An Analysis on Whether or Not Employers Perceive an Enhanced Communication Process Using an Interactive Employer-Coordinator Website

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ABSTRACT

Employers and supervisors from Minneapolis Transitions Work-based Learning Summer Work program were surveyed to determine if they perceived the introduction of an information and communication system, specifically a website enhanced overall communication between the employer and work-based learning coordinator. A website was developed to include resources and links to program forms, documents and related occupational resources as well as offering employers and coordinators several modes of communication venues (chat room, discussion forums and direct email links) as well as a job posting area. The employers were surveyed at the end of the summer program as to their perceptions of the communication process, website components and future implications. Additionally, demographic factors that could affect perceptions were included.

Two of the research objectives included assessing employers' perceptions about the use of the website as a communication tool and secondly, which components of the website they found useful. Three additional research objectives sought to understand whether employers' perceptions were affected by occupational area, level of technology skill, years of partnership with the Minneapolis Transitions Charter School work-based learning program.

Results suggest that employers reported the website enhanced the overall communication process with work-based learning coordinators. Findings do not support that respondent occupational area and years of partnership influenced perceptions of an enhanced communication process. There was some indication that the level of technology skill may have played a part in employers' perceptions of the overall value of the website as a communication tool.

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Chapter I: Introduction

The development and sophistication of the information and communication technology during the past decade has dramatically changed the traditional delivery system in the traditional face to face classroom (Blomeyer, Cavanaugh, Gillan & Hess, 2004). No longer is it necessary for a student to be in a classroom to meet the requirements to graduate from high school. The student in a rural area high school may now take courses of interest via online, that are not offered in their school. There are a variety of reasons a district may offer courses online, which could include low enrollment in a particular course, the lack of a qualified teacher or programs of study, or a district's solution to accommodate a student's need for homeschooling.

These web delivered learning systems have also had an effect on traditional communication processes between the student, teacher, administration and parents. In a study by Wingard (2004), it was found that post-secondary faculty reported the addition of a classroom website enhanced communication between the student and instructor, both in and out of the classroom setting. A study by Alexiou-Ray, Wright and Peirano (2003) found that parents viewed a high school class website as a convenient way to communicate with the teacher, as well as access information on their student progress.

The website delivery system has also changed the communication process in the business, public institutions and government. There are government sponsored One-Stop career centers that interact with employers via interactive website. Employers find that these websites useful for getting information and are seen as valuable resource for enhancing communications (WINS, 2008). Thorson, Duffy and Schumann (2007) discuss how the internet has changed the communication process in a number of different venues. Political websites have changed the way politicians interact with supporters. Major newspapers have created online websites in which

people can get current news and happenings. The introduction of websites into the classroom and business operations have influenced and redefined the way in which education and businesses are communicating.

This particular study will introduce an information and communication system, namely a website to the employers of the Minneapolis Transitions Charter School Work-based Learning Summer program. The Minnesota Transitions Charter School (MTCS) is located in the urban setting of Minneapolis. MTCS is a Career and Technology based k-12 charter school started in 1998, working with inner city youth. Eighty percent of the youth come from disadvantaged backgrounds and receive free and reduced lunch. The Work-Based Learning (WBL) Program component consists of Construction Trades, Health Trades, Work Experience Disadvantaged and Handicapped, and a Work Experience program for 14 and 15 year old students. The WBL programs run throughout the year, including a summer youth jobs program. During the 2008-2009 school year, there were approximately 50 of students enrolled in a related work program. During the summer of 2009, 90 of students participated in an MTCS WBL program with approximately 30 employers. The following chart lists the employers, the years that they have worked with MTCS, as well as the number of students currently employed.

Table 1

Demographics of MTCS School Summer Work-based Learning Program

Employers	Years of Partnership	Students Employed
Bishel Construction	2	4
Augustana Care	3	6
Bahai Center	1	4
Project Price	1	4
Reuse Center	1	4
First Universalist Church	2	1
Simpson Housing	1	1
Catholic Charities	1	2
Dairy Queen	2	1
Tree Trust	2	8
MTCS Youth Project	13	4
EAC	6	3
Altrebla	3	1
Comfort Services	3	1

Minnesota Transitions Charter School Superintendent Tony Scallon would like to incorporate an employer-coordinator website in the MTCS Work-Based Learning program that will offer another venue of communication between the employer and coordinator (personal interview, June 2009). This study is designed to gain insight as to whether or not employers

perceive that using an MTCS website with MTCS coordinators enhances the overall communication process.

Exactly what is the definition of a Work-based Learning Program? Work-based Learning programs are included under the umbrella of Career and Technical Education (CTE) programs. Some States refer to this program as Cooperative Education, if there is a school based curriculum that supports work-based learning. Today's WBL programs offer students real life training in supervised worksites in which they receive high school elective credit. Programs range from specific business and Marketing, Industry and Trades, Family and Consumer Science, as well as general employability skill development programs that assist special needs populations and disadvantaged students. The state of Minnesota defines Work-based learning as:

> Work-based learning is an element in education which provides students with opportunities to build career awareness, explore career options, and develop critical thinking skills. WBL describes any formalized learning consisting of instruction that occurs concurrently at a school and worksite. It cannot be achieved in isolation; it requires a collaborative effort between businesses and schools. (Minnesota Department of Education, 2003, p. 2)

The overall objective of the program is to provide the student with supervised paid job training experience that not only teaches relevant employability skills but lead to future success at post-secondary career goals. According to the National Center on Secondary Education and Transition (2003), some of the quality components of a Work-based Learning program include:

1. Well defined goals;
2. Accessible links between students, schools and employers;
3. Good feedback and well defined expectations;

4. Student training plans with clear goals and outcomes;
5. On the job training opportunities;
6. Well defined roles for students, supervisors and school personnel;
7. Adequate academic and social support for students, employers and related partners;
8. Well defined expectations and feedback leading to student success;
9. Mentors available on the jobsite.

The Stone, Kowske, and Alfeld (2004) discussed a study done by Levesque, et.al (2000) in which CTE programs saw a decrease in student enrollment, especially in programs for educationally and economically disadvantaged students, disabled students, and students enrolled in business and office education. In their study, perceptions of secondary school administrators felt that CTE enrollment was not decreasing, but rather course enrollment changed. Students were more likely to take a variety of singleton CTE courses, rather than concentrate in a specific CTE area. In a 1994 NAVE study, administrators attributed the decreasing CTE enrollment trend to students increased credit load in academic courses needed to graduate. Stone, Kowske and Abfelt discuss findings in their study that show many secondary schools have replaced expensive work-based option programs with career related activities, such as career guidance counseling, career assessments and inventories, career centers and school visitations by employers.

Several school districts in Minnesota also saw some of these same trends. Interviews were conducted with several work coordinators employed in Minneapolis and first ring suburb schools of St. Paul, all located in the state of Minnesota. Independent School District 197, which is a first ring suburb of St. Paul, reduced coordination time from 2.0 fulltime WBL coordinators of the work program down to 1.1 WBL fulltime coordinators in 2000. Despite having close to one less fulltime work coordinator position, retired WBL coordinator Joel Andrychowicz, who

taught in Independent School District 197, stated that student enrollment stayed the same, but work coordinator caseloads increased (personal communication, July 1, 2009). In Independent School District 623, located in Roseville, Minnesota, coordination time for WBL coordinators was cut by one period when the school went from a semester schedule-six period day to a trimester schedule-five period day for the 2003-2004 school year (Roseville Board Minutes, 2003). With these scenarios in mind, the work coordinators were faced with the difficult task of completing the required tasks due to decreased coordination time and/or increased student caseloads. Coming up with innovative solutions to resolve this lack of coordination time becomes very important, especially for coordinators to maintain good communication with the student employers.

Maintaining quality communication with students' employers is vital to the success of the overall program. In the Minnesota Department of Education publication, *Connecting Youth to Work-Based Learning* (2003) on-site visitations and communication not only mandated by Minnesota state regulations, but are considered instrumental in ensuring a safe and productive work experience for the work program students. In this publication, it listed five areas that a Work-based Learning (WBL) program coordinator is responsible for overseeing, which include:

1. Program Development. This would include activities such as teach a career class, screen students for participation, find appropriate worksites, develop sound training plans with employer, provide program information to related parties, and work with school counselors in providing ease of process to schedule changes.
2. Program Management. This area includes developing working partnerships with employers, oversee and lead the advisory committee, prepare and process all official program training agreements, plans, certificates, and evaluations. Also included here is

visiting worksites to ensure they are safe and following labor laws, doing follow-up site visitations to see student progress and follow up with any concerns that an employer, parent or student may have in regard to the program.

3. Student Support. Work with students' parents, teachers, employers, and counselors in regard to students progress on program, coordinate interviews and possibly arrange transportation.
4. Program Marketing. Work with school administrators and counselors in regard to scheduling, create materials that promote program, while promoting the program in the business and the community.
5. Program Evaluation. The program coordinator is also responsible maintaining state required program documentation, as well as submitting any required reports.

With these responsibilities in mind, it seems reasonable that the addition of an employer-coordinator website might enhance the communication process between the employer and coordinator and alleviate or reduce problems associated with decreased coordination time and increased student caseloads. For example, the processing of paperwork can be very time consuming because it involves inputting information, getting required signatures from all concerned parties, and getting copies of final documents to everyone. Having the documents posted on the website, employers, parents, and students will have immediate access to these forms and will not have to wait until they meet with the coordinator to review the information. If the student, employer or parent misplaces the forms, they can retrieve them off the website. The employer, student and parent can also fill these documents at their convenience and have them completed before the coordination meeting takes place. In a discussion with MTCS WBL Program Coordinator, Randy Hammond (personal communication, June, 2009), he discussed the

frequency of employers losing student evaluation forms. He stated that he had to deliver the forms several times to employers because they would misplace or lose them. If a website were used, the student evaluation form would be always available for the employer to fill out which can also be filed digitally to the coordinator. Randy Hammond also discussed how on-site employer visitations during the school year are very difficult, as it seems he is "continually putting out fires" with the students. Scheduling appointments may be difficult for employers as well, due to differences in work schedules. Having alternative venues to set up employer communication on this website may be a way to overcome these scheduling difficulties.

There are other components of this website that may prove useful to employers. Links to resources discussing labor laws, workplace safety, discrimination policies, as well as other relevant information are posted. Employers can use the website discussion board to ask general questions and keep them updated on important dates, such as grading times and school holidays.

Statement of the Problem

There is an absence of research designed to understand the use of information and communication technology relative to Work-based Learning coordination.

Purpose of the Study

The overall goal of this project is to investigate whether or not an employer-coordinator WBL program website will enhance overall communications between the coordinator and employers. If the outcome of this study shows a positive result of enhanced communication, it is believed that this type of communication process can be duplicated in other work programs across the state.

Research Questions

This study will attempt to answer the following research questions:

1. Will employers view the introduction of the MTCS employer-coordinator website to enhance the communication process with MTCS coordinators?
2. Does technology skill level of employer affect employers' perception of whether or not the MTCS employer-coordinator website enhances communication?
3. Does the employer occupational area affect employers' perception of whether or not the MTCS employer-coordinator website enhances communication?
4. Does the amount of employer years, in partnership with MTCS students, affect employers' perception of whether or not the MTCS employer-coordinator website enhances communication?
5. What information found on the MTCS employer-coordinator website do employers view as beneficial?

Importance of the Study

This research is important for the following reasons:

1. The study may find that interactive websites may be another venue to communicate with CTE Work-based Learning employers. As described earlier, the job duties of work-based learning program coordinator in multi-faceted. This website may offer another venue for coordinators and employers to enhance communication with each other.
2. With online education becoming a serious player in the K-12 arena, this study may offer some valuable information for these schools who would like to venture into the CTE Work-based Learning component.

3. This study also may demonstrate a different delivery system for the multitude of duties required of the CTE work-based Program coordinator. It may be found that many of these tasks can be completed in an online manner, freeing up coordinator time for student support and tasks, while still maintaining the safety and integrity of the program.

Assumptions of the Study

The following are assumptions of this study.

1. The employers agreeing to participate in the study will have had experience with online communication processes. The employers participating in this study were selected by MTCS superintendent.
2. The employers that participate will need to have access to the internet, which most typically will be at their worksite.
3. The employers participating will have had prior experience cooperating with work coordinators and students.
4. The newly created website will be functional and work properly.
5. A basic flowchart of required documentation and activities needed for Work Program employers and coordinators, specific to the program.
6. After the flowchart was complete, a website was created that included links to resources, connections to discussion boards, e-mail and a chat-room. Official forms and documents were placed on the website that can be downloaded. The website also includes an overview of program and participants' responsibilities.
7. Use of the website by employers and coordinators will increase monitoring time. This assumption is based on the employers and coordinators will be able to monitor students by email, discussion boards and chat room.

Limitations of the Study

1. The most significant limitation of the study is the timeframe in which the study was conducted. This is due to the study occurring during the summer program, which is only six weeks long, as opposed to the 12 week trimester sessions, operated during the school year.
2. Another limitation of this study will be the reliability of the interactive website, as this web site has just been recently developed. The website will be used for the first time with the MTCS Work program employers. It is anticipated that there may be some changes and glitches to work out during the course of this study.

Definition of Terms

Career and Technology Education. Career and Technical Education focuses on exploration of the self in relation to the world of work. Students discover their interests, talents, abilities, and the niches where their talents and abilities might best be used. Career and Technical Education also equips students with research skills to enable them to form a realistic picture of job opportunities. In essence, Career and Technical Education brings greater satisfaction and relevance to career choices. (Wisconsin Department of Public Instruction, 2009)

Computer Literacy. The knowledge and ability to use computers and technology efficiently. Computer literacy can also refer to the comfort level someone has with using computer programs and other applications associated with the computer. (Wikipedia, 2009)

Cooperative Education. Cooperative Education combines traditional classes with a work based experience component. These experiences include, but are not limited to service learning, paid related program employment and classroom based student enterprises. (Wikipedia, 2009)

Digital Communication. Electronic transmission of information that has been encoded digitally (as for storage and processing by computers). (Miller, 2009)

Employer. The supervisor or manager, of student worksite, that evaluates and trains the student employee. (Habheger, B., Smith, D., Strom, T., Yecke, C., 2009)

Firewall. A **firewall** is a part of a computer system or network that is designed to block unauthorized access while permitting authorized communications. (Wikipedia, 2009)

Hyperlink (link). A link from a hypertext file to another location or file; typically activated by clicking on a highlighted word or icon at a particular location on the screen. (Miller, 2009)

Information and Communication Technology. Information and communication technology convergence has given rise to technologies such as the Internet, videoconferencing, groupware, intranets, and third-generation cell phones. (BNET Business Dictionary, 2009)

Interactive Website. A website that provides multiple links to web resources developed to enhance online learning opportunities.

Programs of Study. Align elements of secondary and post-secondary education that include challenging academic standards, secondary progression of career and technical coursework that is "non-duplicative" and articulates with post-secondary education programs, degrees or industry related certifications and licensures. Opportunities for secondary to earn post-secondary credit may also be a part of the program of study. (Kentucky Education and Workforce Development, 2009)

Virtual Classroom. The electronic, learning community where students and teaching faculty interact using Internet listservs and the World Wide Web. (Lilly, 2009)

Virtual Collaboration. Two or more people collaborating together to accomplish a task without the use of face to face interaction." (Wikipedia, 2009) Examples could include video chat rooms, googledocs, or other computer based programs that allow multiple users in.

Virtual Reality. A hypothetical three-dimensional visual world created by a computer; user wear items such as special goggles and fiber optic gloves and enter and move about in this digital world, while interacting with objects as if inside it. (Miller, 2009)

Work-based Learning Coordinator. The licensed educator representing the local education agency responsible for coordination and supervision of student employee.

Work-based Learning Program. The local education agency that provides Career and Technical Education learners with opportunities to gain employability and career skills, while earning credit towards graduation . (Habheger, B., Smith, D., Strom, T., Yecke, C., 2009).

World Wide Web. Computer network consisting of a collection of internet sites that offer text and graphics and sound and animation resources through the hypertext transfer protocol. (Miller, 2009)

Chapter II: Literature Review

This literature review surveys various studies and reviews on how websites have influenced communications and operations in education, the workplace, public services and post-secondary and government sponsored career resource centers. The purpose of this research was to establish whether or not, the introduction of websites could enhance the overall communication process with related clients or individuals who regularly access such sites.

Historical Overview of Information and Communication Technology on the Web

The history of the internet, actually dates back to the early 1960"s when scientific and military researchers saw great possibilities in sharing information over computers (Walt Howe, 2009). The early internet was a very complicated system, used mainly by engineers, scientists, computer experts and librarians. Watts (2003) describes this era as the "mainframe phase" in which one could see the possibilities of information and communication technology, but the costs and time delays of this technology were limiting. Leinonen (2005) describes information and communication technology phase in education as "programming, drill and practice" in which the software used was for drill and practice and programming was thought to teach logic and math skills.

The internet grew in the 1970's with the introduction of the protocol TCP/IP, which allowed the routing and transmission of data files (Howe, 2009). It wasn't until the late 1980's, when the protocol hypertext was proposed, and became known as the world wide web in 1991. In the early years of the world wide web, its use was restricted to research, education, and the government. Watts (2003) describes this phase as the "microcomputer phase" which saw the introduction of the personal computer and computer-aided guidance systems. Leinonen (2005)

describes this ICT phase in education the "computer based training with multi-media" which introduced graphics and media into the learning process.

During the 1990's, multiple internet providers appeared and the world wide web worked its way into homes, communities and schools (Hayes, 2009). Watts (2003) described this time as the "web phase" a time when businesses and organizations began creating websites that individuals could quickly access. Career Guidance centers began to create their own websites, as well. In 1995, the Federal Networking Council passed a resolution that provided an official definition of the internet (Leiner,et al, 2003) which described one function of the internet as one that "provides, uses or makes accessible, either publicly or privately, high level services layered on the communications and related infrastructure described herein" (FNC, 1995, p. 1). Leinonen (2005) describes this phase of ICT in education as "Internet-based training" which introduced the world wide web, but still lacked sophisticated uses of multi-media. However, it was this time that education saw the benefits of training at a distance.

The future of the internet and its applications will continually evolve; portability and access to real-time communications will become commonplace (Leiner, et al, 2003). Watts (2003) describes this as the "digital phase" which can be viewed as the transformation of analogue to digital. Communications can now be happen via computer, television, telephone and related technology accessing the world wide web. With increased bandwidth comes the ability to transmit audio and video applications in ways that will transform as well as create new uses for information and communication technologies. Leinonen (2005) describes this phase of ICT in education as "e-learning" evidenced by the introduction of Learning Management Systems, social information systems and open content, which led to an increase in online learning systems. Leinonen believes we are now moving into the fifth phase of ICT in education, which he calls

the "Social software and free and open content." This phase is describe as seeing blogs, wikis and other social software having an impact on the learning process. More importantly, it is having a great impact on the way we communicate in education, the workplace and society in general.

Information and Communication Technology in the Workplace

Information and communication technology is greatly impacting the different means of communication in the workplace. In today's society, the ability to effectively communicate in a digital mode is a foundational workplace skill, as well as understanding the multiple modes of delivery systems (Aho, 2005). In a research study by Aho, members of the business community stated that virtual collaboration tools enhanced productivity in the workforce. In a very recent study by Frost and Sullivan (2009), it found that businesses using advanced collaboration technologies (such as voice over internet, video conferencing, instant messaging, etc…) not only make back twice their investment on this technology, but improvement in production.

Information and communication technologies are also increasing productivity, while saving companies money in overall communication costs. IT consultant, Susan Harkins (2009) believes that web conferencing increases overall productivity in the workplace, as businesses can respond more quickly to a client's request. Many companies and organizations are also using live web chat as a real time method of communicating with clients. Van de Velde (2009) discussed how companies need to replace industry's inefficient employment hiring practices with web based real time career resources. An iLogos research study found that many Fortune 500 companies are replacing the traditional headhunters with online recruiting resources as a means to hire the most qualified individual (Canfield, 2001). By making this change, many companies are locating qualified recruits in a quicker timeframe and saving thousands of dollars as well.

Boston Consulting Group workplace (2002) did a study that suggested there was a recent surge of companies investing in digital communication technology in the workplace. Companies were finding that the addition of new digital communication technology could reduce overall operating costs, yet increase production in the workplace. The study concluded that considering the poor economy, more companies will be pursuing new forms digital communication technology. Harkins (2009) stated businesses that used to spend thousands of dollars, sending employees across the international globe for business meetings, are now saving thousands of dollars by holding virtual meetings and live web chats with individual clients as opposed to spending money on airfares.

Public organizations and institutions are also using information and communication technologies to communicate with residents. Many United States cities have constructed websites to communicate with city residents. In a study done by Jeffres and Lin (2006), they discuss how city websites play multiple roles in communicating to residents. The list of communication areas can include news, education, arts and entertainment, upcoming events, weather, and other related links. These websites offer multiple ways to communicate with city officials. Respondents in this study stated that more and more people expect to get public information online, as well as having access to complete transactions, such as payment for a public service. The medical industry is also using information and communication technology to communicate with providers, patients and medical personnel. John Hopkins Health Care has recently established a digital connection to Health Trio, for patients and administrators, to gain access health records and other health data (Reuters, 2009). The overall mission of Health Trio is to connect participants to the health care services by empowering them to manage personal care

and streamlining communication processes.

Information and Communication Technologies in the Classroom

Information and communication technology provides society with multiple methods for exchanging and displaying information in schools across the country. With more and more schools accessing information and communication technology tools, to enhance the curricular component of the classroom, it seems probable that these tools will influence the current methods of teacher communication with parents and students.

Using websites in the classroom is becoming more common. Many districts are asking teachers to create websites for student and parent access. In Knox County School District, the teachers are supplied with a basic website system to develop multiple class websites with easy access (Whitfield, 2008). Although there are limitations as to what a teacher can do with the program (as opposed to some higher end website development software), Fort Knox teacher Lou Gallo states it is easy to use. Linda Starr (2003) quotes Jakob Nielson who states "The Web is no longer an experiment; it is mainstream. You have to rely on the ability to do business on the Web, and people get very annoyed when they can't. Limited sites are seen as a sign of corporate incompetence" (Neilson, 1997). Ms. Starr goes on to say that the same thing can be said for schools and teachers. Teachers and schools who do not have websites may be viewed as "incompetent."

There are many advantages and disadvantages in using classroom websites, with research certainly showing many positive gains. As teachers become more literate with developing classroom websites, they will find some benefits to include enhanced parent and student communication, as well to improved student learning. In a study by Nelms (2002), evidence gathered on surveys found that parents viewed teacher web pages as a viable form of

communication with the schools. Parents stated that they felt the "one-to-one correspondence" and the calendar assisted them in keeping current with what their child was learning and how they were performing academically. Parents believed this helped them to stay more involved in their children's education. A study by Comunale, Sexton, and Voss (2002) found that most of the students (graduate and undergraduate) rated the course website as useful, while a large percentage felt it added more to their overall learning. Interestingly, the study also found that graduate students who frequently visited the website received better grades in the course. In a study by Drescher (2009), research showed that classrooms using websites not only increased communication with students and parents, but enhanced the overall instruction.

There are concerns that surround the classroom website as well. Not all parents have the computer literacy (or even the comfort level) to use access the teacher created web pages. In one study, a teacher commented that a parent believed using classroom websites put parents (who did not have internet access) at an unfair advantage. Although many public libraries offer free internet access, many families do not adequate transportation and daycare to travel across town to access the classroom's website (Century Network, 2004). Furthermore, incorporating interactive websites in the classroom can be a daunting task for teachers. Research has also shown that organizing websites, making them easy to navigate and providing useful information is very important (de Velde, 2009). Depending on software, it can take many hours of labor to design a website that is relevant, easy to navigate, and provides a good communication venue for the parent.

Information and Communication Technologies in Career Resource Centers

Information and communication technologies are impacting the delivery services provided by career and guidance services (Watts, 2001). Watts contends that the expanded use of

ICT by career and guidance services can be viewed in three ways: "as a tool, as an alternative, or as an agent of change" (p. 2). Face to face career and guidance facilities can be supported with websites, email, and other modes of ICT resources. An employer or client wishing to access career and guidance services can do it online, in the comfort of their home. Resources to post resumes, access career assessments and surveys, locate job openings are just a few activities that can be handled on the home computer by accessing career and guidance websites. There are a number of institutional and public websites that offer career resources for employers and students. In a report by John Casson (2009), he discusses a variety of methods people can utilize career resources by using the WWW. Casson (2009) lists twelve different categories of career related websites, which include: "(1) employer sites, (2) job listings, (3) management recruiters, (4) entrepreneurial ventures, (5) resume postings, (6) homepage portfolios, (7) email communications, (8) networking opportunities, (9) search assistance, (10) career advice, (11) educational programs and (12) retirement information" (p. 1).

In the post-secondary Career Center at Salisbury University (2009), the career center website promotes communication between both the employer and students. This website includes job postings, intern requests, labor law information, setting up appointments for on-campus interviews, and relevant information, such as upcoming job fairs. The Vocational Information Center (2009) website lists various State Career Resources that can be accessed online. Some of these web links also provide career assistance and employment listings. Many secondary school career and student support centers will provide links to some of these career services. Wisconsin and a number of other States use the services of XAP corporation/Mentor Career Center websites (2009), which offers a variety of career related services to secondary students and school counselors.

Several studies have been conducted on various Workforce Center websites across the United States. Many of these Government sponsored centers offer a wide array of services to local employers and citizens. In a 2008 report conducted by Workforce Innovations Network (WINS), a survey was conducted by the Tulsa Metro chamber that asked local employers what the local workforce center could do to better meet their needs. The response of the employers was they wanted a "single point of contact" to address their hiring and training needs. In this same report, it was noted that the Connecticut Business and Industry Association made great strides in improving communication with employers by creating on "One-Stop Center", which encouraged employers to provide employment requests, as well as identify what overall competencies they were looking for. The One-Stop Center in Upper Rio Grande was discussed in this report as being a very efficient center that provides a multitude of employer services for employers and prospective employees as well. Some of the services provided included assessing business needs, recruiting potential employees, screening applicants, providing information for post-secondary training opportunities and providing client satisfaction surveys.

Watts (2002) discusses how information and communication technology can be viewed in three ways, within the career and guidance arena: "as a tool, as an alternative, or as an agent of change" (p2). Using a website in career centers, linked with various resources to career assessments, documentation, job procurement activities, and other related activities pushes clients to become more proactive in their pursuit of employment, training or education. Likewise, an employer becoming more proactive in utilizing the resources on career center websites may also find these services to supplement, or offer alternative means to the traditional communication processes. Finally, Watts discusses the third view of information and communication technology being an agent of change. It has become very evident in present day

society that the workplace and public institutions, the education sector, and career resource facilities have implemented many information and career technologies into overall operations. Whether it is to increase worker productivity, to lower costs, to enhance communications with students and parents, employers and clients, or to offer alternative means for learning, information and communication technologies are impacting how we do communicate.

The Current State of Work-based Learning Programs

Work-based Learning (WBL) programs in the state of Minnesota have been defined as being a formalized program of study that is run in conjunction with schools and businesses. It provides students with opportunities to explore career options, think about future career aspiration, and develop employability skills (Minnesota Department of Education, 2003). A WBL coordinator and employer have specific responsibilities that lead the student to successful participation in the program. Responsibilities for the WBL coordinator include program development, program management, student support, program marketing and program evaluation, many of which duties are done in conjunction with WBL employers. Some of these specific duties include state required official training agreements and training plans, documentation of safety training, student evaluations, relevant jobsite postings of labor laws, face to face visitations, and ongoing communication regarding student progress.

Information and communication technology tools, specifically websites have become standard across many sectors of society. As discussed previously, there are career resource services using websites as a vehicle to communicate and offer resources to clients and employers. Post-secondary institutions are developing one stop career websites for employers and students. Websites such as *www.workbasedlearning.org* offer services to both employers and adult employees that contain information for training and evaluation, as well as areas for

discussion forums and promising practices. The Minnesota State Colleges and University system have developed a website, *http://mnpos.com* for Career and Technology program instructors and students to get information about post-secondary careers and training programs, work-based learning opportunities and secondary articulation credit. With these one stop website venues, a student, teacher and employer can communicate more efficiently.

In a publication by Kemple, Poglinco and Snipes (1999) they write "the role of the coordinator was pivotal in facilitating communication between the employer partners and the Academy teachers and administrators". Many of the secondary schools are offering services for instructors to build websites in their districts. It seems reasonable that implementing a WBL employer-coordinator website at the secondary level, as a supplemental venue for establishing contact and accessing WBL resources, will enhance the overall communication process between WBL employers and coordinators.

Chapter III: Methodology

Introduction

The overall goal of this project is to investigate whether or not an employer-coordinator WBL program website will enhance overall communications between the coordinator and employers. This chapter provides an overview of methodology used to arrive at findings in this study.

This study will be important for several reasons:

1. The findings will help determine whether or not employers perceive this website to be a viable communication tool to be used with work-based learning program coordinators.
2. The findings of this study may offer future insight as to how work-based learning program coordinators can use information and communication technology tools (e.g. website) to provide additional venues to communicate with employers.
3. This study will provide additional research for using Information and Communication technology tools in education.

Subject Selection and Description

This study was conducted with work-based learning program employers that had partnerships with Minnesota Transitions Charter School. Most of the employers participating in this study presided in the city of Minneapolis. The participants in this study were employers that provided paid training stations for one or more students from the Minnesota Transitions Charter School. The employers have one to four years of experience working with the MTCS students. Most of the participants businesses or organizations were located in the city of Minneapolis.

During the initial phase of the study, all employers were contacted by both email and on site visitation. During the on-site visitation, employers received an introductory letter and a business card that contained information about the study and a link to the employer website. This information was left with an on-site employee if the subject was not available. After the subject had an opportunity to review the MTCS employer website, they were asked to complete the anonymous Likert style survey, via Survey Monkey. This process happened over a period of four weeks.

All participants were asked to sign a written consent form to participate in this study. Training for the UW-Stout IRB has been completed. The IRB process is started with the survey pending approval. This is a human subject research study, as the investigation will take place with living subjects. Although it is difficult to keep a small sample survey completely anonymous, great care was taken to maintain confidentiality of the participants.

Instrumentation

This focus of the research for this study encompassed a positivist paradigm, that being one which explores human behavior through observation and reason (Dash, 2005). This study was investigating the attitudes of employers, as to whether they believed the introduction of a work-based program website increased communications with WBL program coordinators. This descriptive study utilize a Likert-scale survey for data collection. The Center for Research in Educational Technology defines a descriptive study as one that uses data from surveys or other qualitative methods to see emerging patterns that may lead to observations, conclusions and recommendations. The Likert-scale survey assesses respondents' feelings or attitudes by using rating scale (Waddington, 2000).

The survey administered to the participants was created specifically for this study. The

questions on this survey were developed to measure employer perceptions on overall communication process of the work program and determine if they felt the addition of an employer-coordinator web site enhanced the overall communication with the Work Program coordinator. The survey had four specific areas that were measured. The areas were:

1. General information.
2. Communication process.
3. Website process.
4. Future implications.

The researcher used a self-developed 19 question survey (Appendix A) was administered to all participants in late August, of 2009. The survey included four categories, which included:

1. General information.
2. Communication Process
3. Website
4. Future implications.

Questions in the general information area were close ended questions, asking demographic information such as employers' occupational trade area, how many years of partnership with MTCS, and some technology questions in regard to their use of the web. The answers to these questions were one answer, multiple choice format. Questions in the Communication Process and the Website category used closed ended questions. These questions used a five point Likert-scale, with one being strongly disagree, two being disagree, three being neutral, four being agree and five being strongly agree. A five point Likert-scale was selected as it gave more flexibility for respondents who may not have a strong opinion on a particular question. The final category, Future implications included open ended questions that pertained

to employers' ideas for additions and improvements to future use of the website.

The researcher' survey was presented to the research advisor and research committee for approval. The research instrument was reviewed by campus offices and the thesis committee. The current survey has been sent in to campus for approval.

Data Collection Procedures

The method used to recruit participants in the study involved several steps in the process. Addresses and phone numbers of all MTCS summer employers were obtained by several MTCS coordinators and administrators. An email was sent out to each employer describing the purpose of the study. All employers were contacted by phone and received a follow-up on-site visitation. During the on-site visitation, employers were given information as to access the website and contact phone numbers to call if they had problems. During the visitations and in the information included in the email, employers were asked to use the website.

A link to the survey was emailed to all participating employers. The survey instrument was developed using a host program, Survey Monkey. All responses on the survey were anonymous. Each survey included confidentiality, survey respondent consent, and researcher contact information.

Data Analysis

The overall objective of this study is to get respondents' feelings or attitudes about whether they consider the MTCS employer-coordinator website can enhance the overall communication the MTCS coordinator. Because the participants must indicate how closely their attitudes match the statement on a rating scale, this will assist in evaluating the overall success (or lack of success) of employers viewing the website to enhance the communication process.

The questions in the survey were categorized using the research questions. The following

table shows how the survey statements and questions relate this study's research questions.

Table 2

Research Questions Related to Survey Question or Statements

Research Question	Survey Statement
Will employers view the introduction of the MTCS employer-coordinator website to enhance the communication process with MTCS work-based learning program coordinators?	Section 2, #1, #2, #3, #4, and #5.
What information found on the MTCS employer-coordinator website do employers view as beneficial?	Section 3, #2, #3, #4, #5 and #6. Section 4, #1, #2, #3 and #4.
Does technology skill level of the employer affect employer's perception of whether or not the MTCS employer-coordinator website enhances communication?	Section 1, #4 and #5
Does the employer Occupational area affect employers' perception of whether or not the MTCS employer-coordinator website enhances communication?	Section 1, #3
Does the amount of employer years, in partnership with MTCS students, affect employers' perception of whether or not the MTCS employer-coordinator website enhances communication?	Section 1, #1

I selected to use a forced response choice on the survey to ensure that respondents answered every section. It is easy to forget or miss answers on surveys, especially if a participant needs time to think about a response and moves on to the next question. I will be using the Likert-scale for measuring my data, using mode to determine the most frequent response.

The method of data analysis used in this study was a t-test in determining whether a given statistic (average level of response) is significantly different from a given value. The average response levels were tested to determine the difference from 3 (3 is neutral). The significance

level is set at 5% (p = .05), thus a p-value of less than .05 is regarded as indicating a significant result. Unless otherwise specified, the one-tailed t-test was used to see whether the average response was greater than 3.

Limitations

1. The timeframe for this study was short, thus not all employers will have had adequate time to properly review and use the MTCS website.
2. The responses from this survey reflect participants personal perceptions, and it is assumed that the responses are truthful.
3. The researcher had limited time to develop a communication process with the employers, thus past experiences with other coordinators could influence the employers responses.

Summary

Employers that partnered with the MTCS summer work-based learning program were surveyed to determine their perceptions as to whether or not the introduction of an employer-coordinator website could enhance the overall communication process with MTCS coordinators. The employers were contacted by email and personal onsite visitations. With n = 20, 14 of the 20 employers responded which is equal to an 70% return rate. Data obtained from the survey responses will be analyzed in SPSS using descriptive statistics.

Chapter IV: Results and Analysis

The purpose of this project was to investigate whether or not an information and communication system, specifically an employer-coordinator WBL program website will enhance overall communications between the coordinator and employers. If the outcome of this study shows a positive result of enhanced communication, it is believed that this type of communication process can be duplicated in other work programs across the state.

Response Rate

The population in this study included business supervisors and non-profit on-site supervisors for Minnesota Transitions summer youth work-based learning program. There were 20 supervisors identified for this study. Of the 20 supervisors contacted, 14 responded to the survey. Of this 14 respondents, one supervisor made contact with the survey, but did not respond to any of the questions, thus was not included in the final calculations.

Demographics

The career areas of the employers included four from construction and trades, three from health careers, two from service, two from maintenance and service, and two from other occupations, listed as digital media. All employers resided in the city of Minneapolis. Four of the employers had one or less year of partnership with MTCS while the others had two or more years. Four of the employer sites did not have a business website. Of the technology comfort level, only two employers reported neutral or strongly disagree in regard to their comfort level navigating on the website.

Results

The second section of this study's survey, titled Communication Process (questions 1 through 5), asked the employers and/or supervisors rate their perceptions of the communication

process (before and after the introduction of the website) between employer and coordinator. A one-tailed t-test was used to determine whether a significant difference exists which is $p < .05$. The summary of each question and the mean and standard deviation is listed below in Table 3.

Table 3

Did the MTCS Website Enhance the Communication Process with the MTCS Coordinators?

	Mean	SD
1. Communication met expectations prior to website	3.461	1.05
2. Prefer on-site communication	3.076	1.255
3. Prefer off-site types of communication	3.846	1.143
4. Website enhances overall communication	3.846	.987
5. View future websites as valuable	3.846	1.06

The first question in the second section asked employers or supervisors whether or not they felt the communication process with MTCS coordinators met their expectations prior to the website. Responses to this question are listed below in Table 4.

In statement #1, the total number of respondents, 7.7% strongly agreed that the communication process with coordinator met their expectations, while 53.85% agreed, 23.8% were neutral, 7.7% disagreed and 7.7% strongly disagreeing. In section 2, statement 1, the sample of employers ($M = 3.461$, $SD = 1.05$, $\underline{n} = 13$) who felt that communication with employer prior to website, met expectations, $p = .07$, which is not significant at the 5 % confidence level.

Table 4

Communication Prior to Website Met Expectations

	Frequency	Percentage
Strongly Agree	1	7.7%
Agree	7	53.9%
Neutral	3	23%
Disagree	1	7.7%
Strongly Disagree	1	7.7%
TOTAL	13	100%

Question number 2, in the communication section of survey asked employers if it was important that they be contacted by coordinators several times a term by on-site visitations. Responses for this survey can be found in Table 5, listed below.

Of the total number of respondents, 15.4% strongly agreed that the communication process with coordinator met their expectations, while 15.4% agreed, 46% were neutral, and 07.7% disagreed and 7.7% strongly disagreeing. In statement 2, the sample of employers ($M = 3.076$, $SD = 1.255$, $n = 13$) which asks employers whether they prefer on-site communication from coordinators, $p = .41$, which is not significant at the 5 % confidence level.

Table 5

Prefer Communication with On-site Visits

Response	Frequency	Percentage
Strongly Agree	2	15.4%
Agree	2	15.4%
Neutral	6	46.1%
Disagree	1	7.7%
Strongly Disagree	2	15.4%
TOTAL	13	100%

Question number 3, in the communication section of survey asked employers if it was important that they be contacted by coordinators several times a term, by communication processes other than on-site visits. Responses for this survey can be found in Table 6, listed below.

Of the total number of respondents, 30.8% strongly agreed that they preferred other types of communication over on-site visitations, while 38.5% agreed, 23.1% were neutral, and 7.7% strongly disagreeing. Of the respondents, 0% listed disagreed. In statement #3, the sample of employers ($M = 3.84$, $SD = 1.143$, $n = 13$) who preferred off-site types of communication, $p = .01$, which is significant at the 5 % confidence level.

Table 6

Prefer Communication Without On-site Visit

Response	Frequency	Percentage
Strongly Agree	4	30.8%
Agree	5	38.5%
Neutral	3	23%
Disagree	0	0%
Strongly Disagree	1	7.7%
TOTAL	13	100%

Question number 4, in the communication section of survey asked employers if they felt the communication process could be enhanced by using this website. Responses for this survey question can be found in Table 7, listed below.

Of the total number of respondents, 69.2% agreed that the communication process with coordinator met their expectations, while 15.4% strongly agreed, 7.7 % were neutral, and 7.7% strongly disagreeing. Of the respondents, 0% listed disagreed. In statement 4, the sample of employers ($M = 3.84$, $SD = .987$, $n = 13$), who perceived that the website enhanced the overall communication process, $p = .004$, which is significant at the 5 % confidence level.

Table 7

Communication can be Enhanced by Using Website

Response	Frequency	Percentage
Strongly Agree	2	15.4%
Agree	9	69.2%
Neutral	1	7.7%
Disagree	0	0%
Strongly Disagree	1	7.7%
TOTAL	13	100%

Statement # 5, in the communication section of survey asked employers if they felt this website could be a valuable communication tool in the future. Responses for this survey can be found in Table 8, listed below.

Of the total number of respondents, 53.8% agreed that the website could be a valuable communication tool in the future, while 23.1% strongly agreed, 15.4% were neutral, and 7.7% strongly disagreeing. Of the respondents, 0% listed disagreed. In statement 5, the sample of employers ($M = 3.84$, $SD = 1.06$, $n = 13$) who perceived that a future website would be a valuable addition to the communication process, $p = .007$, which is significant at the 5 % confidence level.

Table 8

Website is a Valuable Communication Tool to use in the Future

Response	Frequency	Percentage
Strongly Agree	3	7.69%
Agree	7	53.85%
Neutral	2	15.38%
Disagree	0	0%
Strongly Disagree	1	7.7%
TOTAL	13	100%

In the third section of the survey, questions 2 through 6 asked employers to rate the value of the components offered on the MTCS employer-coordinator website. The sections listed resources for employers (such as labor law information), official paperwork (such as program student training agreements, timesheets and evaluations), employer-coordinator-student responsibilities, communication options (such as email to coordinator, webchat and discussion forum), as well as a job bank section. The majority of the respondents, 84% or higher, agreed and strongly agreed that all of these areas on the website were useful. Responses for all five areas can be found in Table 9, listed below. The scale used in this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

In section 3, statement 2, the sample of employers ($M = 4.07$, $SD = 1.15$, $\underline{n} = 13$) who felt that the links to resources were useful, $p = .002$, which is significant at the 5 % confidence level. In section 3, statement 3, the sample of employers ($M = 4.30$, $SD = 1.109$, $\underline{n} = 13$) who felt that access to program paperwork was useful, $p = .0006$, which is significant at the 5 % confidence

level. In section 3, statement 4, the sample of employers (M = 4.07, SD = 1.115, n = 13) who felt listing program participants responsibilities was useful, p = .0023, which is significant at the 5 % confidence level. In section 3, statement 5, the sample of employers (M = 4.23, SD = 1.091, n = 13) who felt the various electronic communication venues were useful, p = .0008, which is significant at the 5 % confidence level. In section 3, statement 6, the sample of employers (M = 4.153, SD = 1.068, n = 13) who felt the job bank was useful, p = .0011, which is significant at the 5 % confidence level.

Table 9

Employers Attitudes on the Various Components of the Website

Website Components	SD	D	N	A	SA
Resources	1 (7.7%)	0 (0%)	1 (7.7%)	6 (46.2%)	5 (38.5%)
Official Paperwork	1 (7.7%)	0 (0%)	0 (0%)	5 (38.5%)	7 (53.8%)
Participant Responsibilities	1 (7.7%)	0 (0%)	1 (7.7%)	6 (46.2%)	5 (38.5%)
Communication Options	1 (7.7%)	0 (0%)	0 (0%)	6 (42.6%)	6 (46.2%)
Job Bank	1 (7.7%)	0 (0%)	7 (53.8%)	5 (38.5%)	5 (38.5%)

Section 1, statement 5 was used for research #2 question. For this research question, a measure of "technology skill level" was devised for respondents. A variable, tech-skill, that had a value of 1 (low) for those employers whose internet comfort level was 3 or lower (neutral to strongly disagree with statement provided) or 2 (high) for those who internet comfort level was 4 or 5 (agree or strongly agree with the statement provided). Of the thirteen respondents, 2 were placed in the low-tech group with responses had the value of 1. Eleven

respondents were placed in the high-tech group with responses higher than 3. Responses for this area are found below, in table 10. The scale used in this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

A two-sample t-test was used conducted for research question two. The question asked is "Is the average response for people in the low tech-skill group higher or lower than (depending on which question) the average response for people in the high tech-skill group". Here the process is to test whether the difference between the groups is significantly higher/lower than 0.

Table 10

Tech-skill Level and Comfort Level with Navigating Website

	Respondents' Internet Comfort Level Rating				
Tech-Skill Level	SD	D	N	A	SA
Low	1	0	1	0	0
High	0	0	0	4	7
Total	1	0	1	4	7

Statements found in Section two were revisited, using the Two-sample t-test. Responses for this area can be found below, in Table 11. In section two, statement one, the sample of employers in the low tech-skill group that found the MTCS on-site visitations being adequate, (M = 2.5, SD = 2.12, n = 2) as compared to sample of employers in high tech-skill group (M = 3.63, SD = .809, n = 11), p = .915, which is not significant at the 5 % confidence level. Responses for this area are found below, in table 11.

The scale used in this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Table 11

Onsite Coordinator Visitations Met Expectations

	Met Expectations Rating				
Tech Skill Level	SD	D	N	A	SA
Low	1	0	0	1	0
High	1	1	3	6	1
Total	1	1	3	7	1

In section two, statement two, the sample of employers in the low tech-skill group that preferred on-site visitations, (M = 2.0, SD = 1.41, n = 2) as compared to sample of employers in high tech-skill group (M = 3.27, SD = 1.19, n = 11), p = .900, which is not significant at the 5 % confidence level, indicating the level of tech-skill is not a variable. Responses for this area can be found below, in Table 12. The scale used in this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Table 12

Prefer Onsite Visitations from Coordinator

	Prefer On-site Visitations Rating				
Tech Skill Level	SD	D	N	A	SA
Low	1	0	1	0	0
High	1	1	5	2	2
Total	2	1	6	2	2

In section two, statement two, the sample of employers in the low tech-skill group that preferred alternate forms of communication other than on-site visitations, (M = 2.0, SD = 1.41, n = 2) as compared to sample of employers in high tech-skill group (M = 4.18, SD = .75, n = 11), p = .0029, which is is significant at the 5 % confidence level, indicating the level of tech-skill is may be a variable. Responses for this area can be found below, in Table 13. The scale used in this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Table 13

Employers Preferring Electronic Communication

	Met Expectations Rating				
Tech Skill Level	SD	D	N	A	SA
Low	1	0	1	0	0
High	1	0	2	5	4
Total	2	0	3	5	4

In section two, statement three, the sample of employers in the low tech-skill group that perceived the introduction of the website as enhancing communication, (M = 2.5, SD = 2.12, n = 2), as compared to sample of employers in high tech-skill group (M = 4.09, SD = .539, n = 11), p = .0142, which suggests that the lower tech skill group has a lower preference for electronic communications as opposed to the higher group, which is significant at the 5 % confidence level. Responses for this area can be found below, in Table 14. The scale used in this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Table 14

Introduction of MTCS Website Enhances Communication

	Met Expectations Rating				
Tech Skill Level	SD	D	N	A	SA
Low	1	0	1	1	0
High	0	0	1	8	2
Total	1	0	1	9	2

In section two, statement four, the sample of employers in the low tech-skill group that perceived the MTCS website to be a valuable tool in the future, ($M = 2.5$, $SD = 2.12$, $n = 2$) as compared to sample of employers in high tech-skill group ($M = 4.09$, $SD = .700$, $n = 11$), $p = .0234$, which suggests the lower tech skill group has a lower preference for the value of a future website as compared to the high tech-skill group, which is significant at the 5 % confidence level. Responses for this area can be found below, in Table 15. The scale for this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Table 15

Perceive the Future of Website to be Valuable in Future

	Met Expectations Rating				
Tech Skill Level	SD	D	N	A	SA
Low	1	0	0	1	0
High	0	0	2	6	3
Total	1	0	2	7	3

Research question #4 sought to ascertain whether years of partnership with MTCS students affect employers' perception of whether or not the MTCS employer-coordinator website enhances communication. Data was analyzed by career area, however, because several career areas only had one observation, it was not possible to conduct a test of significance. Responses for this area are listed in Table 16. According to Table 16, over half of employers, 7 out of 13, fell within the construction & maintenance and health care occupations.

Table 16

Occupational Area of Employer's Business

	Frequency	Percentage
Construction & Maintenance	4	30.7%
Health Care Occupations	3	23.8%
Service Occupations	2	15.38%
Other (digital media)	2	5.38%
Construction & Health	1	7.69%
Health & Service Occupations	1	7.69%
Total	13	100%

Continuing with research question #4, employers were asked if communication from coordinator, prior to website, met expectations. Data for this response can be found below in Table 17.

Although it is not possible to conduct a test of significance for this questions, the assumption can be presented that the majority of respondents from all areas combined (combined $M = 3.44$, $n = 13$) suggesting employers generally leaned towards neutral that coordination communication prior to website MTCS met expectations.

Table 17

MTCS Coordinator Communication Prior to Website Met Expectations

	Respondents	Mean	SD	Min	Max
Construction & Maintenance	4	3	1.41	1	4
Health Care Occupations	3	3.6	1.52	2	5
Service Occupations	2	4	0	4	4
Other (digital media)	2	3.5	.707	3	4
Construction & Health	1	3	3	3	3
Health & Service Occupations	1	4	4	4	4
Total	13				

Continuing with research question #4, employers were asked if they preferred on-site visitations from the MTCS coordinator. Data for this response can be found below in table 18.

Although it is not possible to conduct a test of significance for this questions, the assumption can be presented that the majority of respondents from all areas combined (combined $M = 3.07$, $n = 13$) suggesting employers were neutral that they preferred onsite coordination visitations from MTCS employers.

Table 18

Employers Prefer Onsite Visitations From Coordinator

	Respondents	Mean	SD	Min	Max
Construction & Maintenance	4	3.25	1.7	1	4
Health Care Occupations	3	3	3	3	3
Service Occupations	2	4	3	3	5
Other (digital media)	2	2	3	3	4
Construction & Health	1	4	4	4	4
Health & Service Occupations	1	2	2	2	2
Total	13				

Continuing with research question #4, employers were asked if they preferred electronic communications from MTCS coordinators. Data for this response can be found below in Table 19.

Although it is not possible to conduct a test of significance for this questions, the assumption can be presented that the majority of respondents from all areas combined (combined $M = 4.06$, $n = 13$) suggesting employers generally leaned towards agreeing that they preferred electronic communications from MTCS coordinators.

Table 19

Employers Prefer Electronic Communications

	Respondents	Mean	SD	Min	Max
Construction & Maintenance	4	3	1.4	1	4
Health Care Occupations	3	3.6	.57	3	4
Service Occupations	2	5	0	5	5
Other (digital media)	2	5	0	5	5
Construction & Health	1	4	4	4	4
Health & Service Occupations	1	3	3	3	3
Total	13				

Continuing with research question #4, employers were asked if they felt the MTCS employer-coordinator website enhanced communication. Data for this response can be found below in Table 20.

Although it is not possible to conduct a test of significance for this questions, the assumption can be presented that the majority of respondents from all areas combined (combined $M = 4.15$, $n = 13$) suggesting employers generally leaned towards agreeing that the website enhanced communication with the MTCS coordinator.

Table 20

Website Enhances Communications

	Respondents	Mean	SD	Min	Max
Construction & Maintenance	4	3.5	1.73	1	5
Health Care Occupations	3	4	0	4	4
Service Occupations	2	4.5	.707	4	5
Other (digital media)	2	4	0	5	5
Construction & Health	1	3		3	3
Health & Service Occupations	1	4		4	4
Total	13				

Continuing with research question #4, employers were asked if they felt the MTCS employer-coordinator website would be valuable in the future. Data for this response can be found below in Table 21.

Although it is not possible to conduct a test of significance for this questions, the assumption can be presented that the majority of respondents from all areas combined (combined $M = 3.76$, $n = 13$) suggesting employers generally leaned towards agreeing that an MTCS website will be valuable in the future.

Table 21

Website Will Be Valuable in the Future

	Respondents	Mean	SD	Min	Max
Construction & Maintenance	4	3.25	1.70	1	5
Health Care Occupations	3	4.3	.577	4	5
Service Occupations	2	4.5	0	4	4
Other (digital media)	2	4	0	4	4
Construction & Health	1	4		4	4
Health & Service Occupations	1	3		3	3
Total	13				

For research question four, a variable for years of MTCS experience was created, one group being employers with one year or less of partnership. The second group included employers with over one year of partnership. For this section, a two-tailed t-test was conducted, as there wasn't a set expectation of one group being higher or lower than the other group. Of the thirteen respondents, five had one year or less of partnership. Eight respondents had more than one year of partnership. Results from this area can be found below in Table 22.

Table 22

Years of Employer Partnership with MTCS

	Number of Years				
MTCS Experience	< 1 year	1 year	2-3 years	>3 years	Total
1 year or less	4	1	0	0	5
Over 1 year	0	0	2	6	8
Total	4	1	2	6	13
TOTAL	1	0	1	4	13

In section two, statement one, the sample of employers in the 1 year and under group that found the MTCS on-site visitations being adequate, (M = 3.4, SD = .894, n = 5) as compared to sample of employers in over 1 year group (M = 3.5, SD = 1.19, n = 8), p = .8757, which is not significant at the 5 % confidence level. Results from this area can be found below in Table 23. The scale used in this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Table 23

Onsite Coordinator Visitations Met Expectations

	Met Expectations Rating				
Tech Skill Level	SD	D	N	A	SA
1 year and under	0	1	1	3	0
Over 1 year	1	0	2	4	1
Total	1	1	3	7	1

In section two, statement two, the sample of employers in the 1 year and under group that preferred on-site visitations, ($M = 3.4$, $SD = 1.14$, $n = 5$) as compared to sample of employers in over 1 year group ($M = 2.875$, $SD = 1.35$, $n = 8$), $p = .4875$, which is not significant at the 5 % confidence level. Results from this area can be found below in Table 24. The scale used in this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Table 24

Prefer Onsite Visitations from Coordinator

Prefer On-site Visitations Rating					
Tech Skill Level	SD	D	N	A	SA
Low	0	1	2	1	1
High	2	0	4	1	1
Total	2	1	6	2	2

In section two, statement three, the sample of employers in the one year or under group that preferred electronic means of communication, ($M = 3.6$, $SD = .547$, $n = 5$), as compared to sample of employers in over one year group ($M = 4.0$, $SD = 1.41$, $n = 8$), $p = .56$, which is not significant at the 5 % confidence level. Results are listed below in Table 25. The scale used in this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Table 25

Employers Preferring Electronic Communication

	Met Expectations Rating				
Tech Skill Level	SD	D	N	A	SA
Low	0	0	2	3	0
High	1	0	1	2	4
Total	1	0	3	5	4

In section two, statement four, the sample of employers in the one year and under group that perceived the introduction of the MTCS website to enhance communication, ($M = 4.2$, $SD = .447$, $n = 5$) as compared to sample of employers in the over one year group ($M = 3.625$, $SD = 1.18$, $n = 8$), $p = .3279$, which is not significant at the 5 % confidence level. Results from this area can be found below in Table 26. The scale used in this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Table 26

Introduction of MTCS Website Enhances Communication

	Met Expectations Rating				
Tech Skill Level	SD	D	N	A	SA
Low	0	0	0	4	1
High	1	0	1	5	1
Total	1	0	1	9	2

In section two, statement four, the sample of employers in the one year and under group that perceived the introduction of the MTCS website to enhance communication, ($M = 4.0$, $SD = 1.0$, $n = 5$) as compared to sample of employers in the over one year group ($M = 3.75$, $SD = 1.16$, $n = 8$), $p = .6998$, which is not significant at the 5% level. Results from this area can be found below in Table 27. The scale used in this portion of the survey was SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree.

Table 27

Perceive the Website to be Valuable in Future

	Met Expectations Rating				
Tech Skill Level	SD	D	N	A	SA
Low	0	0	2	1	2
High	1	0	0	6	1
Total	1	0	2	7	3

A p-value of less than .05 is regarded as indicating a significant result in this study. From the data in the five statements, the p-values were .8757, .4875, .562, .327, and .699, which suggest that years of partnership with MTCS has no impact on responses to the survey statements.

Chapter V: Summary, Conclusions and Recommendations

Summary

The overall goal of this project was to investigate whether or not an information and communication system, specifically an employer-coordinator work-based learning program website enhanced overall communications between the coordinator and employers. Although the sample was small, the outcome of this study shows a positive result of enhanced communication. With this in mind, it is believed that this type of communication process can be duplicated in other work programs across the state. The review of literature sought to establish whether or not, the introduction of a website could enhance the overall communication process with related clients or individuals who regularly access such sites.

Of all the 20 respondents, 13 (65%) of the MTCS employers responded to the survey. These results were analyzed using a single t-test and two-tail t test for each variable to determine response rate for the survey questions. It was not possible to conduct a statistically significant analysis of whether occupational trades affected responses, as numbers were too low.

The main theme that emerged from the responses was that MTCS employers felt that the website was a valuable tool that could be used to enhance communication. It was interesting to note that employers did not have a strong preference for on-site visitations, but did want some type of communication, whether it be via phone, email, or other message sources. There was also an agreement of the employers that using this type of website in the future would be beneficial.

Another area that employers perceived to be beneficial was having access to program forms, documents and resources. MTCS employers also agreed that a job bank and various portals for communication were useful. There did not appear to be any statistical findings of

employer years of partnership and employers occupational area having any significant effect on responses in the study.

The study did suggest that the technical skill comfort level may have an impact in employers preferring on-site visitations for communication venues, as opposed to digital communication methods, however, the questions to determine tech-skill level were not in-depth, thus the researcher would not view this as significantly significant. The study also did not come up with statistical significant data that employer occupational areas or years of partnership had any effect on their perceptions of enhanced communication or the website being a valuable communication tool.

The findings of the study will be used by the superintendent at the Minneapolis Transitions Charter School to create an actual website to use with the work-based learning program coordinators and employers. These findings will assist the department to reevaluate the website prototype used in this study and revise it according to perceived attitudes of employers that responded to the survey.

Limitations of the Study

1. The most significant limitation of the study is the timeframe in which the study was conducted. This is due to the study occurring during the summer program, which is only six weeks long, as opposed to the 12 week trimester sessions, operated during the school year.
2. Another limitation of this study will be the reliability of the interactive website, as this web site has just been recently developed. The website will be used for the first time with the MTCS Work program employers. It is anticipated that there may be some changes and glitches to work out during the course of this study.

Conclusions

Each research question stated in Chapter One will be restated and answered based on the analysis of the data. Employer perceptions of whether the MTCS employer-coordinator website enhanced the communication process with coordinators were assessed by their responses to the research developed questionnaire. After each research question, reference will be made to the appropriate survey questions.

Research Question #1. Will employers view the introduction of the MTCS employer-coordinator website to enhance the communication process with MTCS coordinators?

Question #1 of the survey instrument asked employers to rate whether communication with employers prior to website met their expectations on a Likert scale of one to five, with rating options of strongly disagree, disagree, neutral, agree and strongly agree. It appears that there is not a significant response to this statement, as the p-value was over .05.

In question #2 of the survey instrument, employers were asked if they preferred communication with on-site visitations from the work-based learning coordinator. Six out of the 13 employers were neutral on this response, with four rating agree or higher and three rating the statement disagree and lower. Although the p-value of this statement was .41, the number of neutral responses leads this researcher to suggest that employers did not truly have a strong attitude on this particular statement.

Employers were asked in question #3 of the survey instrument, if they felt it was important that they be contacted by coordinators several times a term, by communication processes other than on-site visitations. Nine of the thirteen employers rated this statement as agree or higher. Three employers were neutral and one employer disagreed. The p-value for this

statement was .01, suggesting that employers did agree with this statement, that they preferred electronic and alternate forms of communication, as opposed to strictly on-site visitations.

Question #4 of the survey instrument asked employers if they felt the communication process could be enhanced be using this website. Of the 13 respondents, eleven employers rated this statement as agree or higher. One employer rated the statement neutral and one rated the statement as strongly disagree. The p-value for this statement was .004, suggesting that employers did find this website to enhance communication with the coordinator.

Lastly, question #5 of the survey instrument asked employers if they felt this website could be a valuable communication tool in the future. Of the 13 respondents, ten employers rated this statement as agree or higher. Two of the employers rated this statement as neutral, with one employer giving a rating of strongly disagree. The p-value for this statement was .007, suggesting that employers attitude did see the future of this website as a valuable tool.

Based on the responses to the five questions, it can be concluded that the employers agreed that this type of communication (employer-coordinator website) is viewed as a means to enhance communication with work-based learning program coordinators. It was interesting to note that not all employers felt that on-site visitations were necessary for good communication, but that some type of communication (phone, email, etc…) was important.

Research Question #2. What information found on the MTCS employer-coordinator website do employers view as beneficial?

In the third section of the survey, questions #2 through #6 asked employers to rate the value of the components offered on the MTCS employer-coordinator website. The sections listed resources for employers (such as labor law information), official paperwork (such as program student training agreements, timesheets and evaluations), employer-coordinator-student

responsibilities, communication options (such as email to coordinator, webchat and discussion forum), as well as a job bank section. The majority of the respondents, 84% or higher, agreed and strongly agreed that all of these areas on the website were useful.

Employers were asked in section #3, question #1, whether they felt that links to resources were useful. Of these employers, 11 agreed with the statement, with one employer giving a rating of neutral and one employer giving a rating of strongly disagree. The p-value was .002, which is significant at the 5 % confidence level and suggests that employers did find this section useful.

In question #2 of section #3, 12 of the 13 employers felt that the links to official program paperwork were useful, with one employer rating of strongly disagree. The p-value was .0006, which is significant at the 5 % confidence level and suggests that employers did find this section useful.

Eleven of the 13 employers, in section #3, statement #3, felt that the descriptions of program participant responsibilities were useful, with one employer rating of neutral and one employer rating of strongly disagree. The p-value was .0023, which is significant at the 5 % confidence level and suggests that employers did find this section useful.

In section #3, question #4, 12 of the 13 employers felt that the various communication options were useful, with one employer rating of strongly disagree. The p-value was .0008, which is significant at the 5 % confidence level and suggests that employers did find this section useful.

Finally, in question #5 of section #3, 12 of the 13 employers felt that the links to the job bank were useful, with one employer rating of neutral and one employer rating of strongly disagree. The p-value was .0011, which is significant at the 5 % confidence level and

suggests that employers did find this section useful.

Based on the responses to the five questions in section #3, it can be concluded that employers did view the access to program documentation, forms and resources as useful. The job bank and various communication avenues (web chats and discussion forums) were also seen as useful by the majority of the employers.

Research Question #3. Does technology skill level of the employer affect employer's perception of whether or not the MTCS employer-coordinator website enhances communication?

In the first section #1, questions #4 and #5 were used to answer this question. A measure of technology skill was devised by placing a value on employers perceived internet comfort level. Those with a value of 3 (neutral) or lower (disagree and strongly disagree) were assigned a value of 1(low). Respondents with a value of 4 or higher (agree and strongly agree) were assigned a value of 2 (high). Of all respondents, 11 were rated having a level of 2 and two respondents were rated with a level of 1. A two-sample t-test was conducted to ask, "Is the average response for people in the low tech-skill group higher or lower than the average responses in the high tech-skill group."

In section #2, question #1 attempted to assess whether there the low tech-skill group rating differed from the high tech-skill group in their rating of prior MTCS on-site visitations being adequate. A p-value score of .915 indicates that it is not significant, thus it is assumed that the tech-skill level is not a factor in whether employers feel prior coordination visitations were adequate.

In the following section #2, question #2 attempted to assess whether there the low

tech-skill group rating differed from the high tech-skill group in their rating of employers viewing MTCS on-site visitations being important. A p-value score of .90 indicates that it is not significant, thus it is assumed that the tech-skill level is not a factor in whether employers feel on-site visitations are important.

The third question #3, in section #2, attempted to assess whether there the low tech-skill group rating differed from the high tech-skill group in their rating of preferring electronic and alternate types of communication as opposed on-site visitations. A p-value score of .014 is significant, and may suggest that the low tech-skill group has a lower preference for electronic communications as compared with the high tech-skill group.

Finally, in section #2, question #4 attempted to assess whether there the low tech-skill group rating differed from the high tech-skill group in their rating of whether the MTCS website enhanced the communication process. A p-value score of .014 is significant, and may suggest that the low tech-skill group views the website less favorably in regard to enhancing the communication process as opposed to the higher group

Based on the responses to the above questions, it can be suggested that the low tech skill group did not necessarily prefer digital communications from the work-based learning coordinators, as opposed to the high tech group. The preference for onsite visitations did not show any variance between the two groups, as well as satisfaction with coordination visitations prior to the survey.

Research Question #4. Does the employer occupational area affect employers' perception of whether or not the MTCS employer-coordinator website enhances communication?

The data from this research question was analyzed by career area, however, because several career areas had only one observation, it was not possible to conduct a test of

significance. Because of this, a qualitative assessment will be used. In the section two, statement #1, asking whether respondents felt that coordination prior to the website met expectations, the mean response (out of 1 to 5, with 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree) for four respondents in the construction trades was 3, indicating that they were neutral. For respondents in the health care trades, the mean was 3.6, in the service occupations, the mean was 4 and in the other occupations, the mean was 3.5, suggesting that a larger percentage of this group agreed coordination met their expectations prior to the introduction of the website.

In the section two, statement #2, asking whether respondents whether they preferred on-site visitations from coordinators, the mean response (out of 1 to 5, with 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree) for respondents in the health care trades was 3, indicating that they were neutral. For respondents in the construction trades, the mean was 3.25, in the service occupations, the mean was 4, suggesting that a larger percentage of these two groups agreed preferred on-site coordination visitations. Respondents from the other (visual and media design) group, had a mean score of 2, suggesting that they did not prefer onsite visitations.

In the section two, statement #3, asking whether respondents preferred electronic communications, the mean response (out of 1 to 5, with 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree) for respondents in the construction trades was 3, indicating that they were neutral. For respondents in the health care trades, the mean was 3.6, in the service occupations, the mean was 5 and in the other occupations, the mean was 5, suggesting that a larger percentage of this group preferred electronic and alternate forms of communication.

Section two, statement #4, asked whether respondents felt that the introduction of a website enhanced communications. The mean response (out of 1 to 5, with 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree) the mean of construction trades was 3.5, for respondents in the health care trades, the mean was 4, in the service occupations, the mean was 4.5 and in the other occupations, the mean was 4. This suggests that a larger percentage of this group agreed that the website enhanced communications.

In the section two, statement #5, asking whether respondents felt that the website will be a valuable communication tool in the future, the mean response (out of 1 to 5, with 1 being strongly disagree, 2 being disagree, 3 being neutral, 4 being agree, and 5 being strongly agree) for the construction trades was 3.25, in the health care trades, the mean was 4.3, in the service occupations, the mean was 4.5 and in the other occupations, the mean was 4, suggesting that a larger percentage of this group agreed that the website will be valuable in the future.

Based on the responses in this research question, a test of statistical significance could not be determined, thus a conclusion or summary of responses would be unwarranted.

Research Question #5. Does the amount of employer years, in partnership with MTCS students, affect employers' perception of whether MTCS employer-coordinator website enhances communication?

For this research question, a variable for years of MTCS service was created, 1 being employers with one or less years of partnership and 2 being two or more years of partnership. A two-tailed t test was conducted, as there was not a set expectation of one group being higher or lower than the other group.

In section two, statement one, the p-value was .8757 for rating prior coordination as meeting expectations. In statement two, the p-value was .485 for preferring onsite visitations. In statement three, the p-value was .56 for preferring electronic means of communication. In statement four, the p-value was .327 for employers rating the introduction of the MTCS as a way to enhance communication. In statement five, the p-value was .699 for employers rating the future of a website as a valuable tool.

Based on the analysis of these results, there was not a significant finding, indicating that prior years of partnership with MTCS work-based learning program has not impact on employers rating of the communication process.

Recommendations

1. It is recommended that a similar survey be conducted at the end of the school year with a greater number of employers and two or more school districts. Having a larger number of participants will lead to more valid and reliable data. Using several schools or school districts will provide comparative data as well. A second study may provide a more statistically reliable view of employers' perceptions that digital web component is another viable form of communication with the work-based coordinator.
2. If a second study of a similar nature is conducted, it is recommended that the website be created by a professional in the website design area. Ease of navigation, graphics, readability and other graphic design considerations are important.
3. If a second study of a similar nature is conducted, it is also recommended that the study occur over a longer time period. Providing a longer time period to access the work-based learning website will allow the participants to become more acclimated to using this digital resource.

4. Should a similar study take place, it is recommended that an orientation session be used with employers on using the work-based learning website. This may provide extra reinforcement for employers who may not be comfortable with the internet.
5. Digital applications in education are becoming more prevalent in society. It is recommended that traditional face to face and virtual high schools, who currently do not have a work-based learning component, investigate the possibility of a work-based learning employer-coordinator website in their program.
6. It is recommended that a work-based learning program website also include students and parents in the communication process. This type of venue would provide a more uniform mode of communication for all concerned parties.
7. This data could have future implications for work-based learning programs that are seeking additional venues to communicate with employers. It is recommended that survey questions be evaluated if a similar study is done in order to promote a better analysis of employers using the website as a communication tool.

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Appendix One

Research Questions Used on Survey

General

1. How many years have you worked with Minnesota Transitions School?

   Under one year

   One year

   Two to three years

   Over three years

2. Which following career area best describes your business or organization?

   Construction and maintenance

   Health careers

   Service occupations

   Other (please specify)

3. Does your business or organization have a website that is currently in operation?

   Yes

   No

4. How many times did you access the MTCS website?

   One time

   Two to three times

   Four to five times

   More than five times

5. I am very comfortable navigating and searching on the internet.

   Strongly agree Agree Neutral Disagree Strongly disagree

Communication Process

1. The overall communication process, with the MTCS coordinator met my expectations prior to the website.

   Strongly agree Agree Neutral Disagree Strongly disagree

2. It is important that the MTCS coordinator communicate with me several or more times a month. I would prefer the communication to be done by on-site visitations.

   Strongly agree Agree Neutral Disagree Strongly disagree

3. It is important that the MTCS coordinator communicate with me several or more times a month. I prefer communication to be done by web page, phone calls, email or student messages.

   Strongly agree agree neutral disagree strongly disagree

4. The communication process could be enhanced with the MTCS coordinator by using this website.

   Strongly agree agree neutral disagree strongly disagree

5. The MTCS employer-coordinator website will be a valuable communication tool for future use.

   Strongly agree agree neutral disagree strongly disagree

Website

1. Overall, the website was easy to navigate

   Strongly agree Agree Neutral Disagree Strongly disagree

2. Having links on the resource page (labor law information, I-9 forms, selective service registration and social security) is very useful.

   Strongly agree Agree Neutral Disagree Strongly disagree

3. Having access to student documentation, such as employer, coordinator, student and parent responsibilities is very useful.

   Strongly agree agree neutral disagree strongly disagree

4. Having several options for communication (email links, chat-room, and discussions board) is very useful.

   Strongly agree agree neutral disagree strongly disagree

5. Having access to detailed information such as employer, coordinator, student and parent responsibilities is very useful.

6. Having a job bank to list current openings is very useful.

   Strongly agree agree neutral disagree strongly disagree