and enter the job market or go on to college. It’s part of a career path that opens up other opportunities” (Powers, 1997, p. 4). Students involved in the program will increase their technical expertise and social competency. The student’s success revolved around the participation of the parents, employer, and the school representative. Each has a vital part in the success and choices of the youth apprentice.

Kantor claims that after students become involved in the Youth Apprenticeship programs, whether they are non-college bound or college bound, they will begin to see a direct link between what they do in the classroom and their future occupational careers. Consequently, they will work harder in school in order to acquire the skills they need to succeed in the labor markets. Kantor also argued that by exposing young people to more responsible adults in the work place, an apprenticeship system would help adolescents mature more quickly and thereby make it less likely they will get involved with drugs, commit crimes, or get pregnant.

For these students, a job-based education program like apprenticeship does indeed seem to offer a much-needed alternative to the academic orientation of the high school curriculum (Kantor, 1994). Youth Apprenticeship allows students to more fully understand what it means to be a worker and a member of a community. Fillipczak (1992) cited the following social benefits of apprenticeships:

- Youth apprentices spend more time in the work world and less time hanging out with friends.
- Mentors teach apprentices how to do the work, and they may also share tips for being politically savvy in the business world.
- Mentors often provide tricks of the trade and of the company. The apprentice learns that it's not always just knowing the rules that matters; it's knowing how the rules really operate.

Youth apprenticeship is an effective way to gain many of the skills needed to become competitive in a rapidly changing and technological workplace (Evanciew, 1994). Youth apprenticeship can offer rich opportunities for those that choose to participate and give them a foot ahead in today's workplace.

#### *Benefits and Challenges to the Employers Involved in the Youth Apprenticeship Program*

The Department of Workforce Development states that 98 percent of employers say they would recommend the program to other businesses and that over 85 percent of Youth Apprenticeship graduates are offered jobs by their employers at the end of their apprenticeship (2007). Employers involved in the Youth Apprenticeship program are offered many opportunities to train their future workforce by being involved in the Youth Apprenticeship program. Employers rate apprentices better than other entry-level workers in computer skills;

company understanding; technical skills; and acting responsibly and professionally (Institute on Education and the Economy, 2001). Businesses benefit from apprenticeship programs by being assured that high school graduates have been trained on current equipment and techniques; they are also strengthened by having employees who are able to confront the changing, flexible, and competitive nature of a global workforce (Evanciew, 1994).

Along with benefits of creating their own workforce there are many challenges that also accompany taking on a youth apprentice. Employers and mentors, however, defined their own set of workplace challenges in trying to create learning environments while also maintaining an efficient business (Scribner & Wakelyn, 1998). Many employers feel that the cost to have a youth apprentices on board is more costly than the benefits of creating their future workforce. Seeing the times with our economic downslide companies are now more than ever enthusiastic about the youth apprenticeship program as there continues to be a growth of unskilled workers to fill skilled workers positions.

Increasingly, the demands and changes in modern workplaces require workers who are highly skilled and independent thinkers (Evanciew, 1994). In order to meet these challenges it is programs such as Wisconsin's Youth Apprenticeship that will shape the workforce of our future. Students will acquire the needed skills through this program to be successful and lead a fulfilling and skilled future.

### Chapter III: Methodology

Youth Apprenticeship programs continue to remain strong in times of economic uncertainty in the United States. Many employers today rely on these programs to assist in providing them the skilled workforce for the future. Student participants in the Youth Apprenticeship programs rely on the opportunities this program provides to assist them in their future career choices and the process to gain skills and knowledge needed for these occupations. Little research has been done over the past fourteen years as to what the success rate of these programs are in the Manitowoc county area. Things to be considered about the overall success of the program are student's interest level at entrance into program, on the job experiences, opportunities after high school and the program, and student's interest level when exiting the program. Answers to all of these considerations will provide students, parents, employers, and state funding agencies the information they need to continue to offer programs such as Youth Apprenticeship.

#### *Subject Selection and Description*

This study utilize can be classified as a descriptive nonexperimental design. Descriptive research is a type of quantitative research that involves making careful descriptions of educational phenomena (Gall, 2007). Descriptive studies tend to evaluate the "what is" of the study. Some descriptive studies involve primarily the administration of questionnaires or interviews to samples of research participants. This type of research (sometimes called survey research) had yielded much valuable knowledge about opinions, attitudes, and practices (Gall, 2007). In this study, descriptive research will be measured through observations of subjects, pre and post questionnaires, and interviews.

Utilizing a longitudinal study, the research subjects were followed, observed, interviewed, and questioned over a one year time period. A longitudinal study involves collecting data from a sample at different points in time in order to study changes or continually in the samples characteristics (Gall, 2007). The study utilized a panel study which allowed for a one year short duration of the study. A panel study involves selecting a sample at the outset of the study and then at each subsequent data-collection point surveying the same sample (Gall, 2007). Data collection was accomplished through a survey, observations, and interviews. Utilizing a panel study allowed for the best opportunity to identify how and in what way each subject's experience was perceived to have changed.

All students enrolled in the Youth Apprenticeship programs of Manitowoc County were selected as a sample for the research study. Subjects were identified and selected based on their current enrollment in the Manitowoc County Youth Apprenticeship Program. Currently Manitowoc County Youth Apprenticeship has fifty-three students enrolled in the program coming from six area high schools consisting of Lincoln High School in Manitowoc, Mishicot High School in Mishicot, Valders High School in Valders, Roncalli High School in Manitowoc, Reedsville High School in Reedsville, and Two Rivers High School in Two Rivers, Wisconsin.

All subjects were enrolled in the following program areas; Agriculture, Auto Technician, Drafting and Design, Finance, Health Services including nursing assistant and pharmacy technician, Hospitality, Tourism, and Lodging, Manufacturing Machining, Manufacturing Woods, and Welding. Of the 53 subjects 17 identified themselves as females. Thirteen (13) of the Youth Apprenticeship students reported junior status in high school while 40 students are reported being seniors in high school. All juniors in high school are level-two participants and will complete the two-year program during 2009-2010 school year.

All seniors in high school are level-one participants and completed the one-year program in June of 2009. Additionally, five of the senior-level subjects reported to be completing the level-two program that they started in 2007.

### *Instrumentation*

The data collection method used included an eight-question survey (Appendix A) written by the researcher. This survey was provided to all subjects at the completion of their first (for first year students) or third semester (for second year students) of the Youth Apprenticeship program. The same survey was proctored at completion of the Youth Apprenticeship program to determine if the subjects' career goals and objectives had changed throughout the program.

The survey itself included constructed response elements (open ended), meaning that respondents can make any response they wish (Gall, 2003). Each question individually addressed career goals and aspirations prior to entering the youth apprenticeship program, reasoning for entering the program, how subjects found out about the program, and the programs influence on their future career goals. The last question utilized the Likert scale, which typically asks for the extent of agreement with an attitude item (Gall, 2003). The Likert scale was used to assess the students' overall satisfaction with the youth apprenticeship program thus far. The survey was estimated to take a student no longer than ten minutes. The survey also allowed for gaining personal insights into the students' youth apprenticeship experience. No measure of validity or reliability has been documented since the survey was designed specifically for this study and by a novice researcher.

### *Data Collection Procedures*

The survey was employed during the subjects second semester grading conferences. Each Youth Apprenticeship student was given an eight question survey at their quarterly grading

conference. Quarterly, parents, student, employer, school liaison, and county coordinator get together for a grading conference to assess progress and discuss future workplace placements. Included with the survey was an informational letter for the parent and student regarding the research and to obtain subject consent.

Upon consent the youth apprentice completed the survey, when completed it was collected by their school liaison that then returned them to the researcher. The entire process of distribution and completion took no more than three weeks to complete. Individual students who did not return the surveys in a timely manner were reminded by their school liaison. The researcher kept reminding all school liaisons to collect these from the apprenticeship students.

The county coordinator, throughout the 2008-09 school year, also observed students enrolled in the youth apprenticeship program. The county coordinator conducted observations at quarterly grading conferences, worksite visitations, school visitations, and during student technical college courses. Through observations student's progress toward career goals was tracked on a more personal basis through completion of the program.

Subjects were also periodically interviewed to gauge progress on career goals and to ensure their success in the program. The major advantage of interviews was its adaptability by a skilled interviewer, gaining subject trust and rapport, thus making it possible to obtain information that the individual probably would not reveal by any other data-collection method (Gall, 2003).

#### *Data Analysis*

Data was collected and analyzed according to the original questions on the pre and post survey, data collected through interviews, and overall opinions from observations. This data allowed the researcher to compile a listing of all students involved, their program areas,

enrollments in Career and Technical Education courses, initial career goals, end career goals, completion of the youth apprenticeship program, and retention of career area. Data from the surveys, observation, and interviews was also compared to the original research questions to ensure all information was gathered in an effort to maximize validity. Recommendations were developed and shared with participating schools as well as the Wisconsin Department of Workforce Development.

### *Limitations*

This study has several limitations; including the survey, subject observations, and interviews were all designed and completed by a novice researcher. The novice researcher who prepared the survey was a new coordinator of the program. The researcher may not have enough background on the program to draw adequate conclusions. Another limitation of the study may be the county being studied. Some program areas in the Manitowoc County Youth Apprenticeship have very few students enrolled in that specific program area, making the results very small in that area. Another limitation was the maturity level of the program students. Understanding that most of the data encompasses opinions of 16-18 years old respondents may impact the findings. Finally, noting that the findings are specific to the Manitowoc county area, others may not be able to utilize them as originally intended.



## Chapter IV: Analysis of Findings

### *Introduction*

The purpose of this study was to determine the career outcomes of Manitowoc County Youth Apprenticeship students in relation to career choices before and after completion of the Youth Apprenticeship program. It also sought to identify needed improvements and modification that need to be made based on the results of this study.

A summary of demographics of respondents is shown in Table 1. Table 2 identifies the Program area of respondents and the program length of respondents for each program area.

Table 1. *Demographics*

<b>Category</b>	<b>Respondents</b>
<b>Gender</b>	
Male	32
Female	14
<b>Grade Level</b>	
11	20
12	26
<b>Program Length</b>	
1 Year	32
2 Year (2007-08)	5
2 Year (2008-09)	9

Table 2. *Program Area Demographics*

Program Area (2008-10)	1 Year Program	2 Year Program (2007-09)	2 Year Program
Agriculture	3	2	2
Automotive Technician	1		
Drafting & Design	2	1	1
Finance	6	0	1
Hospitality	0	1	0
Health – CAN	9	0	0
Health – Pharmacy Tech	1	0	0
Manufacturing Machining	4	2	3
Manufacturing Woods	2	0	1
Welding	3	0	1

The survey (Appendix A) provided Manitowoc County Youth Apprenticeship participants with questions regarding career goals and educational objectives prior to the program and upon completion. It also provided how respondents learned about the program, why they chose to participate in the program, the programs influence on their future career and educational goals, and their overall satisfaction with the Manitowoc County Youth Apprenticeship Program. A total of 53 surveys were either hand delivered or sent in the mail to Manitowoc County Youth Apprenticeship completers; 46 surveys were returned and tabulated.

Table 3 identifies the appropriate Career Cluster and the retention rate of those clusters among Manitowoc County Youth Apprenticeship respondents. Respondents were placed in the

appropriate career cluster based on where each youth apprenticeship program fit into the individual clusters. For example, the Welding youth apprenticeship was placed in the manufacturing career cluster based on welding being a career option under this cluster. The respondents are considered retained if they remain in the same career cluster but not always the same career area. For example, a respondent that participated in the welding youth apprenticeship but upon completion of the youth apprenticeship program entered into a millwright adult apprenticeship would still be retained in the manufacturing cluster based on the cluster in which a millwright is an identified occupation. The percent retained is based on a 100 percent of respondents who entered into the specific career cluster and how many were identified as being retained in that cluster. The average percent retained was identified as being approximately 73.4 percent overall.

Table 3. *Career Cluster Retention Rate*

Cluster	Total Respondents	Respondents Retained	Percent Retained
Agriculture, Food & Natural Resources	7	5	71.4%
Transportation, Distribution & Logistics	1	1	100%
Architecture & Construction	4	4	100%
Finance	7	5	71.4%
Hospitality & Tourism	1	0	0%
Health Science	10	9	90%
Manufacturing	16	13	

Table 4 and 5 identify the educational plans prior to and upon completion of the Youth Apprenticeship Program. Respondents were given 2 year college, 4 year college, military,

workforce, and other as options on the survey (Appendix A). The tables and graphs show that respondents changed their educational goals upon completion of the youth apprenticeship program. Respondents showed a 12.8 percent change in their plans to attend a 2 year college, a 3 percent change in their plans to attend a 4 year college, and a 26.3 percent or increase of those that entered the workforce upon completion of the program.

Table 4. *Educational Plans Prior to Youth Apprenticeship Participation*

Cluster	Total Respondents	2 Year College	4 Year College	Military	Workforce	Other
Agriculture, Food & Natural Resources	7	1	2	0	4	0
Transportation, Distribution & Logistics	1	1	0	0	0	0
Architecture & Construction	4	1	3	0	0	0
Finance	7	2	5	0	0	0
Hospitality & Tourism	1	1	0	0	0	0
Health Science	10	5	5	0	0	0
Manufacturing	16	11	2	0	3	0

Figure 1. Educational plans prior to youth apprenticeship participation

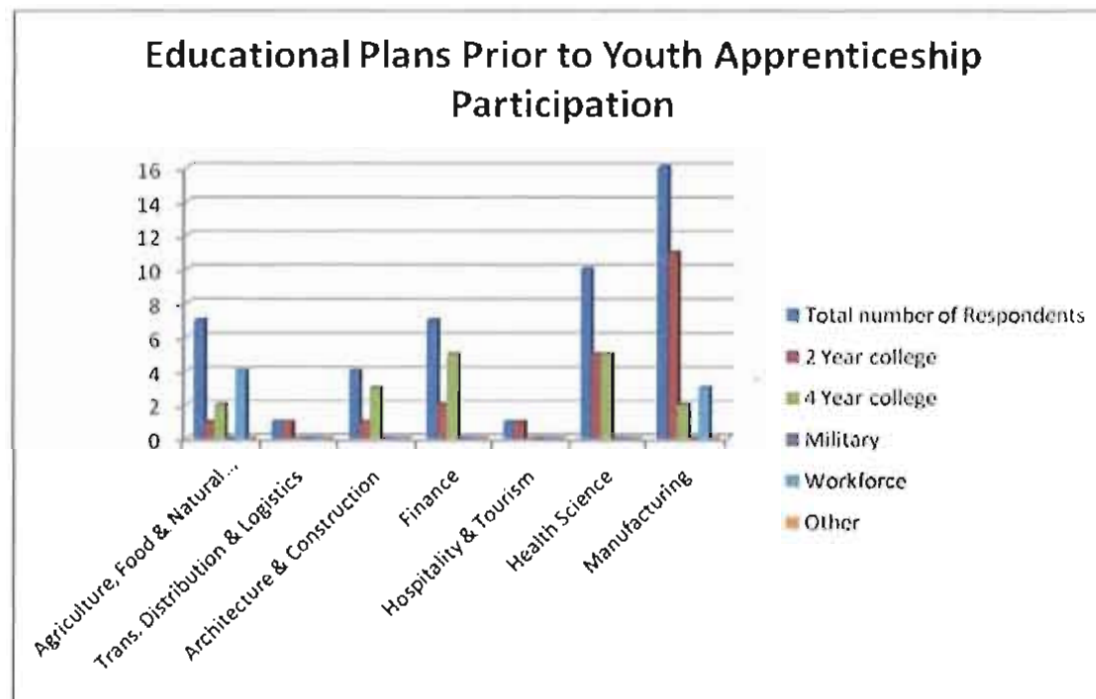


Table 5. Educational Plans After Completion of Youth Apprenticeship Participation

Cluster	Total Respondents	2 Year College	4 Year College	Military	Workforce	Other
Agriculture, Food & Natural Resources	7	2	2	0	3	0
Transportation, Distribution & Logistics	1	1	0	0	0	0
Architecture & Construction	4	1	3	0	0	0
Finance	7	2	5	0	0	0
Hospitality & Tourism	1	0	0	1	0	0
Health Science	10	4	4	0	2	0
Manufacturing	16	7	2	0	7	0

Figure 2. Educational plans after completion of youth apprenticeship participation.

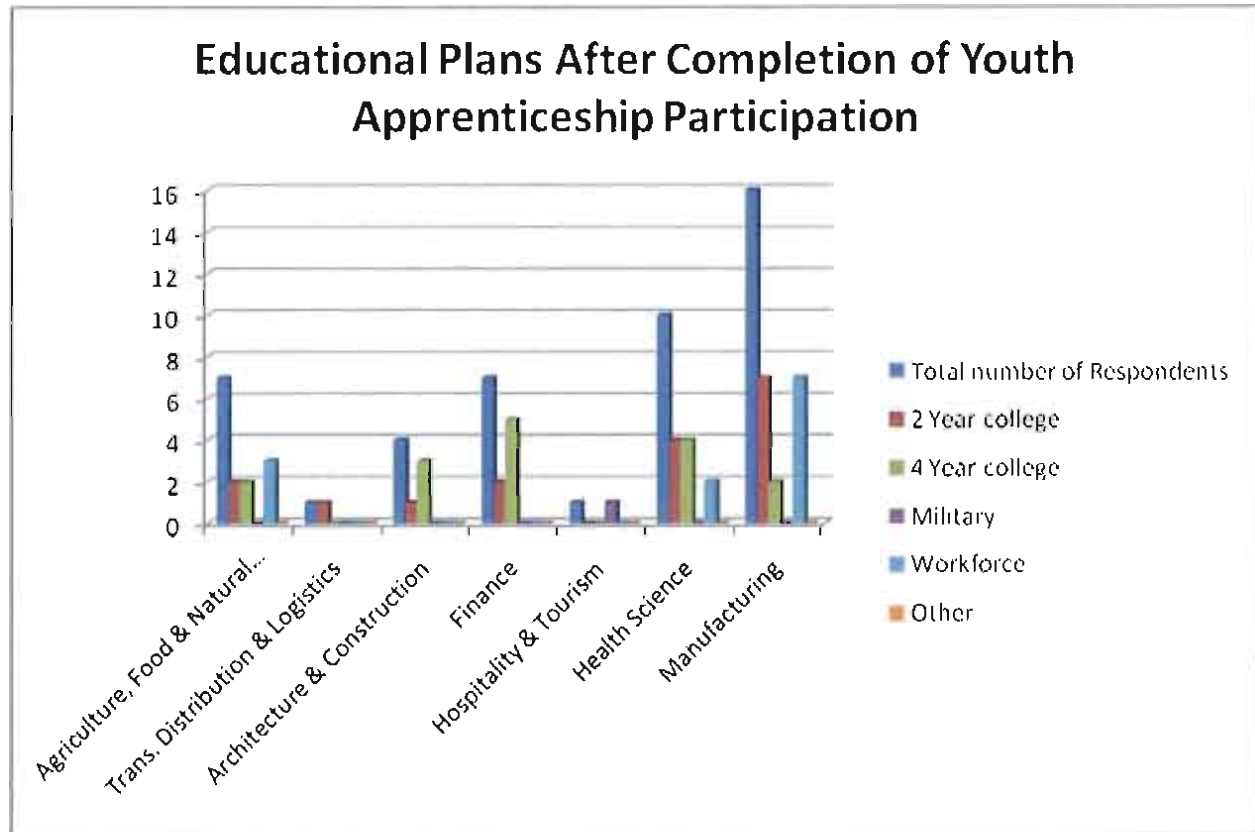


Table 6. *Change in Education Goals of Youth Apprenticeship Respondents*

Cluster & Educational Options	Prior to Participation	After Participation	% Change
<b>Agriculture, Food &amp; Natural Resources</b>			
2 Year College	1	2	50%
4 Year College	2	2	0%
Military	0	0	0%
Workforce	4	3	25%
Other	0	0	0%
<b>Transportation, Distribution &amp; Logistics</b>			
2 Year College	1	1	0%
4 Year College	0	0	0%
Military	0	0	0%
Workforce	0	0	0%
Other	0	0	0%
<b>Architecture &amp; Construction</b>			
2 Year College	1	1	0%
4 Year College	3	3	0%
Military	0	0	0%
Workforce	0	0	0%
Other	0	0	0%
<b>Finance</b>			
2 Year College	2	2	0%
4 Year College	5	5	0%
Military	0	0	0%
Workforce	0	0	0%
Other	0	0	0%
<b>Hospitality &amp; Tourism</b>			
2 Year College	1	0	100%
4 Year College	0	0	0%
Military	0	1	100%
Workforce	0	0	0%
Other	0	0	0%
<b>Health Science</b>			
2 Year College	5	4	20%
4 Year College	5	4	20%
Military	0	0	0%
Workforce	0	2	50%
Other	0	0	0%
<b>Manufacturing</b>			
2 Year College	11	7	36%
4 Year College	2	2	0%
Military	0	0	0%
Workforce	3	7	133%
Other	0	0	0%

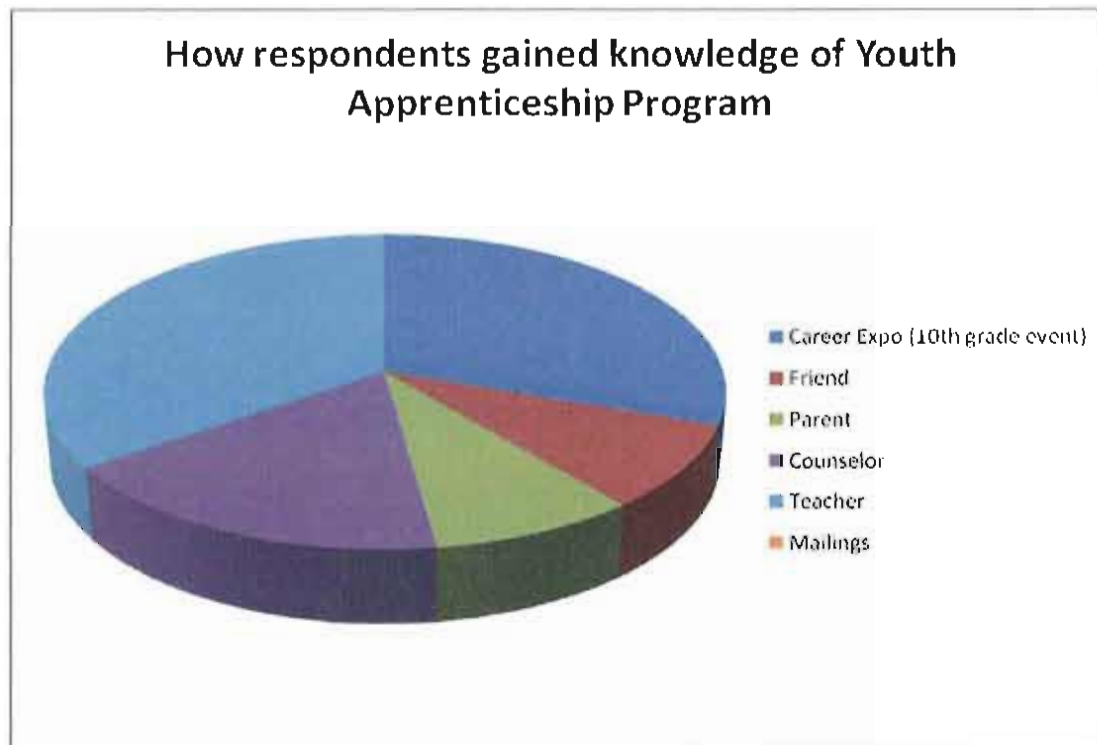
The above findings support the ideas presented in the literature review (Chapter Two) of this study. Numerous researchers (Stone, 2005; Powers, 1997; Kantor, 1993; Kantor, 1994; and Department of Workforce Development, 2007) have stated that all students should be prepared to enter the workforce or begin postsecondary education. These researchers noted the importance of having such a program that enables students to see the direct link between what they do in the classroom and how that will benefit their future careers and goals.

Table 7. *How Knowledge of Program Gained*

Methods	Respondents	Percent
Career Expo (10 <sup>th</sup> grade event)	14	30.4%
Friend	4	8%
Parent	4	8%
Counselor	8	17%
Teacher	16	35%
Mailings	0	0%



Figure 3. How respondents gained knowledge of youth apprenticeship program



The above table and figure represents how respondents gained knowledge of the Youth Apprenticeship Program. Thirty-five percent (35%) of respondents learned about the program from their current teacher. Teachers are proud to promote the program because of previous students' success. Seventeen percent (17%) of respondents learned about the program through their guidance counselor at their school. Many of the current guidance counselors currently serve in the role as the schools youth apprenticeship liaison.

Thirty point four percent (30.4%) of respondents gained knowledge of the program from their 10<sup>th</sup> grade experience at the career expo event. This event takes place at either the University of Wisconsin Manitowoc, Silver Lake College, or Lakeshore Technical College and enables students to explore career options through attending sessions by career cluster. All Manitowoc County high school students attend the career expo and learn about employability skills, a now what session on postsecondary options, a career fair, and Science, Technology,

Engineering, and Mathematics session. Current youth apprentices take part in this event to share their experiences with the program, promote the program, and host a table in the career expo where students can ask questions about the program.

The last 16 percent of respondents were divided among friends and parents. Respondents showed that 8 percent learned of the program through a parent and the other 8 percent from a friend.

Table 8 and 9 along with the below bar graphs show the respondents impact of the Youth Apprenticeship Program on future career plans and educational plans. Respondents are broken down into individual career cluster areas. Of the 46 respondents, 42 respondents said that Youth Apprenticeship program impacted their future career plans; whereas 4 said that the program didn't have an impact on their plans. Of the 46 respondents, 41 respondents said the Youth Apprenticeship program had an impact on their future education plans; whereas 5 said that the program didn't have an impact on future educational decisions.

Table 8. Respondents Impact of Youth Apprenticeship Program on Future Career Plans

Program Area	Respondents	Yes	No
Agriculture	10	8	2
Transportation, Distribution & Logistics	1	1	0
Architecture & Construction	4	4	0
Finance	7	6	1
Hospitality & Tourism	1	1	0
Health Science	10	10	0
Manufacturing	16	15	1

Figure 4. Respondent's impact of youth apprenticeship program on future career plan

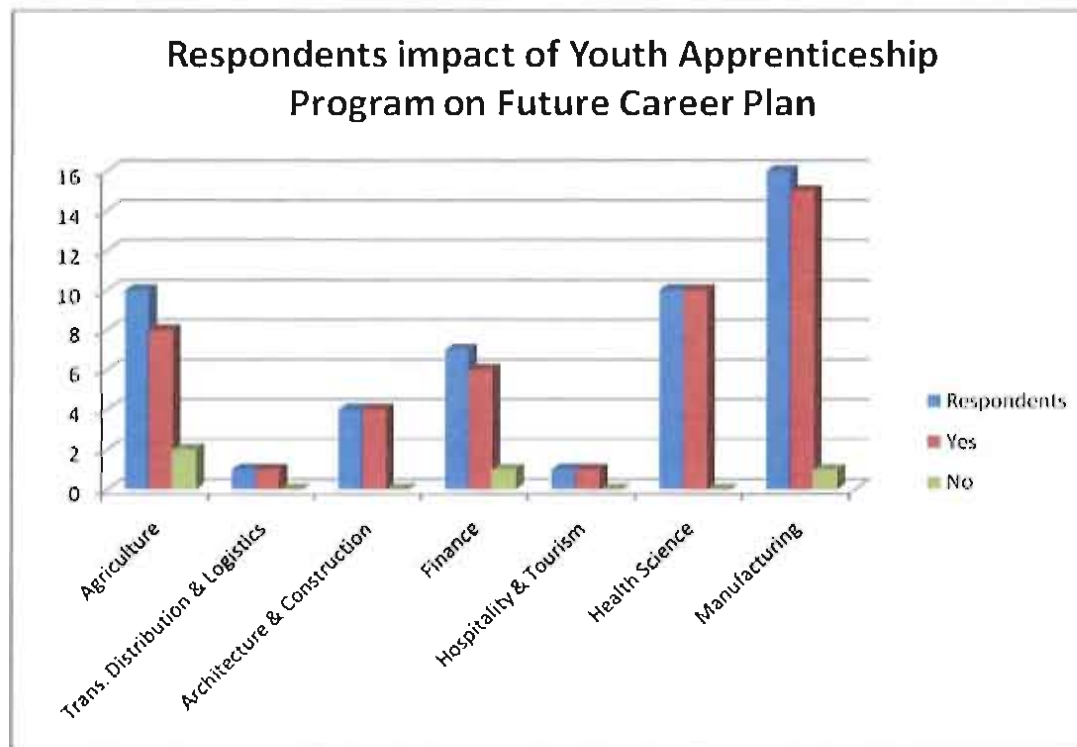


Table 9. Respondents Influence of Youth Apprenticeship Program on Further Educational Plans

Program Area	Respondents	Yes	No
Agriculture	10	9	1
Transportation, Distribution & Logistics	1	1	0
Architecture & Construction	4	4	0
Finance	7	5	2
Hospitality & Tourism	1	1	0
Health Science	10	9	1
Manufacturing	16	15	1

Figure 5. Respondents influence of youth apprenticeship program on further educational plans

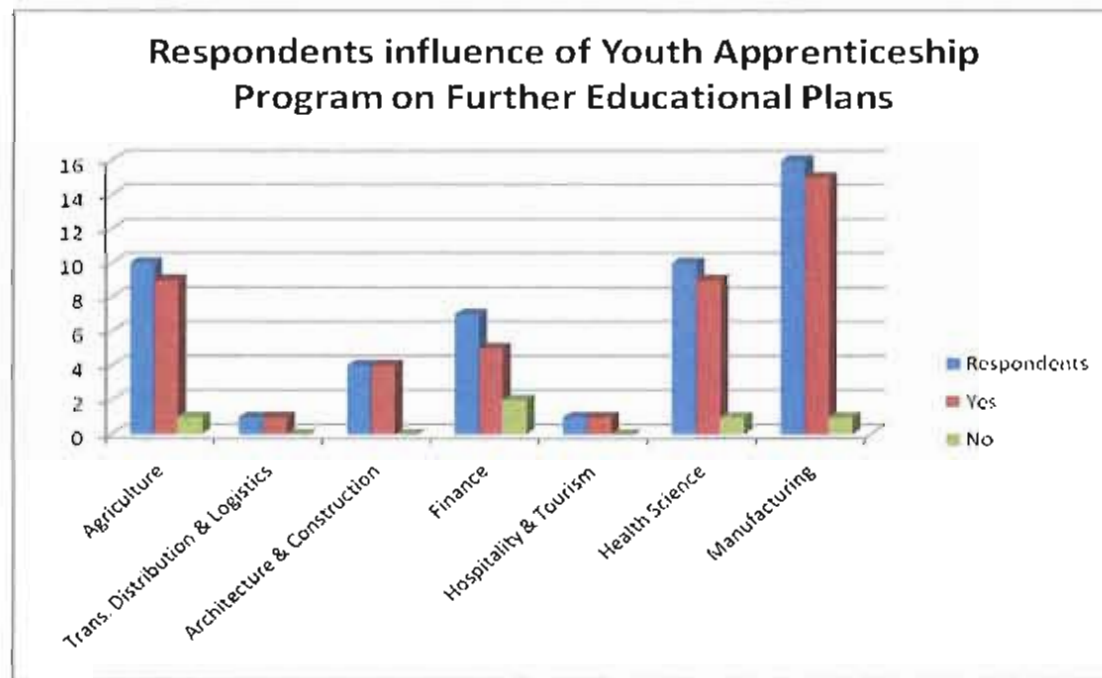


Table 10. Overall Satisfaction with Manitowoc County Youth Apprenticeship Program

Ratings	Respondents
1 (Poor)	0
2	0
3	8
4	10
5 (Excellent)	28

Figure 6. Overall satisfaction with Manitowoc County youth apprenticeship program



The above table and figure shows the overall satisfaction with the Manitowoc County Youth Apprenticeship Program. Sixty point eight percent (60.8%) of Manitowoc county youth apprenticeship program completers rated the program as being excellent. Twenty-one point seven percent (21.7%) of respondent rated the program at a 4, whereas 17.3 percent rated it at a 3

or average. No respondents rated the program at 1 or 2; otherwise no poor ratings were given.

The average score was between 4 and 5 or at a mean of 4.43. The mode and median were identified as a 5, meaning that the majority of the respondents rated the program excellent.

## Chapter V: Discussions

### *Introduction*

This chapter will present the study's conclusions and provide recommendations based on the findings of this study. The purpose of this study was to determine the career outcomes of Manitowoc County Youth Apprenticeship students in relation to career choices before and after completion of the program. With this information, the Manitowoc County Youth Apprenticeship program will focus on long term improvements and changes based on the results of this study.

### *Conclusions*

*Research Objective One:* The first objective of this study was to identify the career pathway retention rate of students enrolled in specific youth apprenticeship programs. The total number of respondents was 46, 37 of them were retained in their career cluster. Eighty percent (80%) of respondents were retained across the seven career clusters that correlate with the youth apprenticeship program areas studied. Health science, transportation, distribution, and logistics, and architecture and construction maintained the largest percentage of respondents that remained in the same career cluster.

While many respondents remain in the same career cluster but may have switched their career goals that are in alignment with the same career cluster. This does indicate the power of the cluster through its multitude of career pathways that the apprentice can move into. For example, a respondent in the health science area entering the program with the career goal of nursing and at the completion of the program they remain in the same cluster of health sciences but have switched their career goal to radiology (this is consistent with Careerclusters.org, (2009) information on career clusters and pathways).

Of the 46 respondents surveyed, 26 remain employed at their youth apprenticeship worksite while they attend a post-secondary institution or work toward completing an adult apprenticeship. Six remain employed full or part time at their youth apprenticeship worksite or at a new place of employment in the same career. Eleven respondents are attending post-secondary education or completing high school while the remaining three were terminated after completion of the youth apprenticeship program. The three terminations were due in large part to the current economic conditions, as evidenced by the employer's comments at the end of the program. These numbers are a test to the success of the Manitowoc County Youth Apprenticeship Program. One year after the experience, 94 percent of respondents are either currently employed in their career pathway or are continuing their education in pursuit of a degree in the same career cluster.

Youth Apprenticeship reporting requirements dictate that program coordinators ascertain whether youth apprentices will remain employed upon completion of the youth apprenticeship. In every case but two, employers stated that the apprentices were valuable assets who would normally be hired on full time, but economic conditions would not allow for it.

With the current state of the economy, some of the respondents were indefinitely laid off, therefore having to choose another career or career pathway to pursue. The choice to pursue another occupation most likely came from their inability to gain employment in their chosen area or the possibility of an unsure future. The students may not have wanted to choose another occupation but needed to gain employment upon graduation from high school.

*Research Objective Two:* The objective sought to answer the question to what extent the youth apprenticeship experience refines career objectives and educational goals of the students involved. This was accomplished by compiling the results of the survey (Appendix A) where



respondents defined their educational and career goals prior to the youth apprenticeship program and upon completion of the program.

The results of the survey indicate that the largest change in educational goals were where respondents had indicated their educational goals as 2 year college prior to the program, but after completion of the program this shifted to their participation in the workforce. While this may seem like a bad thing, it might be explained by a weakness in the survey. The researcher failed to offer adult apprenticeship as a post-secondary option for students. Therefore, students could have defined an adult apprenticeship as either continuing onto the workforce or a two year college rather than an adult apprenticeship that combines work hours with technical college instruction.

Youth Apprenticeship programs are designed for students to begin to see a direct link between what they do in the classroom and their future occupational careers (this is consistent with Kantor, (1994) findings on the Youth Apprenticeship Programs). Ninety-one percent (91%) of respondents indicated that the youth apprenticeship program impacted their future career plans, and 89 percent of respondents said that the youth apprenticeship program impacted their educational plans. This shows that participants did find the experience valuable in shaping their career and educational decisions.

This reinforces findings in the literature review that indicate students are able to explore their career interests and get a jump start on their future. For the respondents this program has allowed them to explore their career of interest in a true business and industry environment. Whether respondents remained at their place of employment, went on to postsecondary education, or chose to pursue a completely different direction with their careers or education, the program can still be deemed a success because students are given a chance to learn more about a

career before they invest a great deal of time and money pursuing their future goals for post-secondary education and their careers.

*Research Objective Three:* This objective of the study is to determine the extent to which student participation in a Youth Apprenticeship program contributes to a prepared and educated workforce. This concept is well defined in the literature review and all data, graphs, and charts in chapter 4. The overall success rate for the Manitowoc County Youth Apprenticeship program can be based on many factors researched including the overall satisfactions of respondents, changes in career goals, total number of completers in the program on a yearly basis, educational goals, and career cluster retention rates. The most prominent and related of this data is the career cluster retention rate. Eighty percent (80%) of respondents remained within their career cluster. These students went on after high school to 4 year colleges, 2 year colleges, adult apprenticeships, or into the workforce. All of these options are important pieces contributing to a prepared and educated workforce.

A large factor in the 20 percent of respondents that weren't retained in their career cluster was the economy in Manitowoc County. Upon respondents' completion of the youth apprenticeship program in June 2009, the unemployment rate in Manitowoc County was 10.8 percent, whereas the Wisconsin unemployment rate was at 9.2 percent and the United States unemployment rate reached 9.7 percent. Upon completion of the program several respondents' were temporarily laid off, offered only part time work, or not offered a job solely based on the economic conditions. Many respondents' workplaces are unionized which didn't allow much room for hiring while other employees were being placed on lay off.

Fourth quarter grading conferences showed that based on exit interview, employers stated that 91 percent or 42 of the 46 respondents would have been or were hired on based on their

experiences with the respondents over the past one or two years. Employers felt strongly about the present economic obstacles being a barrier to the respondent's future employment. Several respondents were forced to complete their programs early due to economic conditions and layoffs in their place of employment, while others were laid off for a short time during the school year but eventually completed the program in the summer.

The end result of respondents not being hired or being laid off resulted in a shift in their career cluster or interest of choice. Many respondents were forced or more inclined to find work in other career clusters to satisfy their basic needs or desire for a specific or different career. Only three respondents reported to have changed their career cluster based on their experience and change of interest as a result of their experience with the youth apprenticeship program.

All respondents (100%) enrolled in the youth apprenticeship program are enrolled in career and technical education courses. The Youth Apprenticeship program requires participants to have related instruction in their high school career and technical education courses or at the local technical college in the area of their apprenticeship. This related instruction further contributes to an educated workforce.

Numerous researchers (Stone, 2005; Hamilton, 1990; Powers, 1997) have linked career and technical education courses to the success of students by preparing them for a more demanding and skilled workforce. Although some students may see academics as pointless, they put a high value on work and hands on learning. The core concept of the Youth Apprenticeship program is hands on learning in a workplace setting. The mission of career and technical education is to prepare students for multiple roles and responsibilities over the entire lifespan- from early childhood to late adulthood. Youth Apprenticeship combined with career and technical education provide a solid foundation for creating a prepared and educated workforce.

Another key indicator that the youth apprenticeship program prepares students to enter a prepared, skilled and educated workforce is their progress monitoring that takes place during the duration of their apprenticeship. All students enrolled in the Manitowoc County Youth Apprenticeship program attend quarterly grading conferences along with their school liaison, parents and/or guardians, the county coordinator, and their workplace mentor. The workplace mentor completes grading materials four times a year in which they assess the student on employability skills and their progress on the skills standard checklists. The skills standards checklists display competencies that are evaluated on the job and serve as a teaching tool for workplace mentors and apprentices. The skills standards checklists are developed by business and industry professionals, the Department of Workforce Development, youth apprenticeship coordinators, and current and former youth apprenticeship mentors. Because of the input provided by the panel members, it is assumed that the skills assessed are current, relevant, and essential for an entry-level employee in a high-skill career.

Along with the skills standard checklists, mentors grade the apprentices on employability skills such as attendance, communication, initiative, teamwork, reliability, accuracy, flexibility, and workplace standards (Appendix A). All of the above qualities in any employee would lead them to be successful and prepared for their future in the workforce. Students' youth apprenticeship grade comes from the skills standards checklist and employability skills, otherwise referred to as the worksite evaluation, and then are averaged with their related career and technical education instruction. The youth apprenticeship grade and completion of the program are excellent indicators that the students are prepared for the workforce and their future.

Based on the findings of this research, it can be concluded that the benefits of the Manitowoc County Youth Apprenticeship program are many. However many obstacles

respondents and employers faced in these harsh economic times, the results show respondents' experiences have shaped their future and given them a jump start on their future. By preparing and retaining students in high-skill careers, employers in the community are able to create their future workforce.

### *Limitations of the Study*

The findings of this study are not generalizable given that the study scope was limited to Manitowoc County school districts and the current economic environment of those communities involved. The study is specific to Lincoln, Mishicot, Valders, Reedsville, Two Rivers, and Roncalli High Schools. Results of the study are only based on respondents' from Manitowoc County School districts and the program area offerings of the Manitowoc County Youth Apprenticeship program.

As defined in Chapter One as being a limitation of the study, survey results are limited to the opinions and answers revealed by the Youth Apprenticeship students. Several respondents that have completed the youth apprenticeship program in the manufacturing area are pursuing adult apprenticeships that combine work hours with technical college instruction. The researcher failed to clearly define adult apprenticeship as an option on the survey; therefore, respondents may have replied that they planned to enter the workforce or attend 2 year college; not knowing which choice best indicated their post-secondary intentions. This may explain the number of students who initially indicated intent to attend a 2 year college, but chose "workforce" after completing their youth apprenticeship.

### *Recommendations to Youth Apprenticeship Leaders*

CTE Coordinators, school districts, other leaders and stakeholders need to realize the short and long term effects the youth apprenticeship programs have on our future workforce.

Youth Apprenticeship program allow schools to assist building a skilled and educated workforce for the future needs of our communities. The following are benefits of participation and development of a local Youth Apprenticeship Program:

- Enhancing Career and Technical education programming in schools
- Develops real world connections between business and education
- Fosters good relationships between schools and local businesses
- Demonstrates relevance to students and connects core and CTE curriculum and standards to the real world.
- Provides dual credit opportunities for high school students
- Assists students in defining and refining career goals according to their experiences.
- Provides a jump start into an adult apprenticeship, post-secondary education, or the local workforce
- Contributes to a skilled and educated workforce

Alongside the benefits come many questions to consider when a district evaluates the need for a school-to-work or youth apprenticeship programs. Both experiences provide students with a hands-on learning approach that can meet the local demands for a skilled and educated workforce. The following are things a district or CTE Coordinator may consider when making decisions to implement the youth apprenticeship program:

- Determine whether support exists from administration, school boards, and community stakeholders.
- What are the local demands and employment trends?
- Based on the local employment demands and trends, determine what youth apprenticeship programs would be offered in your community.

- What are our related instruction options? Is there a nearby technical college? Where can they obtain related instruction?
- Evaluate current CTE curriculum to determine if it prepares students to begin a youth apprenticeship program within the local economy.
- What community resources or local agencies can assist in fostering relationships with local employers? (Examples: Economic Development Corporations and local Chamber of Commerce)

Career and Technical Education Coordinators may find it beneficial to evaluate current CTE programming in their school in preparation for a youth apprenticeship program. This will allow school district to ensure their curriculum reflects the local needs of business and industry as well as 21<sup>st</sup> century skills attainment.

#### *Recommendations for Further Research*

While this study has provided a great deal of information and findings on the youth apprenticeship program, it lacks the long term study needed to determine if the respondents continue in the same career long term or after postsecondary education. The information gained in this study is only representative of the Manitowoc County Youth Apprenticeship and doesn't encompass the entire state's youth apprenticeship program. Therefore, this information can only be used in Manitowoc County to make improvements and determine a success rate but can't be utilized on a state-wide level.

It would be recommended that a study be completed on a state-wide level and for a longer period of time to determine the overall success rate of the Wisconsin program. It is also recommended that the 70 percent of all other school districts that participate in the Wisconsin Youth Apprenticeship do a study of similar depth to enhance programming and make

improvements on a local level. Involving and surveying the workplace mentors and business and industry could also provide important feedback to enhance programming locally and statewide.

The information gained through this study only provides information directly on the Manitowoc County Youth Apprenticeship programs. It could be enhanced if it included the students' connection to career and technical education courses at the high school level. This would assist in providing a success rate and information for improving career and technical education programs at the high school level.

The data that has been collected will be disseminated to the participating Manitowoc County Youth Apprenticeship employers, the Manitowoc County schools, school board members, the Department of Workforce Development, high school liaisons, prospective employers, parents, and students, and other youth apprenticeship coordinators in the state of Wisconsin. Career and Technical Education Coordinators and CTE work-based coordinators can utilize this study to learn more about the possibilities of this program as well as why they should create such programs in their areas.

Furthermore the information will be used to improve the Manitowoc County Youth Apprenticeship Programs in the future. Improvements will be made by sharing the information with all stakeholders such as the superintendants of participating schools, career and technical education instructors, guidance counselors, school liaisons, employers, participation students and parents, and high school principals. It can be determined that the use and distribution of this study will only enhance and grow youth apprenticeship programs across the state of Wisconsin and especially locally in Manitowoc County.



## References

- Black, S. (2007) Apprenticeships: A tradition that works. *American School Board Journal*, 38-40.
- Careerclusters.org. (2009). *States' career clusters*. Retrieved November 21, 2009, from Career Clusters: <http://www.careerclusters.org/16clusters.cfm>
- Department of Workforce Development. (2006) *Governor Doyle announces \$67,000 in youth apprenticeship grants for Southwest Wisconsin*. Retrieved June 1, 2008 from <http://dwd.wisconsin.gov/dws/programs/ya/>
- Department of Workforce Development. (2007) *Youth apprenticeship: Investing in Wisconsin's Future*. Retrieved June 2, 2008 from <http://dwd.wisconsin.gov/dws/programs/ya>
- Evanciew, C. (1994, November). Maximizing learning through youth apprenticeship Programs. *Clearing House*, 68(2), 111. Retrieved June 19, 2008, from Professional Development Collection database.
- Evanciew, C. (1994) *Emerging themes in youth apprenticeship programs: A qualitative study*. (ERIC document NO. ED379425) Retrieved June 3, 2008 from EbscoHost database.
- Gordon, H. (2003) *The history and growth of vocational education in America*. Illinois: Waveland Press, Inc.
- Hamilton, S., & Hamilton, M. (1994, Autumn). Schools and workplaces: Partners in the transition. *Theory Into Practice*, 33(4), 242. Retrieved June 19, 2008, from Academic Search Elite database.

- Hamilton, S. (1990) *Apprenticeship for adulthood: Preparing youth for the future*. London: Macmillan.
- Haynsworth, T., & Perselay, G. (1994, May). A U.S. youth apprenticeship program. *Journal of Education for Business*, 69(5), 252. Retrieved June 19, 2008, from Professional Development Collection database.
- Husted, S., Mason, R., & Adams, E. (2003). *Cooperative occupational education*. Upper Saddle River, NJ: Prentice Hall.
- Kantor, H. (1994, Summer). Managing the transition from school to work: The false promise of youth apprenticeship. *Teachers College Record*, 95(4), 443-461. Retrieved June 19, 2008, from Professional Development Collection database.
- Kantor, H. (1993). The hollow promise of youth apprenticeship. *Rethinking Schools*, 8(1), 1, 4-5, 25-26.
- Katzenberger, R. (2004) *An evaluation of the Loyal district school-to-work students basic workplace skills preparation*. (Thesis document) Retrieved June 6, 2008 from UW-Stout database.
- Lewis, A. (1991, February). Youth apprenticeships. *Education Digest*, 56(6), 59-59. Retrieved June 19, 2008, from Professional Development Collection database.
- Manitowoc Public School District. (2008, June 19). Retrieved June 25, 2008 from: <http://www.mpsd.k12.wi.us/education/district/district.php?sectionid=1>
- National Education Foundation. (2006). (D. A. Kuttan, Editor, N. E. Foundation, Producer, & National Education Foundation) Retrieved November 21, 2009, from U.S. Department of Education's Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV): <http://www.perkins4.org/default.asp>

- Partnership for 21st Century Skills. (2009). *21st century skills*. Retrieved November 2009, 2009, from: [http://www.21stcenturyskills.org/documents/le\\_white\\_paper-1.pdf](http://www.21stcenturyskills.org/documents/le_white_paper-1.pdf)
- Powers, M. (1997, Winter). Next stop, the workplace. *Human Ecology*, 25(1), 12.  
Retrieved June 19, 2008, from Academic Search Elite database.
- Reese, S. (2009). Gazing into the Future. *Techniques*, 14-19.
- Rojewski, J. W. (2002). *National research center for career and technical education*.  
Retrieved November 21, 2009, from National Research Center for Career and Technical Education: <http://www.cehd.umn.edu/NRCCTE/Research.html>
- Scribner, J., & Wakelyn, D. (1998, October). Youth apprenticeship experiences in Wisconsin: A stakeholder-based evaluation. *High School Journal*, 82(1), 24.  
Retrieved June 19, 2008, from Professional Development Collection database.
- Scribner, J., & Wakelyn, D. (1997) *Youth apprenticeship in Wisconsin: A stakeholders based evaluation*. (ERIC Document No. ED422505). Retrieved June 8, 2008 from EbscoHost database.
- Stone, J. R. (2005). The neglected majority - Revisited. *Journal of Career and Technical Education*, 67-85.
- Vickers, M. (1994, January 1). A new take on on-the-job training: Youth apprenticeship is becoming a more viable option in the U.S. *Vocational Education Journal*, 69(3), 22. (ERIC Document Reproduction Service No. EJ478792) Retrieved June 11, 2008, from ERIC database.
- Vo, C. (1996, January 1). Selling self-interest. *Vocational Education Journal*, 71(2), 22. (ERIC Document Reproduction Service No. EJ517289) Retrieved June 11, 2008, from ERIC database.

Whitaker, J. (2008). Career pathways: What they are and why we need them.

*Techniques*, 22-23.

Wolff, G. H. (2002). *National research center*. Retrieved November 21, 2009, from

[http://136.165.122.102/UserFiles/File/pubs/Guide\\_for\\_Policy-Copa.pdf](http://136.165.122.102/UserFiles/File/pubs/Guide_for_Policy-Copa.pdf)

## Appendix A

### Survey

**This research has been approved by the UW-Stout IRB as required by the Code of Federal Regulations Title 45 Part 46.**

Manitowoc County Youth Apprenticeship Survey

Year in School:    Junior        Senior

Gender:    Female    Male

YA Program Area \_\_\_\_\_

Please complete the following questions regarding your participation in the Manitowoc County Youth Apprenticeship Program.

1. What were your career goals or aspirations prior to entering the youth apprenticeship program?
2. Why did you choose to participate in the Manitowoc county youth apprenticeship program?
3. What courses in career and technical education (business education, technology education, family and consumer sciences education, and agriculture) did you take prior to entering into the youth apprenticeship program?

List course names:

Did these courses influence your decision to participate in the Manitowoc county youth apprenticeship program?

4. How did you learn about the Manitowoc county youth apprenticeship program?

