

AN ANALYSIS OF TRADITIONAL AND INTEGRATED BASIC SKILLS AND THE
EFFECT ON STUDENT RETENTION RATES AT MATC-MILWAUKEE

By

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Abstract

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An Analysis of Traditional and Integrated Basic Skills and the Effect on Student (Title) Retention Rates at MATC-Milwaukee		
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The study provides research about integrated curricula that has occurred during the mid 1990s, especially work done to bridge the traditional gap between the “liberal” and “useful arts.” Of greatest value to 2-year community colleges and technical colleges are the findings about teaching developmental education and ESL in the context of vocational preparation. An analysis of two Pre-College’s pilots projects, offers invaluable insight as to how basic skills and ESL can reenergize and improve students performance, further reduce attrition and increase retention rates and give life to a program until recently was no more different from any other adult basic education program in the United States.

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Chapter One

Introduction

Milwaukee Area Technical College (MATC) is one of 16 two-year technical colleges and one virtual college in the State of Wisconsin. Mandated and created by Wisconsin State law in 1907 to permitted cities to operate trade schools for persons age 16 or older as part of the public school system (Chapter 122) and allowed them to establish technical schools or colleges under the control of either the school board or a special board (Chapter 344). “Wisconsin was the first state in the United States to establish a system of state support for vocational, technical and adult education (Chapter 616, Laws of 1911)” (www.board.tec.wi.us/atagInc.htm). During a 50-year period, MATC has become the largest two-year school in the system with an enrollment of over 63,000 students (MATC Fact Book, 2000). MATC’s central mission in 1911 was to help the working class complete their secondary education and transition them into a vocational or occupational trade. Over the first 50 years, MATC added new missions such as becoming a postsecondary institution in the 1960s and seeking to meet national credentialing standards of a post-secondary college in the early 1970s. MATC provides W-2 job training and soft-skills education and has transfer relationships with 22 private and public colleges and universities in the State of Wisconsin. In the midst of all these new opportunities, MATC has always held to its first and most important mission, transitioning the working-class of Milwaukee and assisting them into careers as its only reason for existence (Vice President MATC Union, 2000).

The Pre-college Division (formerly called College Transition) provides basic skills instruction, an Adult High School, English as a Second Language and Pre-GED and GED education, and has over 250 full and part-time instructors. The division provides instructional

services to over 26,000 secondary and remedial students. Services are offered at 32 Community Based Organizations and at four campus locations. The Pre-College Division, the second largest at MATC, (Liberal Arts and Sciences is the largest) brings in over 20 million dollars in revenue to MATC and represents 21% of MATC operational budget. It is watched over very carefully by the district Vice-President of Finance, Academic Affairs and the President of the College. The division's operational budget, with state funding, is four million dollars, with revenues over 20 million, a net gain of 18 million dollars for the school's general budget.

Background of the Problem

The greatest challenges facing adult basic education programs (ABE) today are students who are ready to work and have the skills to meet employer's demands. For ABE to meet these challenges, major reforms need to accrue in two critical areas: 1) students need more hours of instruction (improve retention) and 2) integration of curriculum where subject matter addresses the real world of employment (What Work Requires, 1991; Grubb, 1997). Unfortunately, the typical basic skills student is bored by the repetition and endless drill of his/her studies and fails to see the relevance to any occupational goals and generally seems unaware of the college's other programs and activities. The result, research done by Quigley (1997) and others, shows a dramatic rise in dropout rates in remedial courses. Consequently, students needing remediation but failing to complete the appropriate course work are unlikely to persist or to complete the program of study—a pattern repeated in most developmental courses everywhere (Putting America to Work, 1984). For students to make any academic progress in their studies, typical findings on educational gains for students in basic education states that, “100 hours of instruction per grade-level equivalent gain in basic skills” is needed for any student to be successful

(American Association of Community Colleges, 2000). However, current research by Bailey (1997) strongly argues that the remedy to this national problem is to borrow the method of integrating academic and occupational context. That is, to develop remedial (or developmental) courses and ESL programs with an occupational emphasis, or to teach these subjects in tandem courses or clusters, with developmental English and math linked to an occupational (Perin & Boehlen, 1999).

Statement of the Problem

Currently the division is still using the curriculum developed by its own teachers (15 to 20 years ago) and many of the instructors have not adopted the state board's revised curriculum. The adoption would force the division to move away from a book-based to a competency based curriculum. Another critical problem is the fact that employment skills leading to short-term training or job placement are not incorporated in its current curriculum. Lastly, the course content is not uniformed and does not connect to higher skill sets in the technical, vocational or occupational divisions. This means that students are not being prepared for the next level of academics, nor entry-level employment.

When looking at the past results of the ABE program and the lack of adoption to make the needed changes, the end results can document. MATC's Community Based Organizations (CBOs) and Adult Basic Education (ABE) program retention rates are no better and certainly no worse than anywhere else. MATC's retention figures are deplorable as documented from the school's data collection system.

Of the two programs, the CBO's lose more students a year than does ABE. For example, in the academic year 1992-1993 there were 1,648 students entering the CBO program for their

first time. By the academic year end, only 315 remained (19.1% retention), losing 1,333 students the first year. Of the 315 who re-enrolled in the fall of 1993-1994, their second year—just 72 remained in 1994-1995, a 4.3% survival rate of the 315 total, or a loss of 243 students. And of the 72 students returning to the CBO program for their third year in 1995-1996, only 14 continued on to the close of the next academic year (0.8% survival rate), with a further loss of 58 students. In sum, of 1,648 students who initially enrolled in the CBOs in 1992-93, by 1995-1996 only 14 managed to attend for four consecutive school years, CBOs losing in the interim 1,634 of the 1,648 students enrolled in the program. By 1997-98, only two students completed their GEDs and only one enrolled into a vocational-occupational program. In 1999, this student had dropped out because of poor grades. It seems that if the state objective for the CBO program was to see how quickly it could make students disappear; the program could boast that it had succeeded beyond its wildest expectations (MATC SMIS & COMOS System, 2000).

Retention-rate figures for the Adult Basic Education (ABE) program between 1991 and 1999 appear slightly less discouraging. In the academic year 1991-1992, some 3,269 enrolled in the ABE for the first time, and a mere 639 (a survival rate of 19.5%) re-entered for a second year in 1992-1993, a loss of 2,645 of the original 3,269 students. Two hundred eighty three students returned for a third consecutive year in 1993-1994, (an 8.6% survival rate) with a further loss of 356 students. In 1994-1995 only 208 students came back to the program for a fourth year, (a 6.3% survival rate) with an additional loss of 75 students. Figures for the last two years, 1995-1996 through 1997-1998, are, respectively: 141 students returned in the fall of 1995-1996 for a 4.3% survival rate and a loss of 67 students; 107 students re-enrolled for their sixth consecutive year, having an 3.2% survival rate, with a final loss of 34 students. Twenty-three students moved

into occupational-vocational programs and only two students by 1999-2000 had completed their post-secondary education. In sum, for the period under examination, the ABE program began in the fall of 1991 with a first-time enrollment of 3,269 students, and ended in the fall of 1997-1998 with only 107 students, a loss of 3,162 students in the 7 years studied (MATC SMIS, & COMOS System, 1999). With these types of results, a new developmental progress is worth looking into, if it leads to strengthening students retention and helps students make the transition into a better paying job.

Data from the ABE and CBO program at MATC strongly suggest that retention and success has been a major concern. It seems reasonable that any interpretation of alternate strategies to increase retention is warranted.

Purpose of the Study

The purpose of this study is to evaluate the effects of integrating technical and vocational content into the basic skills curriculum. Furthermore, the study will see if the integrated curriculum improves student satisfaction and thereby leads to improving retention, and transitioning rates into short-term technical and vocational programs.

Research Questions

The following questions will assist in diagnosing the factors that lead to improving the curriculum as well as student and instructor satisfaction. It will also determine if these changes will strengthen the program's retention rate and lowering the student attrition rate.

1. What are the problems associated with integrating vocational content with basic skills?
2. How effective was the integrated vocational content in basic skills?
 - A. Did students learning improve?

- B. Did the instructors like teaching this revised curriculum?
 - C. Did the hours of instruction increase for these students in comparison to those who were enrolled in traditional basic skills classes?
 - D. Was the overall retention rate compared to the traditional basic skills class better or worse?
 - E. Did more students successfully transition into short-term vocational programs in comparison to traditional basic skills students?
 - F. How successful were these basic skills students in their first year vocational classes? Were they better prepared than traditional basic skills students?
 - G. How many students completed their one-year vocational programs? Was it more than the traditional level 3 basic skills students?
3. Were students satisfied when they were exposed to the integrated vocational content with basic skills?

Rationale for the Study

1. If integration of technical and vocational content into basic skills can improve students' and instructors' satisfaction, this might increase retention and transitioning rates into vocational/occupational programs.
2. If the integration of vocational content into basic skills did not cost the division much money and time, would it not be prudent to expand the pilot project to other basic skills content areas?
3. If basic skill instructors were satisfied with the content changes, could it assist in further curricula changes to improve student and instructors satisfaction?

Limitations of the Study

1. Collecting data from basic skill students could be a problem because of the nature of MATC's student population. Many students are transitory. Over the last two years, retention mailing and focus groups produced less than 12% outcomes because of the large volume of returned letters and disconnected telephone (College Transition Internal Report, 1999).
2. Some instructors may be unwilling to participate in a satisfaction survey if results would be used in their formal, yearly job appraisal.

Definition of Terms

Adult Education: This term means services or instruction below the postsecondary level for individual who have attained 16 years of age, who are not enrolled or required to be enrolled in secondary school under State law, and who lack sufficient mastery of basic education skills to enable the individuals to function in society...(WTCS Guidelines, 1999).

Adult Basic Education Grade Level of Instruction:

Grade Levels: 0.0 – 5.9 = Level 1

Grade Levels 6.0 – 8.9 = Level 2

Grade Levels 9.0 – 12.9 = Level 3

SIMS: Milwaukee Area Technical Colleges Old Data Retrieval System.

COSMO: Milwaukee Area Technical Colleges New Data Retrieval System.

Pre-College Division: Formally the College Transition Division, it is a merger of the High School Relation Division with College Transition. NCA asked that these areas be combined to

reduce duplication and to streamline services into a seamless process. All services of Secondary Education are now under one program area.

Chapter Two

Review of Literature

The purpose of this literature review was to determine the best integrated technical and vocational basic skills curriculum to use in this study. Furthermore, the study will determine if the integrated curriculum of other programs improve the student's satisfaction and thereby lead to improved retention and transition rates in short-term technical and vocational programs. The literature also offers a historical background of integration and how it will be used to support the project's scope, implementation, and evaluation.

What follows is a brief summary of reforms and strategies considered in this study, especially useful in integrating occupational/vocational content with remedial instruction, developmental, ESL and Adult Basic Education. First, and foremost, the present system of ABE assessment of learning, where the tests are kept confidential and outcomes are measured, is not the way business sees real competency being measured. Rather than measure competence at what schools and textbooks define as important, cognitive sciences favor outcomes which measure how well students can perform activities that have meaning in everyday social and occupational practice, which are understood and credible to students, parents, employers, politicians, the media, and the larger community (Badway & Grubb, 1997; Berryman & Bailey, 1992; Lave, 1988; Resnick, 1987; Eishen, 1991; Perin & Boehlen, 1999; Stout & Magnotto, 1988).

A wide variety of commonly cited methods to create an integrated curriculum are noted below in Table 1. The chart demonstrates the possible methods that could be used in this pilot design.

Table 1

Design characteristics of integrated models used by authors in the review

Integration Type	Kraskouskas	Schmidt	Finch	Badway	Perin	Bailey	Grubb
Writing-across-the Curriculum	X	X	-	X	-	-	X
Write to Learn	-	-	X	-	-	X	-
Paired/Clusters or-Tandem Courses	X	-	X	-	X	-	-
Inserted Modules	X	-	-	-	-	-	X
Hybrid Courses	X	X	-	X	X	-	-
Applied Academic	X	-	-	X	X	X	-
Capstone Courses	X	-	-	X	-	-	-
Applied ESL-Occupational Content	X	-	X	X	-	-	X
Multidisciplinary	X	X	-	-	X	-	-
Total types of responses	8	3	3	5	4	2	3

Note: (X)=Yes Used in Model (-) No Was not Used.

Integration of Vocational with Basic Skills

Much research about integrated curricula occurred during the mid 1990s, especially work done to bridge the traditional gap between the liberal and the useful arts. Educational reformers such as (Adler, 1996; Grubb & Kraskouskas, 1992; Boesel, 1994; Watkins, 1990; Eishen, 1991; Gabelnick, MacGregor, Matthews, & Smith, 1990; Tinto, 1997; Grubb, 1996), have shown the

way curriculum reforms and newer teaching strategies can work to remedy seemingly insurmountable problems by borrowing the methods of integrating academic and occupational context, that is, develop remedial (or developmental) courses and ESL programs with an occupational emphasis.

One of the most frequently used approaches by instructors is *Writing Across the Curriculum* (WAC). Both academic and occupational instructors are encouraged to incorporate more writing into the courses. Often teachers think that this involves the ability to be able to write different types of English papers. On the contrary, it is used to improve teaching by instructors and learning, by clarifying what students have learned and as a roadway to sharpen critical thinking and troubleshooting skills (Eishen, 1991). Additionally, WAC is used by instructors who are familiar with this method, as the means to help students think more deeply about their subject matter, to clarify and organize their thoughts and help them see their learning in context with their career objectives. This approach is often labeled, *Write to Learn* (Grubb, 1996). An example of this was used by instructors at Prince Georges Community College in Largo, Maryland. The writing exercises in a business math class focused on helping students move between mathematical equations and word exercises, which, led in turn, to identifying applications in everyday life by writing about them. The outcomes of such radical methods were substantial reducing attrition and increasing retention (Stout & Magnotto, 1988). Ultimately, more students successfully passed the course work as a result of the addition of the writing component. Unpredicted outcomes of these changes in pedagogy were students' willingness to participate in "coherent discussion" and more active questioning (Grubb, 1996).

The next type of integration that could be used is called *paired/cluster or tandem courses* (also known as linked courses) (Perin & Boehlen, 1999). The curriculum is aligned between a remedial-developed course, which offers no college credit, and a general education course offering college credit. The instructors work together to help the at-risk students meet the college course competencies they need. The college instructors assist in identifying the course competencies students are having difficulty mastering while the remedial instructors provide the support needed to help students to understand and master those competencies (Kalman, Castellano & Grubb, 1995). Classes are offered during a two or three hour period on the same day, usually one class following the other.

As for the use of inserted modules, the law enforcement program at Nashville State Technical Institute offers a good example of how this method could work. Instructors were interested in having students learn more about “historical, ethnical and aesthetic perspectives in industrial engineering, mechanical engineering and business technology courses” (Grubb, 1996 p. 143). Instructors discovered that students continued in class longer and their grades improved. In a pervasive approach of integration, students learned “ratios of Ohm’s law in an automotive or electronics programs, or review proportions when studying the laws of gasses in respiration therapy” (Grubb, 1996, p. 142).

A more extended and formalized approach to infusion is to incorporate larger modules taken from academic approaches, where teaching or reinforcements are both quick and informal. “Among the powerful advantages of inserted modules courses are their adaptability and application of cognitive learning theory. Students duplicate workplace skills in their classroom assignment, learning by doing” (Badway & Grubb, 1997, p. 19).

Hybrid courses are an integration of occupational and academic education where multidisciplinary courses take the perspectives and methods of particular academic disciplines by incorporating issues and concerns that are distinctly occupational (Grubb, 1996).

Applied academic courses have been developed as a way to serve the needs of occupational students more precisely because the final approach employs infusion of conventional academic subjects that provides practical applications taken from true occupational experience. Since most academic liberal arts and science courses are too general, too abstract, or lack appropriate application related to an occupation, teachers mold the content to a particular occupational area. These special courses are taught by occupational or academic instructors, and rarely, because of fiscal limitations, team-taught. Conflicts commonly occurred where teachers believed a course should stress more abstract, theoretical academic underpinnings, practical information or instead stress occupational examples of socialization, into the values of an occupation. To reduce the conflict, greater collaboration and greater discussion between academic and vocational faculty will lead to greater accommodations and a better quality of instruction to meet the need of business and students. Often called cooperative group projects, where instructors and students collaborate to organize, plan, and conduct a specific project leading to a total group accomplishment (Finch, Frantz, Mooney, & Aneke, 1997).

Capstone courses place a greater value on both occupational and academic courses, with a goal of moving courses to a more authentic assessment mode. In a capstone project the instructor develops a plan and executes a project, similar to one in work setting, that includes planning, finance, technical, and productive skills, as well as labor, safety, environmental and community issues (Badway & Grubb, 1997). Many colleges have set up projects that are exactly

like a technical company, applying plant layouts, materials-handling knowledge and designing manufacturing plants. Other schools have applied appropriate business forms, presentations, data entry and retrieval procedures using various media to make the project as real as possible for the classroom experience as to the true work world. By focusing on materials and competencies of the real work world and integrating several disciplines, a real context is the end result (Badway & Grubb, 1997).

In *Applied ESL Occupational Content* courses, the aim is to improve the reading and writing skills of students by drawing from related occupations, develop reading and writing assignments that imitate those skills needed to be used on an entry-level job and prepare students for careers that are available. Black Hawk College in Moline, Illinois developed a machine-tool curriculum for Laotian and Vietnamese students by integrating key occupational skills related to reading and writing to meet the employers entry-level requirements and help students get a job (McGrath & Spear, 1991; Grubb, 1997). Students practiced vocabulary for the workplace, writing outcomes on different types of business forms as well as identifying problems on the floor and learning the appropriate steps to inform the employer (Grubb, 1995; Ramsey, 1997). The real opportunity here is to bring education, and business, together and these partnerships lead to job placement of graduates and improved curriculum related to real world competencies.

Multidisciplinary courses offer a different approach to integrating academic and occupational education by incorporating special general education content that possess special interest to occupational students. Yavapai College offers such a course entitled, "Technology and Human Values," which examines the ethical issues generated by advancing technologies, as well as the influence of technology on individual and social values (Grubb, 1997; Yager, 1990). Here,

the common element is the application of academic content, philosophy, and literature, sociology or anthropology—and their concepts and analytic methods to technological developments.

Students get a better understanding of how these subjects work together, the compelling consequences of such choices, and of how they related to the current work world (Grubb, 1997).

Employer Needs and Suggestions to Improve Academics at the Two Year Colleges

Part of the tragedy remedial students face is that they remain educationally the least prepared and furthest away from satisfying employers' requirements for future employment (America's Choice: High Skills or Low wages, 1990). Today's employers hold far higher expectations for their employees' educational preparation. Among the contributors in this report were employers demand for a better-prepared labor force, in the sense that students have mastered basic competencies and have the capacity to apply them and, that individuals will have more years of schooling (The Committee for Economic Development, 1985). Employers in the sub-baccalaureate labor market are often dissatisfied with the preparation in high schools and community colleges, their complaint about atrocious verbal skills and deficient mathematical preparation reflect a quiet despair that educational institutions are not doing a better job (What Work Requires, 1991). In 1985, the Committee for Economic Development declared, "Business, in general, is not interested in narrow vocationalism. It prefers a curriculum that stresses literacy, mathematical and problem-solving skills." They go on to say national remedial programs have, on average, between a 65% to 80% per year drop out rate (between 1991-2001) and, this fact alone justifies the needed changes recommended by this national committee.

The Commission on the Skills of the American Workforce depicted the future in stark terms in its widely cited report, "America's Choice: High Skills or Low Wages." It described the

skills needed for a third industrial revolution encompassing the “demonstrated ability to read, write, compute, and perform at world-class levels in general school subjects (mathematics, physical and natural sciences, technology, history, geography, politics, economics and English). “The Commission felt that students should have the ability to exhibit a capacity to learn, think, work effectively alone and in groups and solve problems (p.136).”

Secretary of Labor, Lynn Morley Martin in 1991, outlined his department’s educational expectations in “What Works Requires.” In it he complained, “We are failing to develop the full academic abilities of most students...” He listed five competencies and three foundation skills necessary to create high performance schools, among which were greater competences in the conventional academic capacities of reading, writing, mathematics and computational skills, as well as “thinking skills such as decision making, problem solving, and knowing how to learn. (p.137).” Some pressure remains from employers to emphasize job-specific training far too narrow for any community college to realistically undertake. Most employers realize that neglecting the more academic or higher-order competencies may not affect employment in the short-run, but it is likely to be detrimental to the long-run prospects of both students and employers.

As conflicting as some of these expectations may seem, most scholars in the field second the position advanced by the Commission on the Future of the Community College, which argues that “if technical education programs are too narrow, if work cannot be a broadening experience, then the students may achieve only short-term gains” (p.132). Continuing, the Commission recommended “exploring new ways to combine technical and general studies throughout the undergraduate experience” and urged that “community college faculty should

take the lead in closing the gap between the so-called ‘liberal’ and the ‘useful’ arts...by developing up-to-date programs that integrate the core curriculum and technical education” (pp. 137-138).

In review, most of MATC’s classroom instructors agree that the curriculum needs to concentrate on how students learn, that is more job-specific in content, and “integrates academic and vocational education” in a coherent sequence of courses that help students achieve both academic and occupational competencies (MATC Basic Skills Survey Report, February 2001).

After reviewing the literature, the faculty, staff and administration agreed to use Badway and Grubb’s, *Sourcebook for Reshaping the Community College: Curriculum Integration and the Multiple Domains of Career Preparation*. There were two volumes of material that provided many examples of how each model was used and the results that accrued at various technical and community colleges throughout the United States. Further, the faculty and staff agreed that the best models in the Badway and Grubb’s source book were team-teaching and program curriculum integration model to support student learning and retention (MATC Basic Skills Survey Report, February 2001).

The examples of integrated instruction discussed by one group of educators, seek to reshape individual courses, while the group sought to develop a series of courses, both academic and occupational, that students take simultaneously, with each course designed to complement the others.

Research Evaluation Models Used

On the following page, Table 2 looks at possible research evaluation (data collecting methods) techniques that could be used in the pilots integrated curriculum approach. It is a comparative analysis of possible research methodology that could be used in this report. These different types of research methodologies come from the literature review noted above and possible applications can be used in the purposed Pre-College's Pilot Project. Among the approaches are infusion—inserted modules, writing-across-the curriculum strategies (WAC), applied academic courses—and integration—multidisciplinary courses, tandem, cluster-course designs, capstone and tandem, cluster-course design, capstone and learning-community formats (Grubb & Kraskouskas, 1992; Grubb, 1997).

Table 2

Data collection methods used by authors in the literature review

Methods	Kraskouskas	Badway	Franz	Schmidt	Perin	Bailey	Grubb
Statistical Analysis	-	-	X	-	X	-	X
Objective Measures	-	-	X	-	X	X	-
Random Sampling	-	-	-	-	-	-	X
Surveying	-	-	X	X	-	-	X
Subject Continue- Enrolled/Attendance	X	-	-	-	X	-	-
Regular Classroom- Subject-Grades	-	-	X	-	-	-	X
Standards	-	-	-	-	X	X	-
Competency-Based	X	-	-	-	X	X	-
Case Study	X	X	-	X	X	-	-
Interview/Student- Feedback	-	-	X	-	X	X	X
Questionnaires	X	X	X	X	X	-	X
Rubrics/Checklist	-	-	-	-	X	-	X
Action Research	-	-	-	-	X	-	X
Job Placement	-	-	X	-	X	-	-
Delphi Technique	-	-	X	-	X	-	-
Total types of methods	4	2	9	3	12	4	8

Note: (X)=Yes Method Used (-)=Not Used

Kraskouskas and Grubb (1992) developed the DACUM (Developing a Curriculum) process to create core competencies to be used in their evaluation of student success. Left to his own devices, Grubb (1995) used questionnaires and surveys of students to determine their feelings regarding the new integrated curriculum. Questionnaires can offer or provide a very good amount of information as to the personal feeling of the instructors and students. But there are disadvantages worth noting here, “(1) questions must be written clearly, (2) the reader must understand the underlying purpose and problem, (3) the questionnaire or survey of students must avoid wordiness and ambiguity, and lastly (4) the questionnaire or survey should be written in a totally objective manner” (Isaac & Michael, 1997). Grubb believes that student retention and improved curricula is directly related to how students’ feel about what they are learning and how it fits within the students’ employment objectives. He also used random samples to collect information from instructors and staff to determine overall likes or dislikes of integration course work (p. 42). Perin and Boehlen (1999) preferred to use student feedback, exit interviews, changes in grades and attendance, evaluation checklist, action research and tracking job placement. (Schmidt, Finch, Faulker & Kandies, 1995) asked participants to answer questions to determine if students were doing better than those who were non-participants students. Interviews do have some major advantages, (1) they permit its authors to search for and address nagging questions, (2) permit probing to obtain more complete data on critical issues, (3) provides help in establishing and maintaining rapport with respondent(s) or at least determine when rapport has not been established, and finally (4) provides a means of checking and assuring the effectiveness of communication between the respondent(s) and the interviewer(s) (Isaac & Michael, 1997). The disadvantages were inconvenience of setting up the interviews, cost and the

activities were very time-consuming (Isaac & Michael, 1997). Frantz, Finch, Mooney, and Aneke (1997) used a four-part assessment focus where they looked at the reaction of students and teachers, looked at learning results of students' behavior, and placement. Some of the direct benefits of behavioral objectives were (1) provided the basic competencies needed for students to survive, (2) gave the skills needed to become a responsible citizen and (3) developed a positive self-esteem and concept of self (p. 225). Some of the limitations of the method were (1) defining the exact process to determine the correct type of behavior, and (2) writing the objectives and developing the checklists were painstaking and tedious (p. 227). Results were compared to non-participants. Surveys are used to determine if students looked favorably on the new curriculum and sampling used to find out if teachers felt positive about working together. They also compared test scores of students and post-secondary enrollment outcomes to non-participants. They also used questionnaires, opinion polls, rating scales, checklists, structured interviews and focus groups that lead to the used of Delphi Technique. The authors hoped that the stakeholders could reach a group consensus as to the benefit of the new curriculum and whether it would lead to the desired results the group were seeking. On face value, it looked like a worthwhile goal, but there were many disadvantages reported in the book entitled *Handbook in Research and Evaluation* (p. 122) such as, “ (1) bandwagon effect of a majority opinion; (2) the power of a persuasive or prestigious individual to shape group opinion; (3) the vulnerability of group dynamics to manipulations; and (4) the unwillingness of individuals to abandon publicly stated positions.”

While offering many different types of methods to validate the overall results of all aspects of the integrated curriculum, no one method stands out more than any other.

Chapter Three

Method of Study

Research Methodology

Data collected from MATC's ABE and CBO programs suggest that retention and success of students is a major concern for the division and the department. A direct and substantial change may be needed to make major improvements which support student learning, retention and transitioning into occupational-vocational programs. For this to happen in an effective and efficient manner, changes in curriculum design, teaching method and skills necessary to be successful in a post-secondary program had to be examined and put into a process where a pilot could be used to determine whether the changes would be effective or not. The following chapter looks at that process.

The Descriptive Research methodology was used in this study. The methodology includes describing systematically the facts and characteristics of a particular area in the Basic Skills Department to determine if changes in the course curriculum improved conditions or instructional practices. Because the groups already existed, comparisons and evaluations to determine how to use the results in future planning and decision-making were made.

Design

The methods and procedures employed were, a record search sample to determine achievement and retention percentages of subjects who were enrolled in the new curriculum content courses, versus the traditional basic skills courses already documented. A further record search sample compared transition rates of entry into post-secondary programs and completion of students' first year of college. A survey sample, using a Likert scale, was used to determine

the students' satisfaction with their educational experience. The researcher hypothesized that academic achievement, retention, and transiting rates would differ significantly from those students who were in the traditional basic skills courses. Students' would have more satisfaction in integrated courses versus the traditional basic skills courses.

Procedures

Two random sample groups were formed, one was given the new curriculum designed with a content that would lead to success and the other represented the total population of the traditional basic skills students. The controlled, traditional groups, whose results have already been reported, were selected by State criteria. Students had to meet the under-educated classification, (0-8.9 grade level) to participate in the program. Prior to enrolling, students received pre-testing and counseling and were placed in the ABE or CBO programs. The group results were used to evaluate/compare outcomes of the new vocational basic skills curriculum. Comparisons were made in academic success, retention rates, transiting percentages of enrolled students in the pilot project, enrollment into post-secondary and grade point averages. These results were compared to the total student population (those following the same enrollment procedure) that represented the traditional adult basic education method. This sample represented approximately 250 to 300 students. Lastly, a students/faculty survey was used to determine if students enjoyed the new curriculum and whether faculty saw better results. The results had a direct application in determining if those methods would be used in future classroom instruction.

Subjects

Adult basic education students (subjects) were drawn from MATC's downtown program. Over 12,000 students enrolled in ABE, ESL or bilingual basic skills during a program year

(Cosmo, 1999, 2000, 2001). All adult students came from English Level 2, (Eng B-2) basic skills or Career Level 3 or (Career B-3) basic skills classes during the 1998-2000 program years. All student information was taken from MATC Cosmo Computer System or MATC Client Reporting System. Students' Identification numbers (ID#) were used rather than Social Security Numbers. After results were tabulated, the ID numbers were destroyed, making it impossible to identify students and their personal results. Out of 540 possible students, the pool represented 271 students for the two pilots. One hundred forty-two students were enrolled in English B-2 Technical Industrial and 129 in Career B2 Health Occupations basic skills classes. English B-2 represented the short-term, one-year diploma, a lesser academically demanding program. Career B3 represented a one-year degree or two-year associate program, or a high academic demanding type program. There were 135 male, 135 female and 1 unknown student. The ethnic origin of the 271 students was 11 Asian, 143 Black, 64 Hispanic, 19 Native Americans, 23 White and 7 of unknown ethnic background. One hundred sixty-eight students were ages 18-30, 46 were 41 to 50 and 33 were 51 years of age or above. One hundred and ninety-three students had spent between 1 and 4 years in basic skills, with 41 between 5 and 9 years and 35 between 10 and 15 years.

The students were selected by three possible criteria: 1) A student self-selected with instructor's input, or a vocational goal after completing basic skills. Faculty advisers helped students determine their primary and secondary goals using the ABE Personal Education Plan (PEP). Once instructors and students agreed that these were goals that could be met during the program year, students were asked by instructors if they would like to enroll in a new type of class with a Technical-Industrial or Career-Health Occupational focus or they if they would prefer the traditional Basic Skills class; 2) ABE counselors used test scores and pre-test career

inventors offered by MATC's Student Service Department, and 3) Welfare (W-2) or Re-Employment counselors or advisors referred a student to the program. Possible students met with the program counselor and were pre-tested to determine if the academic requirements for enrollment in a Basic Skills Level 2 or 3 courses were completed or not.

Instrument Development

Descriptive data were used in answering the questions in Chapter One and the information that was gathered used faculty and student surveys. The surveys measured the physical counts and the frequencies of students' and faculty's attitudes, opinions, and behaviors to the research questions. Another important feature was determining if the research questions justified the new educational and instructional practices or whether changes in reality made little or no difference, compared to the traditional basic skills course curriculum. A comparison of the overall results of students involved in the integrated classes was compared to non-integrated participants, as a means of determining results of student success and improvement of faculty instruction. The data collected in this comparison grades completion of basic skills level 3 classes -transitioning rates of students, enrollment into postsecondary programs and lastly credits completed. The objective of this projective was to determine the need for integrated curriculum.

Data Collection and Procedure

Descriptive results using statistics of students' overall abilities were collected from all three groups. Data collected was used to determine if students passed, received an incomplete, dropped/withdrawn or failed the course. In addition to these results, the following were collected: 1) program codes, to determine if the student transitioned into a college program, 2) the student transcript documented completion of at least six credits in their program of choice

and, 3) overall grade point. The results were compared to the traditional basic skills group. The source of this data collection came from MATC Cosmo Computer System and results were compared to determine if: 1) significant progress had accrued, 2) students attempted to enroll in a program and lastly, 3) students made it into an occupational-vocational program of choice. The staff and faculty were interested in understanding the students' viewpoint on the development and use of the new curriculum and the use of team-teaching. Faculty members really wanted to know if students enjoyed the course and classroom structure and if they did, how would the academic results compare to positive or negative responses of the enrolled students. Therefore, faculty and staff created a survey sample, using a Likert scale, which determined the satisfaction factors of the educational experiences of these students.

The procedures for collecting the sample survey were done at the end of the fall 2001 semester. It was offered to all students enrolled in the integrated courses (a possible number of 550 students), this was true of the faculty, which included five instructors. This method was used because the results could then be compared between those of who dropped out or withdrew and those who completed the course of study. Participating faculty were trained in the spring of 2001 on how to administer the survey. Faculty had a detailed discussion with their students about the cover letter instructions and about the reasons for the survey. Students could choose not to participate. There were no personal identifiers in the survey and it was collected in a brown folder. After completion of the survey, the researcher collected the brown folders after class to ensure students' and faculty's privacy. After results were coded and defined in a database, all forms were destroyed. Grading and transiting of students data was collected and within a month, results were posted in the school computer system. Results were loaded into an SPSS database

where no personal/student identifiers are used. Hard copies were destroyed to ensure students privacy. A copy of the survey and cover letter is included in Appendix A.

Data Recording

The researcher used SPSS (8.0) in data collection and recording. The MATC computer system allowed the researcher to collect data in a text format using Microsoft Excel. Data then was up loaded into SPSS Window format. Each student received a number, randomly, making it impossible to determine a student's identity and at the same time ensuring that each record was counted only once for accuracy and consistency. MATC's Milwaukee data report, which is in text format using Microsoft Excel, was erased, making it impossible to determine which of the 300 students out of 6,000 were involved in the project sample. The specific data used in MATC's database was sex, race, age, courses enrolled, grades, admission code, program code and grades. As to the survey, demographic information and opinions of course content, likes and dislikes, were collected to determine overall outcomes. The Likert scale seemed to be the best objective means to gauge student and faculty opinions of the new integration project.

Statistical Analysis

The type of statistical analysis used in SPSS was frequencies, custom tables-basic tables, general tables to determine the level of significance. These tables clearly demonstrated attempted to gauge the amount of learning, which happened in the new integrated classroom versus the traditional basic skills classroom. This analysis helped explain some of the relationships and offered some implications as to the reason it did or did not work. It also verified if the current practices had any effect on retention, transiting and satisfaction of students and faculty participating in the courses.

Methodological Assumptions

The following assumptions were made from the data collected by MATC's database and survey:

1. No ill effects were caused to any of the participants involved in the project, samples or surveys.
2. Results helped faculty and the administration look at different domains of instruction, which could be integration to help students become active participants in their cognitive learning process.
3. The results were accurate and represent the current school environment.

Limitations of the Study

Possible limitations are listed here and include, but are not limited to the following:

1. Not all possible factors, such as the reasons why some actions occurred in the classroom were explored;
2. All possible relationships that led to types of behavioral changes or to no changes was possible;
3. Absolute predications that the type of desired behavior changes could be replicated as a scientific experiment were not made. The study dealt with persons who may have had many reasons for reacting to various types of stimulation offered in a classroom.
4. The researcher had no control of the possibility of a low turn-out on the last day of class when the survey was administrated;
5. Some faculty members would choose not to participate in the survey.

Chapter Four

Results and Discussion

Chapter Four provides outcomes of the analysis of the proposed arguments as outlined in Chapter Two of vocational content into the basic skills curriculum. It transitions into post-secondary programs and raises the level of student and faculty satisfaction in the delivery of course content it seems. The study uses a descriptive research model to determine if changes in the course curriculum improve current conditions or instructional practices. Out of a possible 550 students who were enrolled in the pilot project, 271 students were selected to participate in the study. Again, the selection was done randomly from the total possible population in the integration pilot project. The computer system selected the possible participants, or 49.3% of the total group. Table 3 Pilot Sample summarizes the pilot and final selection.

Table 3

Pilot sample in comparison to traditional basic skills class

Group Type	Possible #	Final Group	Percent
Pilot-Integration	550	271	49.3

The participants in the pilot integration were equally distributed by gender, with 135 males, 135 females and 1 unknown person. When looking at the pilot's two program categories, the statistics were consistent with the number of females and males that would enroll in an AEFL

traditional program. See Table 4, Gender of the Pilot Participants, for distribution make-up of sex for the pilot's two program categories.

Table 4

Gender of the pilot participants

Sex	Health	Technical Industrial	Cum. %
Men	43	92	49.8
Women	86	49	49.8
Unknown	0	1	.3
Total responses	135	136	100.0

A total of 168 students were age 18-30, 46 were age 31- 40, 24 were age 41-50 and 33 were age 51 and above. Here again, the students' proportion of youngest to oldest favors younger students in a ratio of 2 to 1. Table 5, Age Make-Up of Overall Pilot Participants in Integration Program, shows the distribution.

Table 5

Age make-up of overall pilot participants in integration program

<u>Age</u>	<u>Frequency</u>	<u>Percent</u>	<u>Cum %</u>
18-30 years old	168	62.0%	62.0%
31-40 years old	46	17.0%	79.0%
41-50 years old	24	8.9%	87.8%
51 or older	33	12.2%	100.0%
Total Responses	271	100.0%	100.0%

With respect to the ethnic background of the students who participated in the two integrated pilots, the highest representation of enrolled students were Black, at 52.8%, followed by Hispanic's with 25.1%. The total ethnic enrollment of the pilots was consistent with the traditional basic skills group. Table 6 Ethnicity of Participants in the Two Integration Pilots shows that Black students are 2 to 1, followed by Hispanic students who are 4 to 1, next to all other participants enrolled in the program.

Table 6

Ethnicity of participants in the two integration pilots

<u>Ethnicity</u>	<u>Frequency</u>	<u>Percent</u>	<u>Cum. %</u>
Asian	12	4.4	4.4
Black	143	52.8	57.2
Hispanic	68	25.1	82.3
Indian	19	7.0	89.3
White	13	4.8	94.1
Unknown	16	5.9	100.0
Total responses	271	100.0	100.0

Research Question 1: What are the problems associated with integrating vocational content with basic skills?

Crucial to any project's success is the quality of instruction, as well as the willingness of teaching faculty from other domains to work together, and for the administration to identify the program's weaknesses and strengths then to act upon them with both celerity and good sense. A faculty opinion survey was used to identify areas where teachers believed there were problems with integrating vocational content into basic skills. The overall objective of these activities were to collect actual information that provided or described current phenomena as the process of integration (Isaac & Michael, 1997). This information was collected in two ways: 1) by observation and 2) in a survey format. Responses were collected and tabulated. The stakeholders

were provided the information as a means to further collect questions and ideas to improve the data collection process.

Getting faculty from the vocational areas together at the same time became the first daunting assignment for the instructional supervisors. It took three-weeks of serious planning to get both groups together in one room. A questionnaire was developed by the basic skills faculty to determine why many basic skills students failed in their first year of post-secondary, vocational programming. This survey was given to the post-secondary, vocational instructors to fill-out three weeks before the first instructional group meeting. Results were tabulated and given to basic skills teachers three days before the instructors met with the vocational faculty. The results created two types of responses among the five basic skills instructors. 1) Anger, resistance and “what do those teachers know,” and 2) “how could this be?” One female instructor noted: “How could students I taught not be prepared for this type of course content in one of their courses?” “Have we not taught these competencies to these students for the last two years?” Two days later, the second question became the major topic of discussion. “We need to find out why the instructors from the occupational side believe our students don’t have those skills as well as how do our students can demonstrate that they have mastered these skills,” noted one basic skills instructor. The questions that were asked can be found in Appendix B.

Since only 14 vocational teachers were involved in the project, the top five problems are listed in Table 7. The top five answers that received the most number 3 responses to the questions are noted.

Table 7

Results of occupational vocational faculty survey; top five problems

Problems	Frequency
#1 Are students capable of reading-classroom assignments?	8
#2 Are students capable of understanding-reading the assignments?	8
#4 Are students able to problem solve and-find the desired answers?	7
#11 Do students demonstrate cognitive skills-needed?	6
#14 What type of Psychomotor Skills do your-students need to complete your class? (Adaptation)	6
Total Responses	35

The basic skills instructors noted that there were other problems related to the program integration. In their survey, the top five answers are recorded in Table 8.

Table 8

Survey responses of basic skills faculty to the major problems in integration

Top Problems	Frequency	Percent
Working with Program Faculty	2	40.0
Developing the Curriculum	2	40.0
Team Teaching	1	20.0
Evaluating Outcomes	0	.0
Supplying Supportive Services	0	.0
Total Responses	5	100.0

The responses indicated that the instructors sought to work with the occupational faculty in developing the course content as one of the major hurdles in integrating the curriculum. Also worth noting, an instructor thought team-teaching was a critical stumbling block in the integration process. Another comment worth noting in the comment section of the survey was, “Getting a general consensus as to the aim, goal, and objectives for the occupational and vocational faculty to match the basic skills was one to the most challenging event that has happened in my many years teaching.” Another faculty person wrote, “You just never knew where the conversation with the vocational faculty would go. It was an eye-opening experience, in many cases, every point they made as to why basic skills students don’t succeed in their first year of post-secondary education made me begin to think.” Another faculty person noted, “Why

haven't we worked together before? They [vocational faculty] did not know what I was teaching anymore than I knew what they were teaching. If we are going to help them [basic skills students] move into programs, I need to know what they [vocational teachers] are teaching to understand why student are failing.”

It took two months of dialog for the faculty in basic skills and vocational faculty to develop the needed skills to begin to build a strong relationship that lead to the development of the new integrated curriculum. Critical to moving the project ahead was picking faculty members who were willing to work on this project. If faculty members not willing to participate in this project had been selected, it would have taken more time and sizable sums of money to pull this pilot project together.

Research Question 2: How effective was the integrated vocational content in basic skills? A. Did students learn more?

Judging a project's effectiveness by citing enrollment numbers represented a part of the evidence. Retention, course completion and pass/fail rates provided a clearer indication of program achievement. Of the 271 basic skills students participating in the two pilots projects, 125 received passing grades (46.1%). When compared with the overall group, the passing Science percentage was 28.3% and for English 32.6% (MATC Internal Report, 2001). Table 9 documents overall results for the two pilots offered in the Pre-College Division for fall 1999 to summer 2001.

Table 9

Final grades for students enrolled in both integration projects 1999-2001

Grading System	Frequency	Percent
Passed	125	46.1
Incomplete	96	35.4
Failed	3	1.1
Drop/Withdraw	47	17.3
Total responses	271	100.0

Table 9 represents a significant advance as these courses, unlike those in Pre-College Division's regular offerings, contained content-based instruction in which learning progress is measured by competency-based outcomes rather than by completing work in a textbook. Ninety-six students received an incomplete, that is, while demonstrating some degree of progress or mastering of course content, students needed one more semester to complete the total course competencies to be able to move into an academic post-secondary program. This represents another major achievement. Only three students received a failing grade, and 47 students dropped out or withdrew from the course.

Technical and industrial-basic skills offered eight English B2 Sections during the project's 2-year duration. Statistics of exiting students from each English B2 Technical and Industrial section as well as for 2 sections of Technical Careers 728 are provided in Table 10.

Table 10

Grading results for T&I English B2 and technical career 728 for 1999-2000

Grades	Frequency	Percent
Passed	76	53.5
Incomplete	49	34.5
Failed	0	.0
Dropped	17	12.0
Total responses	142	100.0

Another way to visualize these outcomes was by analyzing specific pilot programs and breaking the outcomes down even further by course and section number. For example, in the vocational pre-basic skills project, 142 students participated in 2 courses, one career English B2 offered in 2 sections and the second, English B2, offered 8 sections. Of all 10 courses, 76 of 142 students passed; 49 of 142 received incompletes, 0 of 142 failed and 17 of 142, either dropped or withdrew. Table 11 documents the two years on individual results of students who enrolled in the vocational basic skills integrated course in a visual presentation.

Table 11

Final grade results for technical and industrial-basic skills pilot project

Grades	Frequency	Percent
Passed	76	53.5
Incomplete	49	34.5
Failed	0	0.0
Dropped/Withdrew	17	12.0
Total responses	142	100.0

The results were very impressive when compared to the traditional basic skills program's rate noted previously in Table 9. Overall, the retention rate was 81.2% compared to the traditional program of 47%. These courses are still being offered and students who receive incompletes are still enrolled and are nearing completion of program competencies.

Table 12 shows results for students who completed the basic skills Health Occupational integrated program. The results covered a two-year period and many of the students who were in the incomplete category are still working toward meeting their final competencies required before they can enroll in a post-secondary program. Overall, the HO program had a retention rate of 74.4%.

Table 12

Final grade results for health occupation-basic skills program

Grades	Frequency	Percent
Passed	49	38.0
Incomplete	47	36.4
Failed	3	2.3
Dropped/Withdrew	30	23.3
Total responses	129	100.0

More than one-third of the students taking Health Occupations pilot-project courses completed and passed their course, or 49 of 129 students passed. Forty-seven of 129 received incompletes, 3 failed and were referred back to basic skills and 30 dropped or withdrew from the class.

B. Did the instructors like this revised curriculum?

The faculty responses were all positive. For the basic skills instructors, (5) total, 100% agreed the results showed improved learning; retention and transitioning into occupational programs were impressive. What really helped instructors understand how good a job they did with the revised curriculum, was the proven results demonstrated by their students' survey. All of the instructors (vocational and basic skills) agreed, student responses to the pilot integration represent an important element in determining overall success.

Based on class evaluations, student's comments about the project set forth two distinct themes: self-improvement and increasing self-assurance about doing the required work. For example, one student wrote, "I think my writing skills is where I made the most progress." This same student expressed pride in his/her ability to realistically assess already mastered skills and an equal facility in gauging work yet needed to complete the course. "This class gave me a guide to see where my skills are..." There is a conviction that the formidable demands of college-level work seem achievable, the student looks forward to even more intellectually challenging tasks, remarking, "I will be taking English 3 and Intermediate Algebra." Another, when asked, "In what other ways has taking this class changed you?" replied, "That I know I can do anything I want to." Additionally, this student, reflecting on the rigor and self-discipline good instructors engender, vowed "to be in here [MATC] every day, and keeping up with my assignments." Many expressed pleasure in improving their writing proficiency. One, of many responses, proudly declared, "I made greater progress in my writing this quarter than in the last five years," though confessing that improvement was needed in many other areas. Another student (former ESL student) took pleasure in English language comprehension, remarking, "I now understand clearly when people are talking to me"; –no small advance as anyone who teaches English can testify about those who learn another language. The same student made clear priorities for future studies: "My plan for next semester is to take a class on English conversation, vocabulary and writing." A further student expressed pride in a recognizable measure of success, announcing: "I have achieved the General Education Diploma (GED) for which I had thought I would have never accomplished." Continuing, one student noted that she had improved her writing skills, which is now one of her favorite subjects and hobby. Again, it seems clear that this

student has acquired both self-discipline and self-assurance by the following observation: “I plan to focus and really study hard for my first semester in college.” And finally, another student took pride in the writing success acquired. The student could now understand grammar, sentence structure [types of phrases]...like prepositional phrases, and independent clauses, helping verbs, subjects and objects. While this represents only a small sample of responses, it seemed evident to the vast majority of instructors and students, that the new integrated program was something rather special happening to them—learning, understanding and achieving with a greater degree of success and personal satisfaction than they had previously experienced. Table 13 provides outcomes as to student satisfaction on the new integrated courses offered.

Table 13

Survey of student satisfaction on new integrated courses

Integration of New Basic Skills	Yes	Maybe	No	Unsure	Totals
1. Did you enjoy the New Basic-Skills courses more than the-old traditional courses?	234	13	11	13	271
2. Do you believe the new course-work helped you move into-occupational program more-quickly?	188	17	16	84	271
3. Do you believe this course work-helped you prepare for your first-semester classes in college?	193	12	6	60	271

C. Did the hours of instruction increase for these students in comparison to those who were enrolled in traditional basic skills classes?

For faculty to increase their hours of classroom instruction, students needed a reason to want to come to class, stay in class and complete the class work. Factors that determined student success fell into two categories, 1) students academically moved up .5 grade levels or more, 2) students remained in classes for longer periods of time because the class was interesting, challenging and lead to an attainable goal. When looking at students' learning, 15.79% of the traditional Basic Skills students moved up one grade level or more over a four-year period from 1997-2001. The highest-grade level improvement for year 1992-1996 was 12.78% and the lowest 3.52%. The overall results are documented in Table 14.

Table 14

Student learning percentages for traditional basic skills model for 1992-97 year & number of grade-level improvement

Program Year	English-moved-up	Total	% of Grade Level
	<u>Grade Level</u>	<u>Enrolled</u>	<u>Improvement</u>
1992 -1993	132	3741	03.52
1993 -1994	367	3624	10.12
1994 -1995	193	3465	05.56
1995 -1996	81	3410	05.30
1996 -1997	441	3450	12.78

D. The overall retention rate compared to the traditional basic skills class, better or worse?

The overall retention rates for the period of 1999-2001 were as high as 41% and as low as 18.7%. For the years 1991-1995, the highest retention rate was 21.8%. This means that 70% or more traditional basic skills students completed a minimum of 33 hours of instruction per 16 weeks (maximum hours per 16 weeks is 96) or 66 hours per year (maximum hours per year 192 hours). As for ABE students in the integrated pilot, 74.4% of the Health Occupation students were completing 84 hours per 16 weeks and for the vocational basic skills students, and 88.8% were completing 90 hours of instruction per semester. More than a 35% increase per semester for students enrolled in the non-traditional program. Another interesting point worth noting is the dropout rates for the traditional basic skills program. Last year, the rates were 47%, whereas the dropout rates for the integrated non-traditional program was 12% for the Technical Industrial basic skills students and 23.3% for the Health Occupational basic skills project. Table 15 documents the retention rates for the traditional basic skill program for the years of 1991 to 1995.

Table 15

Overall retention rate for traditional basic skills program from 1991-1995

Program Year	Number of Student Retain	Total Enrollment	Percentage
1991-92	639	3269	19.5
1992-93	816	3741	21.8
1993-94	766	3624	21.1
1994-95	653	3465	18.8

E. Did more students successfully transition into short-term vocational programs in comparison to traditional basic skills students?

According to the WTCS reports for 2000-2001, 12.8% of all adult basic education students transition into vocational or post-secondary program during a typical program year. The integrated group's percentage was significantly higher than the state average. Table 16 documents the overall results for both pilot projects.

G. How many students complete their one/two-year vocational programs? Was it more than the traditional level 3 basic skills students?

Another important point worth noting in Table 16 is that 4.9% of the total vocational students who completed the basic skills program received a college diploma and moved into the workforce.

Table 16

Pre-T&I basic skills students who completed a post-secondary program

Completed College	Frequency	Percent	Cum. Percent
Yes	7	4.9	4.9
No	135	96.1	100.0
Total	142	100.0	100.0

There are no graduates in the Health Occupational program because the majority of these programs are two years in length. According to the MATC Research Department, since 2001, only 1% of minorities enrolled in all programs at MATC graduate each year. In the first year

alone, 4.8% of the integrated students completed a short-term one-year diploma course. All these students were Hispanic or African American, and this represents an increase of 3.8% compared to the overall minority graduation rate.

3. Were students satisfied when they were exposed to the integrated vocational content with basic skills?

Student response to the pilot integration represents an important element in determining overall success. Based on class evaluations, students' comments about the project set forth two distinct themes: self-improvement and increasing self-assurance about doing the required work. As noted in Section B page 46, a very good sample of student opinions as to their personal satisfaction, self-improvement and how the courses led to increased self-assurance. The results of the student survey show that, the vast majority of students in the program felt that something rather special happened to them—learning, understanding and achieving--with a greater degree of success and personal satisfaction than they had previously experienced. Table 17 gives the overall viewpoint of the student survey.

Table 17

Survey of student satisfaction of new integration courses

Integration Questions	Yes	Maybe	No	Unsure	Total
1. Did you enjoy the new Basic Skills-course more than the old traditional-course?	234	13	11	13	271
2. Do you believe this new course-work helped you move into occupational-programs more quickly?	188	17	16	84	271
3. Do you believe this course work-helped you prepare for you colleges-course-work?	193	12	6	60	271

As related to question 1 in the student survey, 86.3% of the students enjoyed the new integration. This is a signification improvement compared to the traditional student survey of courses taken. Out of the 271 total responses, only 17 or 16.7% percent enjoyed the old format. This is a 20.2% increase. Question 2 of the integrated survey, shows that 69.3% believed that their success in moving into an occupational-vocational program was directly related to the new course content, whereas, 40.9% percent believed this that traditional basic skills courses directly related to their postsecondary movement. This is a 28.4% increase. Even more important to the student responses was the results in question 3. Do you believe this course work helped you prepare for your college course-work? One hundred, ninety-three of the 271 students believe what they were taught directly prepared them for being a freshman in post-secondary school,

71.2% of all respondents. Whereas, 48.3% of all responded of the traditional basic skills survey believed that their class-work prepared them for their freshman year in post-secondary school.

Chapter Five

Summary, Conclusion, and Recommendations

Summary

The purpose of this study was to analyze the traditional and integrated basic skills curriculum at MATC-Milwaukee and its effect on student retention.

Currently the pre-college division at MATC is using the curriculum developed by its own teachers 15 to 20 years ago and many of the instructors have not adopted the State Board's revised curriculum. If the revised curriculum were adopted, it may force the division to move away from book-based to a competency-based curriculum. Another critical problem has been the fact that employment skills, leading to short-term training or job placement, are not incorporated in its current curriculum. Lastly, the course content may not be uniform and does not connect to higher skill sets in the technical, vocational or occupational divisions, therefore students are not being prepared for the next level of academics, nor entry-level employment.

When looking at the past results of the ABE Program and the lack of change, the end results can easily be documented. Match's Community Based Organizations (CBOs) and Adult Basic Education (ABE) program retention rates are no better and certainly no worse than those anywhere else. MATC's retention figures are deplorable as documented from the school's data collection system.

Data from the ABE and CBO program at MATC strongly suggest that retention and success should be a major concern. It seems reasonable that any adoption of alternate strategies to increase retention is warranted.

The purpose of this study was to evaluate the effect of integrating technical and vocational content into the basic skills curriculum. Furthermore, the study showed that integrated curriculum improves student satisfaction and thereby leads to improved retention, and transitioning rates into short-term technical and vocational programs.

The following questions assisted in diagnosing the factors that led to improving the curriculum, as well as student and instructor satisfaction. It also determined that the changes strengthened the program's retention rate and lowering the student attrition rate.

1. What are the problems associated with integrating vocational content with basic skills?
2. How effective was the integrated vocational content in basic skills?
 - A. Did students learning improve?
 - B. Did the instructors like teaching this revised curriculum?
 - C. Did the hours of instruction increase for these students in comparison to those who were enrolled in traditional Basic Skills classes?
 - D. Was the overall retention rate compared to the traditional basic skills class, better or worse?
 - E. Did more students successfully transition into short-term vocational programs in comparison to traditional basic skills students?
 - F. How successful were these basic skills students in their first year vocational classes? Were they better prepared than traditional basic skills students?
 - G. How many students completed their one-year vocational programs was it more than the tradition level 3 basic skills students?

3. Were students satisfied when they were exposed to the to the integrated vocational content with basic skills?

The Descriptive Research methodology was used in this study. The study tried to describe systematically the facts and characteristics of a particular area in the basic skills department to determine of changes if the course curriculum improved conditions or instructional practices.

The design methods and procedures the study employed were, a record search sample to determine achievement and retention percentages of subjects who were enrolled in the new curriculum content courses, verses the traditional basic skills courses already documented. A further record search sample compared transition rates of entry into post-secondary programs and completion of student's first year of college. A survey sample, using a Likert Scale, was used to determine the students' satisfaction with educational experience. The researcher hypothesized that academic achievement, retention, and transiting rates would differ significantly from those students who were in the traditional basic skills courses. Students' would have more satisfaction in integrated courses versus the traditional basic skills courses.

Conclusion

Each research question will be restated, answered and a conclusion provided.

Research Question 1: What are the problems associated with integrating technical and vocational content with Basic Skills?

As reported in Chapter Four, vocational instructors provide results to basic skills instructors that opened their eyes and forced them to consider that what they have thought was good enough was in fact keeping students from being successful in post-secondary school. The

results were: 1) entering basic skills students were not likely to be successful in their post-secondary courses because they lacked higher levels of technical word definition and subject matter reading. This fact alone made it impossible for most basic skills students to understand their reading assignments, solve subject related problems, and demonstrate cognitive and psychomotor skills in operating machinery.

Research Question 2: How effective was the integrated vocational content in Basic Skills?

A. Did students learn more?

Forty-six percent (125) of 271 students passed their classes. Additionally, 35.4% of the students received an incomplete, which meant they made major progress to meeting the programs objectives, but needed another quarter to complete all the required competencies to be able to move into a post-secondary program. Only 1.1% of the total enrollment failed any courses offered in both pilot projects, and only 17.3% dropped from any of the classes. When compared to the traditional basic skills program, only 28.3% of any of the students passed and or were given incompletes.

B. Did the instructors like this revised curriculum?

One hundred percent of the faculty survey agreed that the new curriculum improved learning, retention, and transitioning into vocational programs.

C. Did the hours of instruction increase for these students in comparison to those who were enrolled in traditional basic skills classes?

According to records collected on traditional basic skills students, 70% of all basic skills students were completing 33 hours per 16 weeks of instruction. Over a year, the average for these students were 66 hours per year (maximum hours per year was 192 hours). As for the new

classes, 74.4% of the students in the Health Occupation integrated pilot were completing 84 hours per 16 weeks and 88.8% of the vocational integrated pilot were completing 90 hours of instruction per 16 weeks semester.

- D. What was the overall retention rate compared to the traditional basic skills class, better or worse?

The retention rate for the two integrated pilots were 81.5% percent for the last two years as compared to the traditional basic skills model, which only had a 47% retention rate. Pilot integration represents a 34.5% increase retention rate.

- E. Did more students successfully transition into short-term vocational programs in comparison to traditional basic skills students?

According to the WTCS reports for 2000-2001, 12.8% of all Basic Skills education students transitioned into an occupational program during a typical year. As for the integrated pilots, 54.9% of the enrolled vocational students were admitted into a post-secondary program and for the Health Occupational students, 35.7% were admitted into a into a vocational or post-secondary program.

- F. How many students complete their one/two-year vocational programs?

In the last two years, 4.9% of the total integrated students enrolled have completed their post-secondary, vocational education.

Research Question 3: Were students satisfied when they were exposed to the integrated vocational content with basic skills?

When reviewing the student surveys, the results reported in question 1 was: 86.3% or 234 students out of 271 enjoyed the new integration course more than the traditional basic skills

classes. As for question 2, 69.37% or 188 students out of 271 believed that the new integrated classes help them move into occupational-vocational or postsecondary programs faster than the traditional basic skills classes. And the last question, number 3, reported that 71.2% or 193 students out of 271 believed that the new integrated class work prepared them for their first semester.

One might well ask—is the integration of academic and vocational education likely to benefit students, given the need for specialization at the post-secondary level and the substantial job-specific requirements in certain fields? The most convincing response to this question is the one raised by employers about their workers; “It is not that workers’ job-specific skills are deficient but that they lack more fundamental competencies, including the ability to read and communicate at appropriate levels and various higher-order capacities taught with a mix of academic and occupational content, appropriately integrated so that students can see how general abilities are necessary in specific occupational settings (Grubb, 1997). The most powerful rationale for integrating academic and vocational education, then, is the reason that first motivated this study: students will be better-prepared for occupations over the long run, especially in a world of changing requirements and escalating skill demands, if they are broadly, rather than narrowly, educated. The faculty survey clearly demonstrated, that basic skills curriculum only does not help large numbers of students’ transition into vocational or post-secondary programs, and prepared them to be successful in their freshman year of college.

Another benefit to students’ integration stresses the non-vocational purpose of education. Given that these integrated courses lead to improved teaching practices and student satisfaction, and generate more active strategies, it seems evident that such approaches are consistent with the

current literature review that learning in context is superior method, compared to the conventional practices of teaching, reading, writing, math or science as abstract bodies of skills and facts disconnected from what they study and its applications in real-world contexts. Clearly, the study seems to demonstrate that the most effective way to teach skills, keep students enrolled and transition them into postsecondary programs and to teach subject matter integrated and in context.

Recommendations

Recommendations Related to this Study

Assessment of Pre-College's 2 pilots projects suggests that it has achieved success initially to warrant expanding, by offering more courses in collaboration with vocational and health occupations. In fact "flesh fields and pastures new" should also be contemplated—planning, new offerings with other college programs and divisions.

Additionally, the solid results in student academic progress might well be imported back to classes inside Pre-College Education Division and eventually expanded to include ESL courses as well, once the merger between High School Relations and Pre-College has been completed and combined and totally reorganized.

Another useful recommendation for the next 2 to 3 years is to convert 25% of all basic skills level 2 and 3 course offerings using an integrated curriculum. An additional 25% could be converted to integrated curricula the following year in 2004.

Some portions of the concerted 2003 Basic Skills courses could be reconfigured into tandem pairings with classes from vocational or Health Occupations, or both collaboration with them so far fruitful. A further number of 2004 basic skills level 2 and 3 offerings might be

organized into cluster groupings of 2 or more vocational or Health Occupations offerings. Also some form of writing-across-the-curriculum (WAC) might be entertained during 2004, by creating a special writing (or math) adjunct and trying it to a pre-college course outside of Pre-College. For example, a Health Occupations class on *Introduction to Training Medical Assistants* might contain Health Occupations students requiring remediation in writing (or math) fundamentals and basic skills students interested in learning about medical assistants. In addition, both Health Occupations and basic skills students would also enroll in the writing (or math) adjunct attached to the “parent” Health Occupations course. Both “parent” and adjunct would be cross-listed, each meeting separately and each having its own instructor. Here, the benefits of collaboration would accrue to both classes—remedial help in writing (or math) for the Health Occupation students and an introduction to a health-field occupation for students from basic skills. This form of tandem pairing could avoid problems of balancing content emphasis and presentation so common if the courses were team-taught.

Lastly, in assessing the Pre-College’s pilot projects of 1998-2001, one problem arose requiring remedy. The Assistant Dean of Pre-College discovered this year that 25 basic skills pilot students were eligible for special support services authorized by Carl Perkins III legislation under the VEA provisions of the act. Unfortunately, Academic Affairs only managed to identify these students recently, and 12 of the 25 belonged to cohort 1 (1998-1999) and 13 to cohort 2 (1999-2000); both cohorts lost between one and two years benefits because the district failed to notify them of their eligibility through specialists or counselors. To avoid such miscommunication in the future, it is recommended that Academic Affairs prepare VEA-eligible

student lists in a timely manner and forward them to the specialist and counselors so they can notify the students the first day of admissions or during admission test.

Recommendations for Further Study

While many traditional basic skills students enroll at the beginning of each semester, their numbers decline well before the class ends. It is recommended that the college conduct a study to determine exactly why students dropout. Student focus groups should be held each semester with students who depart to determine the reasons for students' attrition and use this information to address specific issues.

References

- American Association of Community and Junior Colleges. (1984). *Putting American back to work: The Kellogg leadership initiative: A report and guidebook*. Washington, DC:
- Berryman, S., & Bailey, T. (1992). *The double helix of education and the economy*. New York: Columbia University, Teachers College, Institute on Education and the Economy.
- Bailey, T. (1997). *Integrating academic and industry skills standards*. Berkeley: National Center for Research in Vocational Education.
- Badway, N., & Grubb, W. N. (1997). *A sourcebook for reshaping the community college: Curriculum integration and the multiple domains of career preparation. (Vol.1)*. Framework and Examples. Berkeley: National Center for Research in Vocational Education.
- Badway, N., & Grubb, W. N. (1997). *A sourcebook for reshaping the community college: Curriculum integration and the multiple domains of career preparation. (Vol.2)*. Samples of Career Preparation Innovation. Berkeley: National Center for Research in Vocational Education.
- Boesel, D. (1994). Integration of academic and vocational curricula. In *Programs improvement: Education reform. Vol. III, Final report to Congress, National Assessment of Vocational Education*. Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.
- Commission on the Skills of the American Workforce. (1990). *America's choice: high skills or low wages!* (pp. 40-70). Rochester, NY: National Center on Education and the Economy.
- Eishen, T. E. (1991). Writing to learn: *A vocational teacher's perspective*. *Texas Junior College Teachers Association Messenger*, 1, 6-8.

Finch, C. R., Frantz, N. R., Mooney, M., & Aneke, N. O. (1997). *Designing the thematic curriculum: An all aspects approach*. Berkeley: National Center for Research in Vocational Education.

Gabelnick, F., MacGregor, J., Matthews, R., & Smith, B. (1990). Learning communities: Creating connections among students, faculty, and disciplines: *New Directions for Teaching and Learning*, No.41. San Francisco, CA: Jossey-Bass.

Grubb, W. N. (1995). *The returns to education and training in the sub-baccalaureate labor market: Evidence from the survey of income and program participation 1984-1999*. Berkeley: National Center for Research in Vocational Education.

Grubb, W. N. (1997). *Working in the middle: Strengthening education and training for mid-skilled labor force*. (pp. 143-153, 162). San Francisco, CA: Jossey-Bass.

Grubb, W. N., Dickinson, T., Giordano, L., & Kaplan, G. (1992). *Betwixt and between: Education, skills and employment in sub-baccalaureate labor market*. Berkeley: National Center for Research in Vocational Education.

Grubb, W. N., & Kalman, J., Castellano, M., Brown, C., & Bradby, D. (1991). *Reading, writing, and arithmetic one more time: The role of remediation in vocational education and job training programs*. Berkeley: National Center for Research in Vocational Education.

Grubb, W. N., & Kraskouskas, E. (1992). *A time to every purpose: Integrating academic and occupational education in community colleges and technical institutes*. Berkeley: University of California at Berkeley, National Center for Research in Vocational Education.

Hersh, R. (1983). Are Americans turning out technopesants? *Instructor*, 92 (9), 27-29.

Isaac, S., & Michael, W. (1997). *Handbook in research and evaluation: For education and the behavioral sciences*. San Diego, CA: Educational and Industrial Testing Services.

MATC's College Transition Division. *Annual Fact Book 1999-2000*.

MATC Local 212 Teacher Union-Vice President. *Teachers Orientation Day*, January, 2000.

MATC Basic Skills *Survey Report*. (2000).

MATC SMIS, & COMOS Computer System Data Report. 1999.

Matthews R. (1994). *Notes from the field: Reflections on collaborative learning at LaGuardia*. Long Island City, NY: LaGuardia Community College, Office of the Associate Dean for Academic Affairs.

Perin, D., & Boehlen, S. (1999). *Integrating academic and career-related education: A professional development guide for community college faculty*. (p. 145). Berkeley: National Center for Research in Vocational Education.

Quigley, A. B., (1997). *Rethinking literacy education: The critical need for practice-based changes*. (pp. 163-190). San Francisco, CA: Jossey-Bass.

Roegge, C. A., & Ferej, A. (1995). *But I've been doing this for years: Informal integration of vocational and academic education pilot test report*. Berkeley: National Center for Research in Vocational Education.

Schmidt, J. B., Finch, C. R., Faulker, S., & Kandis, J. (1995). *Preparing teachers to successfully integrate vocational and academic education: A case study approach*. Virginia Polytechnic Institute & State University. Berkeley: National Center for Research in Vocational Education.

Secretary's Commission on Achieving Necessary Skills (SCANS). (1991). *What work requires of schools: A SCANS report for America 2000*. (p. 21). Washington, DC: U.S.

Department of Labor.

Stout, B. R., & Magnotto, J. N. (1988). Writing across the curriculum at community college. In S. McLeod (ED.), *Strengthening programs for writing across the curriculum: New Directions in Colleges*, no. 36. San Francisco: Jossey-Bass

Stout, B. R., & Magnotto, J. N. (1991). Building on realities: WAC programs at community college. In L. Stanley & J. Ambron (Eds.), *Writing across the curriculum in community colleges. New Directions in Community Colleges*, no 73. San Francisco: Jossey-Bass.

Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. University of Chicago Press.

Watkins, B. T. (1990, July 18). More and more professors in many academic disciplines routinely require students to do extensive writing. *The Chronicle of Higher Education*, pp. 13-16.

Wisconsin Technical College Board. Laws of 1911. [on-line]. Available:

<http://www.board.tec.wi.us/atagInc.htm>.

Yager, R. E. (1990). The science / technology / society movement in the United States: Its origin, evolution, and rationale. *Social Education*, 54 (4), 198-201.

Appendix A

MATC – Basic Skills Education Student Survey



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MATC - Basic Skills Education Student Survey

Indicators of Program Quality in Adult Basic Education

70

Please take a few minutes to complete this survey about the Basic Skills program. Your responses are critical for improving curriculum and program design. Your responses will be kept confidential. Thank you

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Please fill-in the correct response for each question below.

Student ID Number

- | | Yes | Maybe | No | Unsure |
|--|----------------------------|----------------------------|----------------------------|----------------------------|
| 1. Did you enjoy the New Basic Skills course more than the old traditional course? | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| 2. Do you believe the new course work helped you move into occupational program more quickly? | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |
| 3. Do you believe this course work helped you prepare for you first semester classes in college? | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 |

Comment Section: Please write about any personal success(es) provided by interactions with the instructors, curriculum, or course work.

Please place completed form in brown envelope and seal. Then return to the instructor. Thank you for completing this survey.

Appendix B

MATC Basic Skills Occupation-Vocational Faculty Survey



Basic Skills/Vocation-Occupational Faculty Survey

Please fill-in one correct response for the question below:

What do you consider as the most difficult problem you faced in the new pilot integration Project?

- 1. Working with program faculty -----
- 2. Developing the curriculum -----
- 3. Team Teaching -----
- 4. Evaluating Outcomes -----
- 5. Supplying Support Services to Students -----
- 6. Other - Comments: _____

Please return to M222 by the following
Tuesday. Thank You



MATC Basic Skills Occupation-Vocational Faculty Survey

Fill-in the Correct Response for each question. (1. =Yes 2. =On occasions 3. =No)

- | | | | |
|--|---|---|---|
| 1. Are students capable for reading classroom assignments? | 1 | 2 | 3 |
| 2. Are students capable of understanding reading assignments? | 1 | 2 | 3 |
| 3. Are students capable of doing work assignments? | 1 | 2 | 3 |
| 4. Are students able to problem solve and find desired answers? | 1 | 2 | 3 |
| 5. Are students capable of demonstrating mastery of subject matter? | 1 | 2 | 3 |
| 6. Are students able to work together in team assignments? | 1 | 2 | 3 |
| 7. Are students good test takers? | 1 | 2 | 3 |
| 8. Are Students prepared for class? | 1 | 2 | 3 |
| 9. Are students good note takers? | 1 | 2 | 3 |
| 10. Do students demonstrate the ability to learn? | 1 | 2 | 3 |
| 11. Do students demonstrate the necessary cognitive skills? | 1 | 2 | 3 |
| 12. Do students demonstrate psychomotor skills needed? | 1 | 2 | 3 |
| 13. Do students demonstrate the affective domain skills needed? | 1 | 2 | 3 |
| 14. What type of psychomotor skills do your students need to complete your class? | 1 | 2 | 3 |
| <input type="checkbox"/> 1 Perception <input type="checkbox"/> 2 Imitation <input type="checkbox"/> 3 Practice <input type="checkbox"/> 4 Adaptation | | | |
| 15. What type of affective domains skills do your students need to complete your class? | 1 | 2 | 3 |
| <input type="checkbox"/> 1 Receiving <input type="checkbox"/> 2 Responding <input type="checkbox"/> 3 Valuing <input type="checkbox"/> 4 Organization <input type="checkbox"/> 5 Internalization | | | |
| 16. What type of cognitive skills do your students need to complete your class? | 1 | 2 | 3 |
| <input type="checkbox"/> 1 Thinking Domain <input type="checkbox"/> 2 Mental Domain <input type="checkbox"/> 3 Knowledge Domain | | | |

Please Return to M222 College Transition Office
