

FACTORS DETERMIND ATTRITION IN HIGH WAGE TECHNICAL FIELDS AT
WESTERN WISCONSIN TECHNICAL COLLEGE
PLAN B PAPER

by

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ABSTRACT

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Factors that Influence Attrition in High Wage Technical Fields At Western Wisconsin Technical College
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Research indicates that American Business and industry are struggling to find the skilled labor to fill positions needed to keep many industries competitive in today's global market. At Western Wisconsin Technical College, three-program areas that are high wage and have a strong employment outlook are also experiencing high attrition rates. The objective of this study is to determine factors that are contributing to the attrition rate in each of these program areas; Medical Laboratory Technician, Air Conditioning, Heating and Refrigeration and Administrative Assistant Information Processing.

A Likert survey will be mailed to all program leavers and graduates in these three program areas to determine what were the major reasons these students did or did not finish the program they had registered for. The primary factors that will be explored include academic and career preparation prior to enrollment, course scheduling, and personal challenges. Personal challenges include financial reasons, childcare, and lack of family support, transportation and personal health.

Literature that is available regarding factors that influence and improve retention in two-year technical college programs will be examined. This research along with the data received from this survey will provide the basis for each program area to consider improvements that will increase retention rates and better meet the labor market needs in today's global market.

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Chapter I Introduction

Employment prospects for American workers are affected by societal, global, scientific, commercial and legislative developments (Melchionno & Steinman, 1998). Job hunters no longer compete with just neighbors for employment. Today, job seekers are facing competition from around the world.

The skilled worker shortage, so evident in industry today is partially due to the increased skill level now required and the decreasing interest in manufacturing careers by today's youth. This trend of a shortage of workers, and competition from foreign markets is particularly well illustrated by the machining industry, where Asian markets now control 40 percent of the worldwide market (Dykman, 1997).

Another example of the skilled worker shortage is in Michigan in 1997, the quality of the labor pool was so limited, a search firm, in addition to recruiting from other companies, needed to search outside the country to fill metal working jobs that paid more than \$50,000 and didn't require a college degree (Dykman, 1997).

Also a study done by the Pennsylvania State University Workforce Education and Development Department in 1996 reported a multinational manufacturer based in Pennsylvania could not find an adequate number of skilled metal workers to run its new factory. Penn State estimated the total economic loss to the affected community to be at about \$20 million (Wall & Tucker & Pellock & Passmore, 1996). The effects of the rapidly changing global economy and a decreasing skilled labor pool will continue to dramatically affect United States production and markets for the foreseeable future (U.S. Department of Labor Bureau of Labor Statistics, 1998).

Training workers to compete in the next millennium will continue to be a challenge for business, industry and education (Wisconsin Department of Workforce Development, 1996). Author Peter Senge, believed in order for an organization to survive, a company's most competitive advantage is its ability to change faster than its competition (Senge, 1990). In his book, The Fifth Discipline, Senge presented an alternative to traditional top down management, encouraging organizational leaders to look at the world as a large system. Systems' thinking is defined as "a discipline for seeing the whole, a framework for seeing interrelationships rather than things" (Senge, 1990). The idea in systems thinking is for organizations to continually grow and evolve to become learning organizations. Part of this growth and evolution depends on the continuous upgrading of workers skills.

Terry O'Banion one of the leading spokespersons in higher education today, believes that educators need to work as a system also. He presents extensively at conferences throughout the country addressing what he calls the learning revolution. His newest book, A Learning College for the 21st Century, described in detail what community colleges can do to prepare their institutions for the next century. O'Banion challenges community colleges to revise mission statements to include an explicit statement reaffirming their commitment to learning (O'Banion, 1998). His primary concern is for colleges to put the needs of the learner first.

Colleges and Universities are changing their focus from recruitment to the retention of their students. Nearly one-third of college freshmen will not enroll for the second year of study (Cravatta, 1997). A projected down turn in the number of high school graduates entering colleges combined with the rising cost of higher education

(College Student Journal, 1997) is decreasing college enrollment. In the 1999 State of the Industry Report, six top trends of the year are listed with the number one trend being the shift from the traditional classroom training to a dramatic increase of classes offered on the Internet (Bernstein & Auerbach, 1999).

Attempts are being made at all levels to meet the needs of the rapidly changing workforce. Nationally, governors are committed to raising state standards. In four years in all states these standards will be used to begin to determine whether students earn a high school diploma (Vocational Education Journal, 1996). The strategic plan developed by the Board of Directors for the Association for Careers in Technical Education for 1996 listed workforce education as the primary educational goal for all students (Lopp, 1996).

The Workforce Investment Act of 1998 was a collaborative effort to meet the needs of United States businesses while meeting needs of job seekers (U.S. Department of Labor, 1998). This new Workforce Investment System is modeling Peter Senge's new systems approach to change by concentrating on working together to meet the needs of the job seeker. The result of this collaboration is a one-stop service system of training and employment. All of these efforts toward education and training at the national and local levels are beginning to impact the American job seeker.

As the impact of the global economy affects the State of Wisconsin, job loss and plant closings are becoming more common throughout the state. From January 1999 to the end of March 1999, 27 different plants closed in the state of Wisconsin (Department of Workforce Development, June 1999). The number one recommendation made by the Department of Workforce Development for employers in Wisconsin is to provide continuous training to their employees (Department of Workforce, 1996).

Technical college training is often the best option for displaced workers. The Wisconsin Technical College System provided education and training to one out of every nine adults in the State of Wisconsin in 1997-98 (webmaster@board.tec.wi.us).

Unemployed and under-employed workers require an upgrade of skills as soon as possible to reenter and compete in the job market. Technical training is one of the ways to meet their needs.

In the Coulee Region, covering 11 counties, Western Wisconsin Technical College (WWTC) provided over 1218 diplomas, certificates, technical or associate degrees in 1997 (Graduate Success Placement, 1997). Employment is the primary concern of most students seeking training at WWTC (Graduate Success Placement, 1998). The numbers of students in need of training at WWTC will certainly increase as over 800 displaced workers from Stroh's Brewery in La Crosse, struggle with the impact of the global market.

Statement of the Problem

Three Western Wisconsin Technical College Program areas Medical Laboratory Technician, Air Conditioning, Heating and Refrigeration Technician, and Administrative Assistant Information Processing provide high wage and strong employment prospects. Unfortunately they are all experiencing high attrition rates as well. Research has never been done at WWTC to look at why students are leaving these programs.

Purpose

The purpose of this study was to determine factors that contribute to the attrition rate in Medical Laboratory Technician, Air Conditioning, Heating and Refrigeration Technician and Administrative Assistant Information Processing. Using the factors

identified, specific recommendations for program improvements will be made with the goal of increased student retention in all previous mentioned associate degree programs areas. If implemented, these improvements would contribute to higher graduation rates and a stronger skilled workforce in the Coulee Region (WWTC Student Employment, 1998).

Research Question

This study focused on the following objectives specifically related to Medical Laboratory Technician, Air Conditioning, Heating and Refrigeration Technician and Administrative Assistant Information Processing programs.

1. Is attrition related to low grade point average (under 2.0)?
2. Have students participated in any career planning activities prior to enrollment (career planning workshop, interest inventory, job shadow or informational interview)?
3. Are there additional factors such as financial aid or course scheduling that impact attrition?
4. What other factors that may impact attrition in other WWTC programs?

Significance of the Problem

Lowering attrition is crucial as it impacts the availability of the skilled workforce and the goal of WWTC to provide comprehensive quality education. Skilled jobs with high wages are needed in the Coulee Region (Brockmiller, 1999). Medical Laboratory Technician, Air Conditioning, Heating Refrigeration and Administrative Assistant are all program areas that would meet both the needs of employers for skilled employees and meet the needs of students looking for high wage employment in the area. This

information may also contribute to the understanding of attrition in other programs within the college. Reducing attrition of students from these programs would certainly be a significant goal for WWTC (WWTC Student Employment Services 1998).

Limitations

The results of this study was restricted to students enrolled in Heating and Air Conditioning, Medical Laboratory Technician and Administrative Assistant Information Processing at Western Wisconsin Technical College in La Crosse, Wisconsin from August 1998 through May 1999.

Definitions

Medical Laboratory Technician is an associate degree program in the Human Services Division.

Air Conditioning, Heating and Refrigeration is an associate degree program in the Industrial Technology Division.

Administrative Assistant Information Processing is an associate degree program in the Business Division.

Career Planning Workshop is a three-hour workshop available for students to learn about their values, skills and interest in relationship to their career interests and job opportunities.

Attrition is the term used when referring to students who drop out.

Job Shadow is time a student spends at the job site with the person who is already working in their field. Students are encouraged to participate if appropriate, ask questions and observe the nature of the work.

Informational interview is another opportunity for students learn about a field of study by talking with someone who is presently working in the field.

Interest Inventory is an assessment tool used to assess a student's career interests and personality type.

Chapter II

Review of Literature

Research has indicated that job seekers in the United States are profoundly affected by societal, global, scientific, commercial and legislative developments (Melchionno, Steinman, 1998). These developments ultimately mean that in the United States job seekers are not just competing with their neighbors for employment, they are competing and functioning in a global economy.

Leaders in business, industry and education face great challenges in dealing with the changes in their respective fields. Many leaders have come to believe in author, Peter Senge's systems thinking approach to problem solving. In his book, The Fifth Discipline, Senge explained how the traditional method of leadership, which is top down management, is no longer effective. "The bottom line of systems thinking is leverage-seeing where actions and changes in structure can lead to significantly enduring improvements" (Senge, P.1990, p.144). Organizations, to be effective in the global job market, need to continue to grow and evolve, working together as a system in order to survive in the rapidly changing global market.

Educational institutions are no exception to this organizational change. They must change in order to be competitive and meet the needs of today's diverse student body and the stakeholders that support institutions of higher learning. Educational institutions provide the trained work force needed in business and industry. Terry O'Banion, author and leader in education reform, also believes educational institutions need to use the systems thinking approach to change. He believed all people involved in education, from

“line” staff to boards of directors, need to be involved in this process. The author advocated a switch in focus from teaching and research to placing learning first. The article, The Learning Revolution: Perched at The Millennium, (Innovations, O’Banion, 1998) stated the following.

If learning is placed first to become the most important value, the policies, practices, programs and personnel must be realigned to reflect the change in focus. Recognition by key stakeholders in the institution that learning should be placed first is the beginning of the learning revolution. (p. 11)

Many colleges are following O’Banion’s lead and changing their focus from recruitment to retention of students (College Student Journal, 1997). Simple actions by colleges to meet the needs of the learner, such as offering more classes on the Internet and offering weekend and evening classes, are ways to meet some of the many changes foreseen in higher education.

Nationally, state standards are being implemented to raise the level of learning in high school. The Association for Careers in Technical Education (ACTE) formerly American Vocational Association (AVA) annually sets a strategic plan for technical colleges throughout the nation. The number one educational goal listed in 1996 plan was workforce education for all students (Lopp, 1996). Research indicated that raising national standards and an emphasis on workforce education are needed to insure that today’s youth will have stronger skills to pursue the more advanced educational training needed for skilled employment. The Workforce Investment Act of 1998 was a

collaborative effort to meet the needs of United States businesses and the needs of job seekers (U.S. Department of Labor, 1998). This new Workforce Investment System is modeling Peter Senge's new systems approach to change by concentrating on business and education working together to meet the needs of the job seeker. The result of this collaboration is a one-stop service system of training and employment.

All these efforts of cooperation and collaboration at the national and state level between business, industry and education are beginning to affect the change needed to provide the U.S. economy with the highly trained workforce needed to compete in the global market. Yet a high number of students continue to leave college before completing their education.

Retention in skilled technical programs is extremely important, particularly when the economy is so vulnerable and when layoffs regularly occur in major industries in Wisconsin and nationwide. Employers want skilled workers, and students want good jobs. However, not all students starting college are completing their training. Vincent Tinto (1987), famous for his research in retention, found that approximately 75 percent of those students who drop out of college during the first two years, are not leaving because of inadequate grade point averages. These students had adequate grades on departure, and left for other reasons. Today numbers remain fairly constant with about 50 percent of freshmen enrolled in colleges and universities dropping out before completing their programs (Brawer, 1996).

When students leave college before completing their education it affects the pool of skilled workers and also impacts the economy of the institution. Funding and revenues have always been driving forces behind retention, particularly for state supported and

owned institutions. This is an increasing concern because of the decrease in both the pool of available students (McGrath, Braunstein, 97) and the level of funding for institutions of higher education. Budgets and appropriations are formula driven. For every hour of student time in class revenues are provided to institutions for serving those students. Colleges lose substantial dollars each year on attrition (Jones, 1986). Keeping students in school is both cost effective and meets the greater need of providing the training to the workforce of the future.

Retention is a growing concern to legislators and employers who want a trained work force and also want the training to be affordable. In order to combat the rising costs of higher education other funding approaches are being implemented in various states around the country. Some states have initiated incentives to increase the numbers of students entering training programs. In Wisconsin, Governor Thompson initiated a new program, called the Tuition Opportunity Grant (TOPS Grant). This statewide program will provide up to \$1000 per student for tuition. This will help insure that the state of Wisconsin has the trained workforce that is needed to fill the technical jobs projected through the year 2008.

Texas provides additional funding for students who stay at the college through graduation. Another idea suggested by legislatures is to provide additional revenue to colleges based on the number of students who graduate. This is already being implemented in the state of Florida. The more students that graduate the more revenue the college receives.

The retention of college students has vast ramifications. Employers get trained workers, education costs stay more affordable, and more students achieve their personal

goals. From an educational standpoint the primary goal of retention is to keep learners in programs until they achieve their goals (Tracy-Mumford et al. 1994). Why students leave before completing their diplomas, certificates or degrees is a very complex issue, and it has been a concern of college presidents, boards and administrators for decades. It is increasingly a concern that is taking a top priority though out college campuses.

Sandra Kerka believed that retention is linked to many factors. She pointed out in “Adult Learner Retention Revisited” that adults make up at least 50 percent of higher education enrollments. She felt that attrition has increased because adult learners are at such varying stages of the life cycle compared to the traditional 18 to 22 year old students.

All levels of education from the K-12 system to post secondary have done extensive research to determine the major factors that contribute to a student persisting until graduation. Retention of students in educational institutions is a widely discussed, researched, written, and presented upon topic. Yet there is disagreement as to the exact causes for why students leave college.

The research that is available indicates that there are many reasons why students leave or stay in college, whether the college is a four-year institution or a two-year technical college. Some of the factors that have been researched at great lengths to determine student persistence in college are listed below.

High school grade point average	age
full time versus part time students	gender
high school curriculum	race
social economic background	goals
personality type	orientation programs
career advising	attendance policies
relationship between faculty and students	enrollment requirements
personal contact	financial resources
work	family institutional fit
remedial education	institutional fit
ACT and SAT Scores	course scheduling
internal/external locus of control	motivation

The focus of the remainder of this literature review on retention was on grade point average of high school students and first year college students, career goals, financial resources, basic skills/academic remediation, faculty/student relationships/ adult learners. Additional factors affecting non-traditional students such as scheduling and employment will also be discussed.

Grade point average

Traditionally students are often admitted into college based on a combination of high school grade point average, high school class rank and composite scores on ACT or

SAT exams. These traditional measures of success in high school have not equated to the retention rates that are sought by administrators seeking to improve student retention.

Cliff Adelman from the U. S. Department of Education recommended that college admissions officials stop placing so much emphasis on Student Achievement Test scores and class rank when deciding who gets admitted into college. In the past, the most accurate way of predicting whether students would graduate from college was to look at the high school course records of the student. Adelman believed that test scores are just a snap shot of what a student can do versus being able to look at the curriculum taken. He felt that curriculum, not test scores or class rank, determines college success. His research supports what he feels is a more common sense approach to why students persist in college. In a lengthy report “Answers in the ToolBox: Academic Intensity, Attendance Patterns and Bachelor Degree Attainment”, Adelman examined the highest level of mathematics taken in secondary education. He found that a student who completes Algebra II more than doubles the odds of completing a bachelor’s degree. His ten-year longitudinal study looks at what Adelman refers to as academic intensity or the quality of the curriculum. This includes advanced placement courses. Adelman developed a scale to determine factors of degree completion that is based on the units of math, foreign language and science, etc. He feel’s his index for intensity and quality is an overall better predictor of college success than any other variable, including test scores and class rank. While some of the following research does not completely agree with Adelman it appears that curriculum is a factor in degree completion.

Unlike Adelman, the research conducted by Wade and Walker found high school grade point average and standardized test scores to be most consistent predictors of

college success (Education, 94). Their research that was conducted at Southern University in Baton Rouge, Louisiana, examined five factors of freshman honor students; graduation class size, grade point average, class rank, ACT composite score, and Algebra I and Algebra II grade point averages. Their results indicated that GPA and test scores were the most reliable indicators of student success.

Decades of research have concluded the strong impact that a high school student's grade point average has on college persistence (Astin in 1972 and Bean in 1985). In the early 1990's research by Pascarella and Terenzini and in 1993 by Asten also suggested that grade point average or academic achievement were the strongest predictors of college completion. Unfortunately students with good high school grade point averages and high ACT/SAT scores continue to leave college. Researchers also have begun to look at what is known as the "first year experience". Students have been studied during the first year at college to determine what contributes to a student's persistence in college. A study that was done examined dropout rates at community colleges. It reported that the strongest relationship of all the factors to retention was a student's first-term academic performance (Hoyt, 1999).

Research supports that no matter what kind of institution of higher learning a student may be attending the most critical time is during the first academic year. The highest dropout rate nationally on college campuses is during the first semester.

Today a proactive approach that is being used is a first year seminar course. More than 70 percent of colleges reported using a seminar course to help assist freshman with the transition into college and to help improve the academic performance of first year students. These orientation programs and seminar courses focus on study skills and often

link students to support services available on campus (Fidler&Godwin,1994; Glass& Garrett, 1995; Kluepfel, 1994).

Textbooks and course curriculums have been developed to promote the skills that researchers have found to improve student success. David Ellis is a pioneer in this area with his course and text, “Becoming A Master Student”, which is in its 9th edition. Lee Noel and Randi Levitz conduct training seminars, conferences and develop curriculums for assistants in student retention. Software is available to track student academic progress during the first semester, with early warning systems to help determine who may be at risk. School personal can then contact students who are at risk of poor performance and assist with whatever may help with student retention. First year courses have proved beneficial for traditional students and at risk students as well. At risk students include students who may have had a lower grade point average in high school, may be the first generation college student, a minority, a student who is only attending school part time or a student who is undecided in their degree. These seminar courses, along with additional training for faculty and staff on academic advising for student retention, are successful strategies to improve retention for all students.

Vincent Tinto believed that the primary focus of first year seminar courses is to improve the educational experiences of first year students. Both faculty and administration around the country support this thinking. Students completing seminar courses are more likely to seek out a faculty mentor, see an academic advisor, participate in campus activities, and use campus resources like the Career Center, the Writing and Academic Skills Center and the Library. A few studies that depict the success of orientation courses are as follows.

Glass and Garrett (1995) in a study of four North Carolina Community Colleges found that completion of an orientation program during the first term of enrollment, promotes and improves student performance regardless of student age, gender, race, major, entrance exam score, or employment status. At Valencia Community College in Florida between 1987 and 1992 they developed and offered an extended orientation course that focused on student success. After the first four semesters of college, they found 65 percent of the students who had been in the extended orientation course (Nelson, 1993) were still enrolled. Again, grade point average has been proven to be a very reliable indicator of success and retention. Seminars and orientation courses have been a successful response to the need to raise students GPA. Grade point average from both high school and the first year of college has proven to be one of the factors contributing to a student's success and retention. Other research suggests that academic performance only explains about half of the number of students who leave college. The next factor to be examined will be the impact that career goals and direction may have on student persistence in college.

Career Goals

One of the challenges presenting itself in measuring retention, particularly in community and technical colleges, are the varying educational goals that students have. Graduation is not always the goal of students. Many students are attempting to gain job-related skills. These students are not enrolled necessarily to complete a program or degree. Other students are enrolled for personal enrichment only, or to explore career options. For some it is a last minute decision or a quick fix to unemployment that

motivates them to start college. Still, other students begin college undecided as to the direction of their education. Many students possess the academic ability, but they do not have the personal attributes, such as time management, or commitment, that are necessary to persist.

Research has explored these factors, and found that students who have a purpose or a specific goal in mind when they begin college have a stronger chance of staying and completing that goal. This holds true whether the student is striving to acquire a certificate or a four-year degree (Tinto 1993). The National Center For Education Statistics reported in 1997 that students with a goal of obtaining a bachelor's degree are far more likely to have attained a degree or are still enrolled in college after five years as opposed to their counterparts who are not clearly degree orientated.

Unfortunately a large number of students who are not as focused or do not have clear direction leave college, not because of poor grades but because they chose to leave. These students are considered voluntary dropouts. Often these are good students who have chosen to leave college, because they lacked commitment, and they did not have a clear academic or career goal. Uncertainty or lack of academic career goals was the most important reasons that these students drop out of college

(Fralick, 1992 p 20).

A combination of students' attributes, goals, and commitments was the model of attrition developed by Vincent Tinto. Without these three, a successful transition into college was less assured. In addition, Tinto examined students who register for school late or shortly before school begins. His research found that students who try to register late often have not thought out or prepared themselves for college, compared to

students who register well in advance. College students with higher goals are more likely to persist (Tinto, 1993).

This lack of preparation for college (career awareness, goals,) plus being admitted into an institution with open enrollment (students can begin college at any time with a high school diploma or General Education Diploma) have been factors that research has indicated can contribute to high attrition rates. Students who register late are more likely to withdraw or fail than students who register on time (Roueché 1993, Roueché). Based on this information Roueché recommended that colleges abolish late registration.

Research has been conducted which examines personality types of students who have difficulty making a career decision. Students who had trouble deciding on a career were also students that were more likely to experience worry, distress, tension and anxiety. These students (Fugua, Blum and Hartman, 1998) were considered to be both chronically undecided and to have excessive anxiety. Research conducted could not determine if the inability to decide made them anxious or if the anxiety created the incapability to decide on a career.

Gerdes and Mallinckrodt (*Journal of Counseling and Development*, 1994) found that a proactive college-counseling center could help with the early identification and intervention of some of the issues, which may ultimately contribute, to students leaving college. These authors found that many students who are struggling academically would benefit from career planning assistance to determine their academic goals. Gerdes and Mallinckrodt found that by improving a student's academic and social integration no matter what the students overall grade point average would improve retention. They found that students drop out because of a mix of emotional, social and academic factors.

Their findings suggest that the more coordination and involvement by both student affairs and the counseling center the greater chance of student retention. In addition, their research recommended that these students work on time management study skills, anxiety management, and an appropriate course load in order to build self-confidence, which would improve their academic performance and persistence.

Students who have a career goal have an advantage over students who register for college without that direction. Students without that clear picture of the end result are at risk of dropping out of college. Thus students who have a goal when they are in college have a greater chance of persisting in college until they achieved that goal.

Financial Aid

Money to pay for college has always been a concern for legislators, administrators, educators, boards, parents, and students. The cost of a college education and available financial aid are factors that have been widely researched in order to determine their effect on student retention. Inadequate funding leads to more student loans, and/or increased work hours. The result for parents and students is added debt. For many students, if the financial burden is too great, they will drop out of school.

The National Center For Education Statistics (NCES) reported in October 1996 that 6.3 million undergraduates (fulltime and part-time students) received federal financial aid. In addition, about 57 percent (approximately 3.6 million) received a Pell grant that averaged about \$1500. The NCES also estimated for the same fiscal year that nearly one in every four federally aided undergraduates received an institution grant that averaged about \$3,730. This information is very positive, it is yet also alarming.

Research conducted by Judith Li on Pell grants found empirical data stated that the higher the Pell grants that were awarded the higher tuition rates became. Pell grants are the primary grants that students receive with the maximum Pell grant being increased by \$125 to \$3,125 for the 1999-2000 school year.

In the past fifteen years, resident tuition for full time students has more than tripled for public state college (Dervaric, 1997). In 1995 the average student loan at a four-year public institution was \$2,417 compared to \$518 in 1980. With the rising costs of education and the need for a trained workforce, the challenge facing the present administration is to make education and training more affordable because tuition grows faster than inflation. Accessible funding for college has such a significant impact on student retention in post-secondary education that legislation on the federal and state levels has been written to make education more affordable for all students. There are many recent examples of such legislation.

The Taxpayer Relief Act of 1997 was designed to give tuition tax breaks to student and their families over the next five years. The Hope Scholarship Credit allows parents 100 percent tax deduction on the first \$1000 of tuition and fees and 50 percent of the next \$1,000 for each of the first two years of school. This is available to all students who are carrying six credits (a half time load) and have not been convicted of a federal or state drug offense. This is available for each family member in college. The Lifetime Learning Credit is another option in which families claim 20 percent on tuition, and they claim fees up to \$5,000 per tax return for any year of education after high school. A family may not use both the Hope Scholarship and the Lifetime learning Credit in the same year. The Series EE Saving Bond is a prepaid tuition, which allows parents the

option of paying for college at today's prices. The student's name has to be identified in addition to the state where the student will attend school. Other methods of financial support exist for students.

Work-study, which is available through financial aid to qualifying students, is an option. Students work in various parts of the college for a wage instead of borrowing money. The federal government subsidizes student wages by contributing 75 percent of the costs. Unfortunately the benefits to the students are often not that apparent. The research conducted by McGrath and Braunstein (1997) found no significant difference in retention between students who participated in the work-study program and those students who did not.

Yet another system of financial aid distribution, most often referred to as front loading, is a method where students' (particularly low-income) are provided with mostly grants during the first year of college and then subsidize the remaining education with loans. The U.S. General Accounting Office (GAO) found that the overall allocation of student funding over a five-year period didn't change that much. Cornelia Blanchette the Associate Director of Education at GAO did find that this practice of frontloading increased the retention of low-income students by 23 percent.

Financial planning for college has also become a lucrative business. Services may include assistance in negotiating a financial aid package, lists of scholarships, and additional financial resources to assist with college tuition. Students are taught how to answer questions, and how to correctly state their goals for scholarship applications and interviews. This is similar to career planning services that assist with admissions to prestigious colleges and universities.

In the 1994-95 academic year, McGrath and Braunstein (1997) studied 632 full time freshman to help make a determination on the factors affecting attrition. Financial Aid was the second best predictor whether a student stayed in school. Almost 75 percent of the families studied had income levels between \$25,000 and \$99,000 and 85 percent of them received some sort of financial aid. Eighty-one percent of students reported, that they would have to work at least part-time while in school.

Research indicates strong correlation between a student's persistence in college until graduation and the student's financial ability to attend and pay for college. Student aid is an important factor contributing to student success in college at any level of post-secondary education.

Basic skills/academic remediation

The financial ramification of student retention until graduation is apparent for colleges and students. However, student retention until graduation also has an impact on the business and industry within a community. Today's companies spend a large amount of money on basic skills training for employees. Companies have found that often workers do not have the basic skills needed to be competitive in today's global economy.

In Texas, during the 1980's, the problem of inadequate basic skills amongst employees became very apparent to the leaders in business and industry. An executive committee was formed to address the problem and develop a strategy that would improve the basic skill level of college students. Students were starting college but lacked the basic skills to be competitive. Many of these students could not write a clear sentence, communicate well, or handle the fundamentals of math.

The executive committee, which conducted this study, recommended that federal dollars be used to increase testing before students begin their college course work. These tests were not used to determine acceptance to the college, but rather they were used to identify any deficiency at the basic skill level before taking college classes. The focus was on having students acquire the basic skills needed to enhance their overall academic performance and increase their retention rates in college.

In the fall of 1989 these recommendations were first implemented. Students who improved their basic skills had a three times greater college completion rate compared to the students who did not. In addition, the federal dollars were appropriated to cover the testing as well as to develop centers on campus that would provide non-credit courses to students for remediation (Executive Summary, 1986).

Student success for academically unprepared students is often achieved by attending college on part time bases while building their confidence and skill levels in other ways. However, this is complicated by the fact that many parents' health and auto insurance policies require that a student needs to be attending college on a full time basis to be covered. Because of these factors, often students attend college on a full time basis even though they would be better off academically if they attended college on a part time basis.

This is consistent research that indicates that some students would be better off aiming for a short-term goal like a technical or associate degree program rather than a four-year degree. Students who require remedial work have a greater chance of achievement if they begin with short-term goals, and build on their accomplishments.

According to NCES, in 1989 a person who completed four years of college earned approximately \$10,000 more per year compared to someone who had not completed four years of college. Basic skills or remediation, if paid by a federal or state agency actually comes back to the federal government and to the community in greater tax dollars, because the student is earning higher wages associated with successfully completed training. Money spent on remedial training is a good investment positively affecting the student, community and state and federal government.

In 1991 at Sinclair Community College in Dayton, Ohio a study was conducted of first time college students to determine the correlation between student retention and academic remediation. Students were studied who completed a remedial English or math course in comparison to student who were not at risk and did not take a remedial course. The results indicated that after three semesters more students stayed in school from the groups of students who went through remediation than the number of students who were initially at no risk at all (Easterling, Patten, Krile 1998).

Remediation or basic skill improvement needs to be addressed by all levels of education. The support dollars to implement the remediation courses or academic centers is also needed to assist students to upgrade skills. The access to basic skills for some students could be the factor that determines if they stay in college until graduation. In turn, students that are trained and educated will meet the needs of business and industry by becoming skilled workers. Basic skill remediation is a very important factor in student retention.

Faculty Student Relationships/Institutional Fit

The significance of the role that faculty/ staff interaction plays in retention is worth examining when determining retention of students at any institution. How comfortable students feel with both their academic and social integration in college is a major factor that contributes to a student's decision to drop out or to persist. The importance of how students' adjusts to college life or their social adjustment may be the second biggest reason of why students leave college (Mallinckrodt, 1988; Pantages & Creedon, 1978). Emotions such as loneliness, and homesickness have been researched along with social support networks, supportive contact with faculty and managing new social situations in efforts to determine what can be done to keep students in college until graduation.

Institutional fit and the comfort level that students feel with the faculty/staff and student body has a great deal to do with student persistence when all other factors are equal (e.g. grade point average, SAT/ACT scores) (Pascarella, Smart, and Ethington, 1986). In research conducted by Rouche in 1993 found of almost 1,000 two and four year colleges, both public and private, the caring attitude of the faculty and the staff was the most important retention factor in all types of institutions. Actions by faculty that were researched and considered as being most important included time spent with students, and the availability of the faculty to students through office hours and email access. Ease in which students received answers to questions and interactions during extracurricular activities was also documented as positive connections for students. Students who felt that they got to know the faculty, considered that relationship to be very positive (Lenning, Beal, Sauer, 1980, Pascarella, 1980, Terenzi & Wright, 1987).

Positive interaction between faculty/staff and students is well documented to increase retention for traditional students. The relationship with faculty/staff has also been found to be important to adult learners, commuter students and female students also. The more a female student perceives instructors to be impersonal or inaccessible the more likely that student may be to leave college (Pascarella, 1984).

Commuter students generally take longer to graduate than traditional students and they may even “stop out” a semester. A positive relationship with faculty and staff is a substantial factor with this group in regard to persistence with their educational goals. An article on commuter students in the *College Student Journal* (Sept.1997) indicated the factors that contribute to persistence. This data was completed over a six-year period at a University in northeastern region of the United States that primarily serves commuter students. From the random sample of the 978 students surveyed, the students who were retained agreed that they got to know the faculty, and it was easier for them to get answers to questions that related to their education. This feeling was not as strongly felt among the drop out students. The relationship students have with faculty/staff and other students, whether they live on campus or commute, is a factor that contributes to student persistence. Some research suggests that if students are given the supportive personnel services, by faculty or staff which provide guidance in both academic and non-academic area, the students will persist (Pascarella, Terenzini, 1991). This indicates that to a certain extent student retention at technical colleges, community colleges and universities is in the hands of the employees that work there.

Adult Learners Non-traditional Students

The unique needs of adult learners are primary focus for college campus administrators and educators especially regarding the issue of retention. Their needs are becoming equally as important as the needs of the traditional 18-year-old student. Economics is the primary reason for the retention of adult learners. Retention costs are cheaper than recruitment, federal and state funding formulas are impacted, and adult learners are certainly part of the solution to the problem of the untrained workforce.

The age of college students was not studied until the 1980's. College enrollments rose about three percent for students under the age of 25, between 1980 and 1990 as reported by the NCES, while the number of college students 25 and over rose by 34 percent. Adult learners (25 years and older) in 1992 made up almost one-half of the college students on campus throughout the country. The NCES reported that between 1995 and 1998 there were more students that were over 35 years old on college campuses than those students who were between the ages of 18 and 19 years of age.

Research indicated that the needs of adult learners at the college level are similar to the needs of adults in basic education classes. Both groups of students are coping with multiple roles along with the responsibilities of work, education and family. Both groups may have had negative past experiences in school, and they often lack confidence in their ability to return. In addition these students may be facing financial difficulties, employment and child care conflicts or they may have opposition to their continued education from significant others.

Other common characteristics of adult students or non-traditional students (NTO's) are that they are employed full time and are they attending college part time.

Many non-traditional students are often enrolled in remedial courses (Windham, 1994). Many of these students have wanted to return to school for a long time. They are more mature and more focused when they return to school, yet they have little confidence in their abilities.

Researchers have found that the opposite also exists. Some NTO's may register at the last minute (late-admits), with very little direction about a degree. These students may have even less confidence than the NTO's who have been thinking about returning to college for years. These students who register late may have not attended school for decades and need remedial education. They may also have an attitude called the fast food approach to education. They have the money to pay for the training, and they want to do it now. They may be demanding, and they often view education like any other product they may purchase, and expect service from. This however may not be the best for the student in the long run (Weiss, Freer, 1999).

Many theorists have developed models to explain why adult students may leave school because of both personal and environmental factors. These models see the college environment as having a big impact on persistence. Tinto's model of institutional departure (1987) addressed just briefly pre-entry attributes like family background, skills and abilities. His focus was the commitment and goals these students set for themselves when starting college. The remainder of his model is based on the experiences and the integration that students have while they are in college. The intention and commitment of adult learners, according to Tinto, is the most important factor in attrition. Students who felt that they weren't getting their money's worth or the desired return on their investment left college. He found this particularly true in the community college setting.

Without commitment Tinto believed that these students are so far behind that their first days of college, are really the first step to dropping out of college (Tinto, 1993).

Bean and Metzner (1985) also developed an attrition model, which placed more emphasis on environmental factors such as finances, hours of employment, outside encouragement and family responsibilities. Bean and Metzner also included age, enrollment status, and residence, educational goals, high school performance, ethnicity and gender. They separated the academic and the environmental outcomes such as the student stress, satisfaction, and usefulness of the degree, when determining reasons for students leaving college. Environmental factors were determined to play a larger role in student drop out rates according to their research.

These models of attrition are useful particularly to community colleges that often have open-access admission or enrollment. The mission of most of these institutions is to serve any student with a high school diploma or General Education Diploma (G.E.D.). Often these community colleges/technical colleges have a higher percentage of part-time students and NTOS who maybe in need of remediation than other institutions with a more selective enrollment might have. In addition these students can begin college anytime even up to a few weeks into the start of a semester. This makes retention of adult learners extremely challenging for many institutions. These models of attrition give some direction to colleges as to the factors that may affect the demographic population that they serve. A determination maybe made by the boards and administration as to which factors are most problematic for them. Administrators can begin to implement any changes that would enhance retention. This could include the implementation of a deadline for registration with no late-admits.

In summary of this review of literature on student retention, the factors that can impact the retention of college students throughout the country have been extensively researched. However the conclusions drawn from this literature review do not clearly identify a specific factor as most important for retention. The factors that contribute to students staying in college until graduation are as diverse as the students themselves and the demographics of the institutions that they attend. Clearly the topics reviewed in the preceding pages (i.e. grade point average, career awareness and goals, financial resources, basic skills, academic remediation, faculty student relationships, adult learners) all affect retention, as they pertain to the individual student. This examination of literature has been most helpful in relation to the problem of retention at Western Wisconsin Technical College. However, the determination of which factors are most relevant is inconclusive. Primary factors for retention vary because they are student and program specific. They would be better determined through a survey of the students in the three programs of concern, Air Conditioning, Heating and Refrigeration, Medical Laboratory Technician, and Administrative Assistant Information Processing. The results of this survey research along with the factors identified in this literature review will facilitate conclusions regarding retention in the above-mentioned programs.

Chapter III

Research Methods

Introduction

Research indicates that American business and industry are struggling to find the skilled labor to fill positions needed to keep many industries competitive in today's global market. At Western Wisconsin Technical College (WWTC), three programs that offer high wage and have a strong employment outlook are experiencing high attrition rates. The purpose of this study was to determine factors that contribute to the attrition rate in Medical Laboratory Technician (MLT), Air Conditioning, Heating and Refrigeration (ACH&R), and Administrative Assistant Information Processing (AAIP). Using the factors identified specific recommendations for program improvements were made with the goal of increased student retention in all previous mentioned associate degree programs areas. If implemented, these improvements would contribute to higher graduation rates and a stronger skilled workforce in the Coulee Region.

This chapter identifies the steps and procedures taken to implement and complete this study. It begins with the design procedure and the method that will be used to implement the survey and includes the instrument, its variables and limitations.

Research Design

The research design that best met the needs of this study was the descriptive design. This design allowed the researcher to use a survey to determine the factors causing attrition at WWTC. The questions incorporated in the survey were based on the information derived from the work done by Tinto, Adelman, Pascarella, Asten and others cited in the review of literature. This survey was requested by the administration

at WWTC to assist in determining factors that impact attrition. The data will help ascertain the primary factors impacting students leaving or completing these programs. Some of the variables addressed are: grade point average, career goals, mentors, financial concerns, course scheduling, vocational goals, teacher contact time, program satisfaction, quality of instruction and course content.

A Likert survey, which is commonly used to access information about attitudes, feelings and/or opinions, was used with a different design for each program area. This is important because each program area had factors that were unique. All surveys had a section of questions that addressed the four research questions: 1) grade point average 2) career exploration 3) goals 4) financial aid and other factors. These questions are the primary focal points of this research. A copy of each survey is included in the appendix.

The rating scale ranges for all surveys used were from (1) not sure at all to (5) very sure, with a yes, no or not sure response for questions that inquired about a service of the college received at enrollment or during the school year.

As previously mentioned each survey had a section of questions that were program specific and were developed based on input from program faculty and admission counselors. These questions were on a Likert scale with a range from (1) not sure at all to (5) very sure. Due to the number of total students enrolled in each program and program leavers, these questions will not be included in the statistical analysis of this thesis. However, the responses to the specific program content questions were viewed as input for each program for consideration of possible changes to be implemented in each individual program.

Division faculty and program counselors reviewed each program survey before printing and mailing. Separate surveys specific to each program were mailed to all students enrolled in each program during the fall and spring semester 1998-1999 school year. Included were the graduates in each program in May 1999 and the students who graduated in 1998 from AAIP as requested by the Business Division. Students who were enrolled in one semester but did not return the following semester were also included. The lists of these students were generated from the college software program S1032.

In summary, all students who were enrolled in the three programs in fall semester (1998) and spring semester 1999 were listed. Four lists were generated; students enrolled in one semester who returned the following semester, students who enrolled and did not return the following semester, (these students were the *leavers*), the May 1999 graduates in the three programs and the May 1998 AAIP graduates. The last group was included to assess increase in student wages within time.

Each survey was identified by a mailing address label, placed on the last page at the bottom of the survey. This was used to keep a record of the students who responded. Included with each program specific survey was a cover letter. The cover letter included the purpose of the survey, a statement of confidentiality, verification that student response would only be reported as a conglomerate, and a sincere request for their voluntary response. A statement in the cover letter specifically indicated the confidentiality of the survey and verified that the survey response would not become a part of the student's record. Also included was a self-addressed postage paid return envelope. The surveys were mailed in mid August 1999.

Every attempt was made to contact all students on these lists by mail or phone. Students' whose surveys came back with incorrect addresses were reviewed and mailed again to a current address, if at all possible. Every attempt was made to update students' incorrect mailing addresses including sending the letter to the student's home address, requesting telephone information in a 50 mile radius, doing internet search sites, and using WWTC foundation's alumni mailing list. Two weeks after the surveys were mailed a follow up reminder call was made to those students who had not returned their survey. Students who were not heard from were called. The researcher either left a message if voice mail was available or asked the student if they had received the survey and encouraged them to return it as soon as possible. A few students asked to do the survey by phone. At that time the researcher explain the significance of the study and read the statement indicating that this was a voluntary response and that the information would not be included in the students record.

Sources of Data

Population

The population studied were students who were enrolled in Medical Laboratory Assistant, Air Conditioning, Heating and Refrigeration and Administrative Assistant Information Processing from August of 1998 through May 1999. The students varied in age, gender, and marital status but all attended school at Western Wisconsin Technical College La Crosse campus, or extended campuses during the designated time frame. A total of 100 percent of the population was surveyed.

The objective of this study was to determine the factors for attrition in the aforementioned three program areas. No other WWTC students would meet the qualification for this population, which was enrollment in one of these three programs during the stated period of time.

Sample

The administration at WWTC requested this survey design to include 100 percent of the population (71 students) from the AAIP, MLT and ACH&R programs. These were students included those who enrolled in college in the fall semester 1998 who did not return in the spring semester 1999. These students are considered leavers. Also included were students enrolled both semesters and who graduated in May 1999 from all three programs, as were those who were the graduates from the May 1998 AAIP program. There were 47 surveys completed by mail or phone resulting in a 66% participation rate.

Instrumentation

The survey (Appendix A) used was developed by the Student Services Specialist (researcher) with input from faculty, deans and counselors from the Business, Human Services and Industrial Technology Divisions. The data, which was analyzed, included the following topics: 1) grade point average 2) career exploration 3) goals 4) financial aid and other factors. As was stated previously, three separate surveys were developed to meet the specific program needs. The first six questions of the surveys in all three programs and the 1998 AAIP graduates (4) surveys were exactly the same and in the same sequence. Questions, seven, eight and nine were the same for all groups except the 1998 AAIP graduates. In addition to the questions mentioned above, seven more

questions (16 total) are the same in the MLT, AAIP, and ACH&R surveys, but not asked in the same sequence.

Overall the surveys asked the students to evaluate their own program awareness, academic preparedness and planning at entry. Utilization of specific career planning options and support services available at WWTC were also measured by the survey, as were factors that contributed to leavers dropping out of college.

Students were asked if they preferred alternative course delivery options such as more night program classes, weekends and self-paced instruction. All students were given the opportunity to answer open-ended questions regarding the strengths and weaknesses of their program. The final questions requested that students make specific comments and recommendations in regard to their individual program.

The AAIP survey had a total of 25 questions. This survey specifically addressed questions about student satisfaction with their program advisor, instructors and the training they received. The AAIP survey for 1998 graduates was the shortest survey with 15 questions. It focused on the student's present employment and emphasized skills needed in their current position.

MLT was the longest survey with 32 questions and ACH&R had a total of 23 questions. Career planning and program specific questions that would help determine the factors that contributed to the low retention rate in these programs were asked. Students in all surveys were thanked for their time and feedback.

The limitations of this study were related to the numbers of students, who were not contacted because of disconnected, obsolete and unlisted phone numbers and the students who chose not to participate, particularly the leavers. This type of survey is very

commonly used at WWTC, and the Technical College System at large, to gather program employment data.

The purpose of this study was to determine factors that contribute to the attrition rate in MLT, ACH&R and AAIP. The selection and design of this study and instrument used was appropriate, functional and practically accurate and provided an adequate reflection of the topic under study. Therefore this study exhibited reasonable validity and reliability.

The primary analyses of these surveys were conducted by the research department at the University of Wisconsin Stout in addition to calculations completed by the researcher. All data from all surveys were tabulated, formatted and analyzed into traditional research design. Cross tabulation was done in each program of the leavers and graduates. Only the data compiled that was relevant to the four research questions were referenced.

Ultimately the results of the data will lead to a better understanding of attrition and retention rates. The data received will give program areas the information they requested within the limitations of this survey. In chapter four further discussion of the results will lead to the final chapter addressing recommendations that will reduce the drop out rates in these specific programs. These recommendations will relate particularly to grade point average, career exploration, goals, financial aid and other factors depending on the outcomes.

Chapter IV

Data Analysis

The purpose of this study was to determine factors that contribute to the attrition rate in Medical Laboratory Technician (MLT), Air Conditioning, Heating and Refrigeration (ACH&R), and Administrative Assistant Information Processing (AAIP). The following data was derived from the Likert surveys of these programs and compiled by the research department at the University of Wisconsin Stout and the researcher. Surveys were sent to 71 students who were leavers and graduates in the combined programs. Responses were received from 48 students or 67 percent of those surveyed. These surveys were developed with input from each division to meet the needs of the divisions in regard to attrition data and the researcher in regard to this thesis. Although total response was good, each survey had some different departmentally specific questions, and not every student responded to every question in each survey. This resulted in data that was difficult to analyze when combining the programs. Based on those limitations, the data presented below is in the simplest form and should be interpreted with the above-mentioned circumstances in mind. Results from MLT and ACH&R are limited; the largest response was from AAIP. This was due to the initial numbers enrolled in each program.

Seventy nine percent of the graduates contacted responded to the survey. The break down of the numbers of graduates in each program, and the number of surveys returned by program is below in Table one.

Table 1

Numbers of graduate students surveyed

	Sent	Returned
AAIP 1998 graduates	12	10
AAIP 1999 graduates	18	16
MLT 1999 graduates	7	6
ACH&R 1999 graduates	6	2
Totals	43 sent	34 returned or 79% response

Along with the graduates, the leavers in each program were a targeted group to be surveyed. A total of 28 students left their programs in the 1998-1999 academic year. Fifteen students left in all three programs after the fall semester, with another thirteen leaving before completing in the spring semester. Each program received a response from leavers and as a whole, out of the 28 leavers, 14 of them, or 50 percent, responded. As mentioned earlier, a complication that impacts the data was the different questions that each division wanted addressed in the program surveys. The impact this had, regarding survey data analysis was not realized by the researcher at the time the surveys were developed. Thus, the data is not as clear as it might have been if all the questions were the same. However, there was sufficient data generated to use as the basis to make recommendations in all three programs and, in fact, changes to all three programs were made based on this data.

Table 2

Leavers in 1998-1999

Leavers only	Fall semester	Spring	total sent	Returned surveys
AAIP	8	7	=15	9 or 60%
MLT	5	2	=7	2 or 28%
ACH&R	2	4	=6	3 or 50%
Totals 28 surveys were sent to leavers and 14 returned or 50% of leavers responded				

The data that was calculated from the surveys, pertinent to each research question was tabulated and presented in the following pages, beginning with the first research question and continuing through the fourth question.

Research question one: Is attrition related to low grade point average (under 2.0)?

The data from this question was taken from the software program S1032, used by WWTC. A list of the names and grade point averages (GPA) was generated off of this software, which determined the number of students who were enrolled in a program one semester who did not return the next semester and whose GPA dropped below 2.0. Forty-one percent of the leavers had a grade point average below the 2.0 that is required to stay in their program and/or receive Federal Financial Aid.

In addition to students GPA records, three program survey questions correlate with academic performance. The survey questions that relate to academic performance will be written in Italics so as not to be confused with the research questions. The data resulting from the survey questions will follow. The first question is: *How academically prepared were you for your program?*

Table 3
Cross tabulation of respondents for academic preparedness

MLT Leavers / Graduates	28.6% Somewhat prepared	Not sure 14.3%
	57.1 % Prepared	
AAIP Leavers only (graduates were not asked)	11.1 % Somewhat prepared	Not sure 11.1%
	55.6% Prepared	Very prepared 11.1%
ACH&R leavers / Graduates	25% Not sure	Prepared 25%
	50% Very prepared	

The data indicates that 55.6 % to 75% felt prepared or very prepared academically in the above mentioned combined groups.

Table 4
Academic Preparedness and Summary total of leavers only

8.3 %	Not prepared
8.3 %	Somewhat prepared
16.6 %	Not Sure
50 %	Prepared
16.6 %	Very Prepared

The data indicates that 66.6% percent of the leavers who responded in all three programs felt academically prepared or very prepared for their course work in their program choice, in a self-assessment of their own academic preparedness.

The next question that correlates with academic performance from the surveys requested students to assess their basic skills at entry. *Do you feel that a lack of basic skills (reading, math, English, keyboarding, study skills) hindered your success in the program? Yes Not sure No*

Table 5

Basic Skills

Programs	Yes	Not sure	No
AAIP Leavers only	3	5	
ACH&R Leavers/ Graduates			4
MLT Leavers/ Graduates			6

* Note that the graduate students in AAIP (1998 & 1999) were not asked this question

The limited data indicates that the leavers in the AAIP program felt that they had some concerns about their basic skills and their academic success. Yet the other two programs with both graduates and leavers felt that their basic skills were not a factor in the academic performance in college.

The last question from the surveys that correlates with research question number two on academic performance requested students to respond to a list of thirteen different factors. *Did any of the following factors contribute to your leaving the program? Only*

one student from all leavers asked, indicated that their *grades* were a factor contributing to leaving college.

Research question two: Have students participated in any career planning activities prior to enrollment (career planning workshop, interest inventory, job shadow or informational interview)? Six questions from the surveys correlate with research question number two, career planning. Each survey question that relates will be indicated in *Italics* followed by a chart with the data that resulted from that particular survey question as was done above. *How confident were you of your program choice when you registered for school?*

Table 6

Confident in program		
ACH&R Leavers / Graduates	Sure = 100%	
MLT Leavers / Graduates	Sure = 57.1 %	Not sure = 28.6%
	Undecided = 14.3 %	
AAIP Leavers	Sure = 66.7%	Very Sure = 11.1%
	Not sure = 11.1 %	Undecided = 11.1%
AAIP Graduates 1999/1998	Sure = 65.4%	Very Sure = 7.7%
	Not sure = 23.1	Undecided = 3.8 %

Student response indicated that more than half, 57.1 percent to 77.8, percent of students' felt sure to very sure about their program choice at entry. This is including leavers and graduates in each program and included the 1998-99 graduate students in AAIP. Overall students felt confident in their program choice when they entered college at WWTC.

The next question from the surveys that would support career awareness at entry is documented next. *Rate your awareness of your program choice (type of work, salary, location, etc)?*

Table 7

Program awareness	
ACH&R Leavers / Graduates	Aware = 100%
MLT Leavers / Graduates	Aware = 57.1% Very Aware = 14.3% Somewhat aware = 28.6%
AAIP Graduates 1999/1998	Aware = 53.8% Very aware = 3.8% Somewhat aware = 42.3%
AAIP Leavers	Aware = 66.7% Somewhat aware = 22.2% Undecided = 11.1%

Over 50 percent of all students in all three programs said that they felt they were aware or knew what the program they were enrolling in was about. This included understanding what the job entailed, the anticipated wage they would earn, as well as if they would have to relocate for employment. Note that a significant number 42.3 percent of the graduate students in AAIP as a group also indicated that they felt they were only somewhat aware of their program at entry.

The following question also correlated with research question number two on career planning. *If you had to do it over again, would you spend more time in career exploration?* All students in all the surveys including the AAIP graduates were asked this question. The results of the data are as follows.

Table 8

More time in career exploration

ACH&R leavers/ Graduates	No more time = 25 % Undecided = 25%	About the same = 25% Much more time = 25%
MLT Leavers / Graduates	No more time = 28.6% More time = 28.6%	About the same = 42.9%
AAIP Graduates 1999/1998	No more time = 7.7% Undecided = 11.5 % Much more time 11.5%	About the same = 34.6% More time = 34.6%
AAIP Leavers	About the same = 44.4 % More time = 22.2 %	Undecided = 11.1% Much more time = 22.2%

More varied responses were given by the students in each program, as to the amount of time spent in career exploration. It would appear that most of the students

would not spend any more time in career planning activities if given the opportunity to. However, a significant minority 46.1 percent of AAIP Graduates and 44.4% of AAIP Leavers would spend more time, too much more time in career exploration.

Another question from the surveys that was relevant to research question two, relating to career planning asked students to indicate if they had or had not see an admission counselor, the data is below. *Did you visit a WWTC counselor about your program?*

Table 9

Counselor visit	
ACH&R Leavers / Graduates	Yes = 100%
MLT Leavers / Graduates	Yes = 85.7% No = 14.3 %
AAIP Graduates 1999/1998	Yes = 57.7% Do not remember = 3.8% No = 38.5%
AAIP Leavers	Yes = 77.8% No = 22.2%

The majority of students (57.7 % to 100 %) indicated that they had seen a counselor at WWTC. Having an appointment with a counselor is often part of the admission process at WWTC particularly for students who are undecided, or have not meet all program requirements to be admitted in the their program.

Each program survey also requested students to indicate if they had participated in anyone of many career-planning activities. The data derived from that question is as follows. *Did you do a job shadow, program shadow, informational interview, mentor program or any other career planning activity before you started school?*

Table 10

Career Planning Activity		
ACH&R Leavers / Graduates		No = 100%
MLT Leavers / Graduates	Yes = 71.4 %	No = 28.6 %
AAIP Graduates 1999/1998	Yes = 34.6% Do not remember 3.8%	No = 61.5 %
AAIP Leavers	Yes = 33.3% Missing	No = 55.6 %

Except for MLT leavers / graduates the majority of students did not spend anytime in a program shadow. A program shadow is time, which a new student spends with a student already enrolled in a program, attending classes with that student. A job shadow is time, which a student spends with a person already employed and working in the field. This question also included whether students were involved with a mentor or participated in a career-planning workshop prior to beginning college. MLT Leavers and Graduates were the exception with 71.4 percent of them doing a program or job shadow.

The last question and data used that was relevant to thesis question number two, regarding students participation in career planning activities prior to enrollment is as follows. This question included leavers and graduates in all programs except the AAIP 1998 and 1999 graduates.

Do you think you would have benefited from a job shadow or informational interview or a mentor program?

Table 11

Benefit from mentor/shadow		
ACH&R Leavers / Graduates	Yes = 25%	Not sure 75%
MLT Leavers / Graduates	Yes = 85.7%	No = 14.3 %
AAIP Graduates 1999/1998	Yes = 76.0% No = 12. %	Do not know = 12.0%
AAIP Leavers	Yes = 44.4 % No = 11.1%	Do not know = 33.3 %

The majority of students indicated that they would have benefited if they had done a program/ job shadow, informational interview or participated in a mentor program.

In summary, the data showed that the majority of students from all programs were sure of their program choice at entry, indicating that some form of career exploration occurred prior to college entry. Students by and large, were aware of what constituted the job that they would be training for in the program they had enrolled in. However significant minorities in individual programs felt they would have benefited from using services provided by the college. These needs have been addressed in the conclusion. The data addresses research question, number two, asking if students had done some kind of career planning activity.

Research question three: Are there additional factors such as financial aid or course scheduling that impact attrition? Three questions from the surveys were designed to help determine the impact that financial aid or other financial resources may have had on attrition. The first question asked students to indicate by checking the services that they used while at WWTC. *Did you use any of the following services at WWTC?*

Table 12

	Financial Aid	Foundation
ACH&R Leavers/Graduates	Yes = 50.0% No = 50.0%	Yes = No = 100.0%
MLT Leavers/Graduates	Yes = 71.4% No = 28.6%	Yes = 14.3% No = 85.7%
AAIP Leavers	Yes = 44.4% No = 44.4%	Missing = 11.1 No = 88.9%

While very few students utilized the college's scholarship program through the Foundation, the opposite was true with the Financial aid Department at WWTC. The percentage range was from 44.4 percent to 71.4 percent of the students in all programs utilized the Federal Financial Aid Program. This would indicate that many students

depend strongly on aid to be in college at WWTC. Students are not eligible for Federal Aid if their GPA is below 2.0. Withdrawal of funding due to GPA has the potential to impact 44.4 to 71.4 percent of students answering this survey. This would be a factor that would certainly contributing to attrition at WWTC.

The next survey question that was used to clarify financial concerns, and to determine if money was a factor that impacted attrition was: *Did any of the following factors contribute to your leaving the program? Financial Reasons*

Students who left the program had the opportunity to indicate financial reasons for leaving by checking from a list of thirteen different factors listed in this survey question (Appendix A).

Table 13

Financial reasons	
ACH&R Leavers	No = 50% Missing = 50%
MLT Leavers	No =14.3% Missing = 85.7 %
AAIP Leavers	No = 44.4 Yes = 55.6%

The table above was inconclusive in showing the number of students who indicated that money was one of the factors that contributed to their leaving college. However 55.6% of the students who left AAIP indicated that money was a factor for leaving college.

The second part of research question number three, addressed the other factors, such as scheduling, that may have impacted attrition. This question was asked differently in the surveys because each of the divisions offer their program specific courses somewhat differently. The only classes that are offered in the evening by any of these programs are a few general education courses from which students may pick. AAIP, ACH&R and the MLT programs at this point do not offer any core program classes other

than the traditional daytime offerings. In addition the MLT also has the unique start time of 6:30 a.m. Students who would like to enroll but can't attend classes during the day have no other options in these programs at this time.

The next survey question that related to determining factors that may contribute to attrition in other WWTC programs, was again derived from the list (Appendix A). Students could check factors that contributed to their leaving. Among the factors was location of classes and scheduling. *Did any of the following factors contribute to your leaving the program?*

Table 14
Location of Class Scheduling

ACH&R Leavers	None	None
MLT Leavers	None Yes = 14.3%	None
AAIP Leavers	No = 88.9 % Yes = 11.1%	No = 88.9 % Yes = 11.1%

From the leavers very few students indicated that the location of their classes or the times they were offered contributed to leaving the program. Would you consider completing the program if courses were offered at night, weekends or self-paced?

Table 15

Nights/weekends/self-paced

	Nights	Weekends	Self-Paced
ACH&R	Yes = 25% No = 25% Missing = 50%	Yes = 25% No = 25 % Missing = 50%	Yes = 25% No = 25% Missing = 50 %
AAIP	Yes = 45% Not Sure = 11% No = 22 % No response = 22%	Yes = 45 % Not Sure = 11% No = 22 % No response = 22%	Yes = 56% Not Sure = 0 % No = 22 % No response = 22%
MLT	*Asked to begin classes later in a.m. Yes = 42% No = 42%	* Program in 3 years, instead of 2 years. Yes = 57.1% Undecided = 14.3% No = 14.3%	

This question had more responses that indicated leavers were unsure if courses were offered differently would they continue in their program. However very significant numbers showed interest in alternate scheduling. The number of students who chose not to answer the question made this data somewhat unclear. This question also clearly indicated that students in the MLT program would have preferred to taken the course load over a three-year period instead of two. Also the numbers of students particularly, in the AAIP program, expressed an interest in courses offered on weekends, nights or self-paced.

The number of hours that students worked was a factor included with research question number three in determining other factors contributing to attrition. The average number of hours that students (leavers and graduates) worked was 23.2 hours per week. The AAIP graduates were excluded from these figures because they were not asked this question.

The number of miles that students on average drove to attend college at WWTC's main campus, from the three program areas surveyed was 21.1 miles. Distanced traveled for students, impacts the cost of attending college and complicates the scheduling of classes and hours scheduled for work.

Research question four: What other factors that may impact attrition in other WWTC programs? Five questions from the surveys that may impact attrition in other WWTC programs are the survey questions concerning the following: 1.) Mentor or job shadow experience 2.) Spend more time in career exploration 3.) Kinds of services' students used while at WWTC 4.) Number of hours that students work 5.) Number of miles that students drive one way to attend college at WWTC.

Data from these questions has been summarized under research question three. There were significant responses from students on these questions. All of the above factors either alone or in combination have the potential to affect attrition.

In conclusion, graduates and leavers in the three programs who responded to the survey provided good information when looking at questions that all students were asked in all programs. However because the questions were not exactly the same, due to departmental needs, it was difficult to draw the kind of data that the researcher anticipated. The data was sufficient to draw conclusions and was the basis to changes in the three departments.

The following chapter will discuss the results and make recommendations based on the data that was available that would impact attrition rates in MLT, ACH&R and AAIP in the coming academic year.

Chapter V

Conclusions and Recommendations

Three Western Wisconsin Technical College Program areas Medical Laboratory Technician (MLT), Air Conditioning, Heating and Refrigeration Technician (ACH&R) and Administrative Assistant Information Processing (AAIP) provide high wage and strong employment prospects. Unfortunately they are all experiencing high attrition rates as well. Research has never been done at WWTC to look at why students are leaving these programs.

The purpose of this study was to determine factors that contribute to the attrition rate in Medical Laboratory Technician, Air Conditioning, Heating and Refrigeration Technician and Administrative Assistant Information Processing. Using the factors identified specific recommendations for program improvements were made with the goal of increased student retention in the previously mentioned associate degree program areas. When implemented, these improvements could contribute to higher graduation rates and a stronger skilled workforce in the Coulee Region.

Likert surveys were sent to all graduates and leavers in all three programs in the fall of 1999. Input from faculty and counselors aided in the development of the surveys. All students were asked the same thirteen questions concerning factors affecting attrition such as, career awareness, academic preparedness, financial, personal reasons, hours worked, relationship to faculty, access to support services etc. Each program had additional survey questions to determine program strengths and weaknesses.

Conclusions and Recommendations

These surveys provided the data and information needed to assist program teams to make specific program recommendation to Industrial Technology, Human Services and Business Divisions at WWTC. Systems thinking and collaborative team approach are models most often used at WWTC to implement change. Program recommendations or improvements are based on these approaches. The Vice-President of Student Services, managers, division faculty, counselors and staff were all informed of the survey results. These employees provide services that are vital to student retention and needed to be part of implementing changes. The recommendations that follow are based on the survey data as well as input from the Division Teams with the primary goal to implement changes that will increase student retention and graduation rates in MLT, ACH&R and AAP.

Research Question one: Is attrition related to low grade point average (under 2.0)?

The data gathered from the college software showed that 41 percent of the leavers had a grade point average below 2.0, which could force them to drop out of their program and /or may have stopped their Federal Financial Aid. Of this group of leavers whose GPA fell below 2.0 only 25 percent sought out support services for any kind of remedial academic course work. This information was derived from the survey data, which asked students to identify services they used while at WWTC. It can be concluded that students who may have benefited from these free services provide by the college, such as the Academic Success Center, tutors, math and reading labs and career counselors, did not.

Based on these conclusions it is recommended that counselors, advisors and specialist in the Student Services Division work with faculty to implement a new early warning system. Previously at WWTC, if students where in academic trouble at semester it was left to the student to seek out assistance. It is recommended that increased efforts

be placed on contacting students by mid-term that have grades below satisfactory performance. This was implemented fall semester 2000. A personal contact will be made first by the faculty advisor or program counselor. This will help build relationships and create stronger connections between students and faculty at WWTC. Personal relationships and strong student teacher connection were found in the literature review to be an important factor in increasing retention. If a personal contact is not possible, a letter with a brochure outlining services available will be sent. As a result of this new system more students will use the remedial and support services and the outcome should be stronger GPA by students. This recommendation supports the literature review which found that the better a student's first semester's GPA is the more likely that student will be retained.

Additional data from the surveys that correlates to GPA and academic performance indicated that the majority of students felt they were academically prepared to be successful in their program at entry. Students met the admission requirements for each individual program, yet not all students had the ability to pass the course work they had enrolled in. This was a factor in the case of the 41 % of leavers who left with low GPA. Based on this data it can be concluded that more academic preparation is needed for some students, and the same early warning intervention procedure mentioned above was implemented.

Also data from the MLT program showed 28.6 percent of the graduates/leavers reported they were only "somewhat prepared" academically for their program. Since both graduates and leavers in MLT indicated concerns regarding their academic ability it can be concluded that was a factor in students' ability to be successful in the program.

This data combined with data from specific program questions and input from Division teams resulted in a one credit Laboratory Math course being developed and build clinical chemistry skills.

Based on conclusions regarding the student's lack of confidence in their academic ability the recommendation to also add a two credit Urinalysis course was also made. This will improve science skills in MLT students before they take Anatomy and Physiology (A&P). This gateway course will also be used for students who do not pass A & P or would prefer to have the additional science study skills. Anatomy and Physiology (A&P) is a prerequisite to continuing in the MLT program. Presently students who do not pass A&P were dropped from the MLT program, until they pass the course. These students have no more contact with program faculty until successfully passing A& P. Often during this time period, students change programs or drop out. This Urinalysis course would allow students to continue in the MLT program, build their study skills in science and lab work, and keep them in contact with program faculty. Two courses mentioned above will be developed and implemented to impact student retention and increase graduation rates, beginning fall of 2001.

In the ACH&R program the limited data indicated that the majority of the students felt academically prepared for the program as a whole. Yet 25 percent were not sure. It can be concluded that these students also could benefit from more academic preparation specific to their program, which correlates to GPA. It was recommended, based on the previously mentioned data and faculty input, that a gateway course be developed that focuses on specific academic skills needed to be successful in the ACH&R core curriculum. In addition, based on surveys and faculty input, another

recommendation was made to make changes in the math curriculum to make it more related to skills needed in the air conditioning and heating industry.

Another survey questions that impacted student's GPA concerned basic skills (reading, writing and math). This data by and large indicated that most students felt they had the basic skills needed to be successful in the program. Five of the eight leavers from AAIP indicated that they had concerns about their basic skills in relationship to their academic skills. These numbers are not sufficient to base conclusions on. However it is reasonable to say that the majority of students felt they had the basic skills to be successful in their program choice, but a significant number of leavers felt unsure of their basic reading, writing, computer and math skills. Based on these facts it is recommended that students be encouraged to take the two credit Student Success course as an elective in their program as one option to improve basic skills. This course is similar to other freshman orientation courses recommended in the literature review. It increases students study skills and self-confidence and could help to improve overall GPA. Based on this survey question it is also recommended that some students may benefit from developmental classes for a semester. These courses are remedial, non-credit and offered out of WWTC Instructional Support Division. Developmental classes can be taken in combination with credit courses. This is particularly significant for students who may be academically at risk at entry, but need to be full time to be covered under their parents insurance. Western is now working with students and insurance companies to verify that the student's full time status can now include developmental classes. Students then could take the course work that is appropriate for them academically without jeopardizing

insurance coverage. Course workload taken to satisfy insurance requirements was found in the literature review to be a factor that contributes to student retention.

Overall the survey questions and literature review show a direct correlation between low grade point and attrition. Students at WWTC who are at risk in any of these three programs will have more options available to increase their GPA. These previously mentioned recommendations have the potential to increase retention in these programs. The added gateway courses in ACH&R, MLT, as well as the Student Success Course, are all reasonable and affordable options to increase student retention and increase graduation rates in the programs surveyed.

Research question two: Have students participated in any career planning activities prior to enrollment (career planning workshop, interest inventory, job shadow or informational interview)?

The results of the data that specifically addressed student participation in career planning indicated that the large majority of students did not use available resources. Between 55 percent and 100 percent of the students in the three programs had not done any kind of career planning prior to entry. Results from the survey question show that a much greater emphasis should be placed on career planning opportunities during the admission process and during the first semester at WWTC to enhance student retention. The literature review showed students who have a clear goal at entry have a higher retention rate and greater graduation rate. It is recommended that students be strongly encouraged to participate in a free three-hour workshop or take Student Success or the other gateway courses now being offered by MLT and ACH&R.

The Career Planning workshop is now available at a minimal cost to students to cover assessments. It is recommended that students be encouraged by counselors, admission advisors, and program faculty to take either the workshop or the Student Success course to evaluate their aptitude for their specific program.

The Student Success course offered at Western is part of the General Education Division. The curriculum provides assessments, career exploration, and self-awareness and study skill topics, all which have been documented in the literature review as being major factors in contributing to retention. This is particularly true during that very critical first semester. In addition, the survey showed the students in AAIP, both graduates and leavers felt they would have spent more time in career exploration if they had the opportunity. Thus these recommendations have the potential to meet the needs of students who want and need further opportunity to explore career options.

Up to 85 percent of the students surveyed in all programs felt they would have benefited from a job shadow or informational interview or mentor program. This was true for MLT and AAIP leavers and graduates. Based on this data it can be concluded that that more shadow and mentor type experiences should be established for students. It is recommended that students be required to participate in one of these activities prior to program acceptance. This may help students who are not sure about their program thus reducing attrition.

Other data taken from the surveys, that inquired about student's confidence in their program choice and awareness of their field indicated that the majority of students felt they knew what they wanted. In addition the majority of students indicated that they

had seen a counselor when they started school. It can be concluded that students felt at entry that they had enrolled in the field they could work in after graduation.

Based on this data, it can be concluded that what is being done to assist most students in career planning is working. However, for the students who are not as confident, workshops, gateway credit courses and participation in job and program shadows may help clarify program choice. This would increase student program satisfaction and also assist with student retention.

Overall the survey questions and literature review show a need for increased career planning prior to enrollment.

Research question three: Are there additional factors such as financial aid or course scheduling that impact attrition? The data showed that from 44.4 percent of AAIP leavers to 71.4 percent of MLT leavers/ graduates responding used the services of the Federal Financial Aid Program. In addition, 55 percent of AAIP leavers (largest group of leavers) indicated that financial reasons were a factor for leaving.

The data showed that students depend heavily on Federal Aid either from grants or loans to attend college. WWTC students in total, receive the third highest total amount of Pell grants, which are based on economic need in the state of Wisconsin. Based on this data it can be concluded that financial aid, or lack of it, impacts attrition. It also can be concluded, since data indicates significant need, that more information be made available to students about other sources of assistance. Programs such as Wisconsin TOP grant, Life Long Learning Credit and other educational benefits are available to income eligible students through Work Force Connections formally the Private Industry Council. Based on the conclusions it can be recommended that an individual with a social work

background be added to the financial aid staff to work with students individually. This person would case manage all students on campus who are on financial aid probation or request additional assistance for other financial programs or services. A student on probation has one semester to get their GPA up to a 2.0 or lose their Federal Financial Aid. It is recommended that this social worker would assess the students needs and make appropriate referrals that best meet the financial and academic needs of the student. This position was implemented in July of 2000.

Other data that impacts a student's financial ability to attend college is funding available through WWTC Foundation. The data showed that only 14 percent of the students from any group accessed the Foundation while at WWTC. It can be concluded that the students in the survey under used this service. Based on this conclusion it can be recommended that more promotion of the resources available would be reasonable. Workshops could be implemented that help students learn how to complete a scholarship application as well informing students of other financial benefits available.

The financial need of many students at WWTC is significant enough to conclude that without some forms of financial assistance many students would have to leave WWTC due to lack of funding.

Course scheduling was another factor assessed in the survey. Students who left programs were asked to check if scheduling was a factor. The data showed that 11 percent of the students' felt that course scheduling impacted why they left WWTC.

Based on the data it can be concluded that scheduling impacted a significant minority of students. Based on this conclusion it can be recommended that alternate scheduling based on departmental need be implemented.

Research question four: What other factors may impact attrition in other WWTC programs? The data showed that course offering such as nights, weekends or self-paced courses had an impact on attrition. In the MLT program more than half of the students would have preferred to take the course work over a three-year period. The strongest response to alternative course offerings came from the AAIP program students, 45 percent to 50 percent of whom would consider returning if the courses were offered at night, weekend or were self paced.

Based on this data it can be concluded that night, weekend and self-paced courses would help reduce attrition. Based on these conclusions it can be recommended that courses offering times be reviewed and that courses on the Internet be offered.

Other factors that may contribute to attrition in these and other programs at WWTC would be the number of hours, students work and the number of miles that they drive one way to school. The data showed that the average student drove 21.1 miles one way to attend school at WWTC and worked an average of 23.2 hours per week while in school. Based on the data it can be concluded that the time students spend driving and working impact attrition.

Based on these conclusions it is recommended that all programs develop more course work on the Internet. This recommendation was made to meet the needs of the student who is working more than part time and driving from the surrounding area to access training. It was also realized that Internet courses are only meeting the needs of students at a particular skill level and who are very self-motivated. The literature review showed that these were barriers to self-paced and Internet courses. It is recommended that this be taken into consideration by providing the information about support services

on the Internet. Student could send their papers to the Academic Success Center to be proofed and returned in a 24 hour time period. This would help reduce the barriers of self-paced and Internet courses.

From the survey data, factors that impacted attrition in these three programs may also affect attrition in other WWTC programs. In particular this would seem so regarding factors that relate to career planning, mentoring, shadowing and services used while at WWTC. The results of this research indicated that no one factor, from the numerous factors researched can conclusively impact attrition at all colleges. Each college must make assessments based on the needs of their community and services provided by their institution.

Recommendation for Additional Research

In retrospect the researcher would have written as many questions as possible exactly the same for all surveys. Not doing this impacted the data making it more difficult to interpret. The data and literature review clearly show the many factors mentioned in the four research questions affected attrition. It is recommended that annual surveys need to be used to help evaluate the effect of program changes on attrition in the programs studied in this research paper and other targeted programs at WWTC.

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12) At the time you enrolled in this program, what kind of work did you imagine this course would prepare you to do?

Repair furnaces and air conditioners_____

Design heating and cooling systems_____

It wasn't clear in my mind at the time I enrolled_____

Other,

describe_____

Leavers only

13) Which of the following factors contribute to your leaving the program?

Instruction_____

Grades_____

Location of classes_____

Transportation_____

Financial reasons_____

Childcare concerns_____

Scheduling problems_____

Found a job_____

Program safety issues_____

Instructor relationships_____

Lack of family support_____

Peer relationships_____

Lack of academic support_____

Program classes were not what were expected_____

Other_____

14) Were the laboratory, facilities and equipment adequate?

Yes

Not sure

No

15) What was the primary reason you left the program?

16) Would you consider completing the program if courses were offered at night?

Yes

Not sure

No

17) Would you consider completing the program if courses were offered on weekends?

Yes

Not sure

No

18) Would you consider completing the program if self- paced courses were offered?

Yes

Not sure

No

GRADUATES ONLY

19) What topics should be added or expanded to the program?

Expand temperature controls_____

Math for HVAC_____

Physics for HVAC_____

Problem solving_____

Oral and written communications_____

Hands- on things, such as soldering_____

ALL

20) What were the strengths of the program?

21) What were the weaknesses of the program?

22) Comments

23) Recommendations

Thank you, for your time and feedback.

Medical Laboratory Technician Survey

- 1) How confident were you of your program choice when you registered for school?
 Not sure at all Not sure Undecided Sure Very sure
 1 2 3 4 5
- 2) Rate your awareness of your program choice (type of work, lab work, drawing blood, salary, location, etc.)?
 No awareness at all Some what aware Undecided Aware Very aware
 1 2 3 4 5
- 3) If you had to do it over again, would you spend more time in career exploration?
 No more time About the same Undecided More time Much more time
 1 2 3 4 5
- 4) Did you see a WWTC counselor about your program?
 Yes Do not remember No
- 5) Did you do a job shadow, program shadow, informational interview, mentor program or any other career planning activity before you started school?
 Yes Not sure No
- 6) Do you think you would have benefited from a job shadow or informational interview or a mentor program?
 Yes Not sure No
- 7) How academically prepared were you for your program?
 Not prepared at all Somewhat prepared Not sure Prepared Very prepared
 1 2 3 4 5
- 8) Do you feel that a lack of basic skills (reading, math, English, keyboarding, study skills) hindered your success in the program?
 Yes Not sure No
- 9) Did you use any of the following services at WWTC?
 Brush up/Goal classes___ Academic Success Center___ Math lab___
 Computer lab___ Opportunity Center___ Tutoring___
 Foundation___ Financial Aid___ Note taking___
 Minority Services___ Disability services___ Counseling___
- 10) Did any of the following factors contribute to your leaving the program?
- | Financial Reasons___ | Instruction___ | Found employment___ |
|--|-----------------------|----------------------|
| Poor job prospects___ | Starting salary___ | Personal challenges_ |
| Grades___ | Location___ | |
| Transportation___ | Childcare concerns___ | |
| Instructor relationships___ | | |
| Peer relationships___ | | |
| Program classes were not what were expected___ | | |
| Lack academic support___ | | |
| Lack of family support___ | | |
| Other, _____ | | |

Yes

Undecided

No

24) Would you have benefited from Introduction to Microcomputers or a key boarding class?

Yes

Undecided

No

25) What were the strengths of the program? _____

26) What were the weaknesses of the program?

27) In order to reduce the credit load would you have preferred to take the MLT program in three years instead of two?

Yes

Undecided

No

Leavers Only

28) If yes, do you think you would have continued in the program?

29) If evening classes were an option would you have been able to complete this program?

Yes

Undecided

No

30) What was the primary reason you left your program? _____

31) Comments

Thank you for your time and your feedback!

Administrative Assistant Survey

- 1) How confident were you of your program choice when you registered for school?
 Not sure at all Not sure Undecided Sure Very Sure
 1 2 3 4 5
- 2) Rate your awareness of your program choice (type of work, salary, location etc.)?
 No awareness at all Somewhat aware Undecided Aware Very Aware
 1 2 3 4 5
- 3) If you had to do it over again, would you spend more time in career exploration?
 No more time About the same Undecided More time Much more time
 1 2 3 4 5
- 4) Did you visit a WWTC counselor about your program?
 Yes Do not remember No
- 5) Did you do a job shadow, program shadow, informational interview, mentor program or any other career planning activity before you started school?
 Yes Do not remember No
- 6) Do you think you would have benefited from a job shadow or informational interview?
 Yes Do not know No
- 7) How academically prepared were you for your program?
 Not prepared at all Somewhat prepared Not sure Prepared Very Prepared
 1 2 3 4 5
- 8) Do you feel that a lack of basic skills (reading, math, English, keyboarding, study skills) hindered your success in the program?
 Yes No
- 9) Did you use any of the following services at WWTC?
 Brush up/Goal classes____ Academic Success Center____ Math Lab____
 Computer Lab____ Opportunity Center____ Financial Aid____
 Foundation____ Disability Services Tutoring____
 Note taking____ Minority Services Counseling____
- 10) Which of the following factors contribute to your leaving the program?
 Financial reasons____ Transportation____
 Childcare concerns____ Instruction____
 Location of classes____ Found a job____
 Lack of academic support____ Grades____
 Instructor relationships____ Scheduling____
 Starting salary____ Peer relationships____
 Program classes were not what was expected____
 Personal challenges____
 Other,
-
-
-
-

11) What was the primary reason you left the program?

12) How many hours were you working per week while attending college?

Not working____	21 to 30_____
1 to 10_____	31 to 40_____
11 to 20_____	41 and over_____

13) Were you satisfied with your program advisor?

Very satisfied	Satisfied	Unsure	Dissatisfied	Very Dissatisfied
1	2	3	4	5

14) Were you satisfied with your instructors?

Very satisfied	Satisfied	Unsure	Dissatisfied	Very Dissatisfied
1	2	3	4	5

15) Were you satisfied with the training you received?

Very satisfied	Satisfied	Unsure	Dissatisfied	Very Dissatisfied
1	2	3	4	5

16) If you marked very dissatisfied for questions #13 to #15 above please explain.

17) Would you consider completing the program if courses were offered at night?

Yes	Not sure	No
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18) Would you consider completing the program if courses were offered on Weekends?

Yes	Not sure	No
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19) Would you consider completing the program if self-paced courses were offered?

Yes	Not sure	No
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20) Do you anticipate returning to WWTC?

Maybe, same program____	Maybe different program_____
Yes, same program_____	Yes, different program_____

Undecided_____

No_____

21) What was your distance traveled (in miles to attend class)?

0 to 5_____

6 to 10_____

11 to 20_____

21 to 30_____

31 to 50_____

51 to 70_____

Over 70_____

22) What were the strengths of the program? _____

23) What were the weaknesses of the program?

24) What recommendations do you have for improving the services and education we offer?

25) Comments

Thank you for your time and feedback!

Administrative Assistant Survey
Graduate Survey Only

- 1) How confident were you of your program when you registered for school?
 Not sure at all Not sure Undecided Sure Very Sure
 1 2 3 4 5
- 2) Rate your awareness of your program choice (type of work, salary, location, etc)?
 No awareness at all Somewhat aware Undecided Aware Very Aware
 1 2 3 4 5
- 3) If you had to do it over again, would you spend more time in career exploration?
 No more time About the same Undecided More time Much more time
 1 2 3 4 5
- 4) Did you visit a WWTC counselor about your program?
 Yes Do not remember No
- 5) Did you do a job shadow, program shadow, informational interview, mentor program or any other career planning activity before you started school?
 Yes Do not remember No
- 6) Do you think you would have benefited from a job shadow or informational interview or mentor program?
 Yes Do not know No
- 7) Have you held more than one position since graduation?
 Yes No
 If so, please identify the titles. _____

- 8) Are you currently employed at the same organization since you graduated from the program?
 Yes No
 If so, please identify the positions held within that organization.

- 9) What are the skills you use most in your position?

- 10) What skills were lacking from your training at WWTC that you have had to learn on the job?

11) Please indicate which of the following activities are part of your current position:

Compose documents and reports using word processing software _____

Integrate data into spreadsheets _____

Use presentation graphics _____

Manage databases using database software _____

Use internal email daily _____

Use electronic calendaring/scheduling (e.g. Lotus Notes or Outlook) _____

Use on-line services regularly _____

Compose and edit correspondence _____

Recommend or make purchasing decisions _____

Coordinate travel arrangements _____

Train others _____

Supervise others _____

Statement: *Based upon conversations that the Office Technology faculty have with some of the past Administrative Assistant graduates, they think that starting salaries in the field may be fairly low in comparison to other programs within the technical college system. However, they also think that many of the graduates, once they have demonstrated their skills on the job and have gained work experience, may be receiving reasonable salary increases with their present employer or upon taking new positions in other organizations.” Therefore, we would appreciate your answering these last two questions regarding salaries. This information is confidential and will not be shared by name or organization.*

12) What was your beginning salary when you were first employed in the administrative assistant field upon graduation? _____

13) What is your current salary now? _____

14) Recommendations:

15) Comments:

Thank you, for your time and feedback!