BRIDGING THE SKILLS GAP: EMPLOYERS' NEEDS vs VOCATIONAL EDUCATION STUDENTS' PERCEIVED CAPABILITIES

THESIS

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Barbara Ann Riley

State University of New York

College at Brockport

Brockport, New York

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SUBMITTED BY:

Barbara Ann Riley

APPROVED BY:

[illegible] 8/17/92

Thesis Advisor Date

Arthur E. Smith 8/24/92

Second Faculty Reader Date

Harold G. Emmerson 8/26/92

Chairman, Graduate Policies Committee Date

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ABSTRACT

The purpose of this study was to determine the perceived worker qualities of vocational education students who have participated in a job training program for at least one year. In addition, this study also endeavored to reveal what these students rated as the five most important worker qualities needed for their future employment.

Sixty high school students enrolled in the WE-MO-CO Vocational Education and Technological Center participated in this study. This job training program enrolls students from 11 public high schools and two private educational institutions in western Orleans/Monroe County, New York.

A Survey of Worker Qualities was administered to the students by their instructors prior to the beginning of their job training sessions. Fifty four usuable surveys were examined. Results indicated that the majority of these students felt they had to offer a prospective employer personal management behaviors and positive work-related attitudes as opposed to academic abilities. Students' ratings also indicated that the above worker qualities were most important to their future employment and did not rate academic abilities as important qualities for their future employment.

CHAPTER I

STATEMENT OF THE PROBLEM

PURPOSE:

The purpose of this study was to determine the perceived worker qualities of vocational education students who have participated in a job training program for at least one year. In addition, this study was designed to discover what these young people rated as the five most important qualities needed for their future employment.

QUESTIONS:

The following questions were investigated:

1. What employability skills, behaviors and attitudes do vocational education students feel they have to offer a prospective employer?

2. Which employability skills, behaviors and attitudes do vocational education students rate as most important for their future employment?

NEED FOR STUDY:

One of the major goals of our educational system is to graduate young people with the knowledge and skills needed to become responsible, independent and productive members of our society. Many non-college bound high school students expect to receive gainful employment upon graduation. These students depend on and trust that their high school education has given them the marketable skills necessary to find full-time employment. Businesses, on the other hand, expect that their new employees will possess certain attitudes, behaviors and skills that meet their labor demands and help to create a competitive, quality workforce (Cantor, 1990; Crosby & Petrosko, 1990; Feller, 1991; Graham, Vitale & Schenck, 1991; Keeley, 1990).

Research shows that businesses are no longer content with employees who have job specific knowledge alone. They seek workers who are able to solve problems, can relate to others and are able to adapt to changing situations in the business world (Building a Quality Workforce (BQW), 1988; Carnevale & Johnston, 1989; Graham, et al, 1991).

The question that arises is whether our public school system is addressing the needs of the business world in the general classroom and vocational education programs. An important dimension that appears to be lacking in the literature on vocational education students work preparation is their perceptions of their own worker qualities and what they feel are the most important qualities for their future employment.

In a recent study conducted by Crosby and Petrosko (1990) in which they correlated teacher ratings of their students' work behaviors with student perceptions of their own worker traits, weak correlations were discovered. Their findings suggest that on certain traits students viewed themselves much differently than others viewed them. The researchers concluded that accurate student self-perceptions are vitally important for competencies that are high priorities to employers who are hiring new employees.

Therefore, it is important to identify those worker qualities vocational education students feel they possess as they begin to plan for their future employment. This information can then be used in determining whether the current curriculum in vocational education training matches the needs of businesses and will help students become more aware of the skills, behaviors and attitudes they need to develop for the their future employment.

DEFINITIONS OF TERMS:

1. Applied learning - using academic knowledge in conjunction with job specific knowledge.

2. Apprenticeships - job training experiences where students enter real work situations and learn job skills from a master craftsman/worker.

3. Employability skills - worker traits that make an employee an asset to a particular business.

4. Formal operations - an adolescent stage of development characterized by an increase in the ability to think in hypothetical terms, think about alternatives and reason abstractly.

5. Paradigm shift - a change in the way businesses are viewing their operations.

6. Propositional logic - an abstract system of thinking in which formal reasoning can be applied to hypothetical situations, abstract concepts and thinking about alternatives.

7. Self-efficacy - the perceived ability to execute courses of action in prospective situations.

8. Self-perceptions - knowledge and/or understanding of the self.

9. Skills gap - a term used to express the disparity between businesses' needs and the skills, behaviors and attitudes the new employee brings to the workplace.

10. Vocational education programs - job training programs.

11. Work-bound student - high school students not attending college after graduation.

12. Worker qualities - skills, behaviors and attitudes that prospective employees possess.

LIMITATIONS OF THE STUDY:

There are several limitations to this study:

1. The survey instrument used in this study was not tested for its validity or reliability.

2. The study was conducted with a limited population of students participating in a vocational education program.

3. The study focused on one vocational education program serving a rural/suburban area in Western

New York State.

3. The small number of subjects makes it difficult to generalize the results to all vocational education programs.

4. Demographic information regarding the specific age, sex, race and academic standing of the subjects was not available.

CHAPTER II

REVIEW OF THE LITERATURE

In his article, published in the January 31, 1992 edition of the Democrat and Chronicle, Ebersole states that the unemployment rate jumped from 4.9 percent to 5.4 percent during the month of December 1991. As the unemployment rate continues to increase, during the current recession, possessing proficient literacy skills, mathematic abilities and interpersonal skills is of paramount importance to prospective employees (Ebersole, 1992; Feller, 1991; Graham, Vitale & Schenck, 1991; Keeley, 1990). Labor shortages, in an era of growing unemployment, seem paradoxical, to say the least. However, Kozol (1985) states in his book, Illiterate America, that entry level and middle management jobs "remain unfilled for lack of competence equivalent to need" (p. 14). He continues by adding that employment agencies are having great difficulty in finding personnel who meet employer requirements.

Feller (1991), in his review of employment and career development, speaks of the dichotomy that now exists between the business world and potential workers.

Companies, both large and small, have as a priority to find, attract and develop a quality workforce in an effort to build innovation and creativity in an internationally competitive market. Blue collar jobs have been replaced with automation and job security now hinges on the ability to adapt to change.

The mismatch between employer needs and employee skills is significant. This mismatch also reflects an even larger gap between the educational system and the business world (Cantor, 1990; Feller, 1991; Graham, Vitale & Schenck, 1991; Keeley, 1990).

CURRENT BUSINESS TRENDS: A PARADIGM SHIFT

New technologies and innovations in production capabilities plus the computerization of data have had a profound impact on the employment needs of American businesses (Carnevale & Johnston, 1989; Cetron, 1990). This coupled with the need to compete in a global marketplace, as led to drastic changes in what employers require of their workers in the areas of skills, behaviors and attitudes (Bowell & Thomson, 1987; Cetron, 1990; Feller, 19912; Hull & Marsalis, 1991; Lee, 1990; Nagy & Wolf, 1990).

"Employers are not only flattening and decentralizing institutional structures to make them more flexible and efficient, they are also keeping their permanent workforce small" (Carnevale & Johnston, 1989, p.2) As our society moves from a manufacturing, industrial era into an information processing era, blue collar jobs are being rapidly replaced with high technological, skill oriented jobs requiring proficiencies in reading, writing, mathematics and science along with the ability to adapt to changing situations (Cetron, 1990). Increases in the service industry and declines in United States manufacturing have shifted the emphasis of businesses from production to customer satisfaction (Barram, 1988; Carnevale & Johnston, 1989).

In order to maintain growth and prosperity, companies must tailor their products to meet customers' needs (Carnevale & Johnston, 1989). This requires a streamlining of business hierarchies placing more responsibility at the frontline or, in other words, on the entry level, production worker (Carnevale & Johnston, 1989; Magaziner & Clinton, 1992).

Becoming more efficient at meeting customers' needs means reducing middle management positions, implementing a team approach and requiring highly skilled workers on the production line where commitment to quality and autonomous decision making is valued (Bonstingl, 1992;

Carnevale & Johnston, 1989; Magaziner & Clinton, 1992).

There appears to be a major paradigm shift in regards to how businesses need to operate (Carnevale & Johnston, 1989). The old view of the industrial era where companies were run under an authoritarian rule, the brain power was relegated to the board rooms and the muscle power was expected on the factory floor is no longer compatible with the need for efficiency, global competitiveness and economic growth (Bonstingl, 1992). The customers' needs and potentials now drive the work process giving more control to those on the front lines (Bonstingl, 1992; Rhodes, 1992).

Employers are finding themselves in precarious positions when it comes to hiring new employees, particularly young people, newly graduated from high school (O'Neil, 1992a). "Entry level employees are drawn, increasingly, from populations in which human capital investments, prior to work, have been insufficient." As the labor pool continues to decline employers will need to "make rather than buy" skilled employees (Carnevale & Johnston, 1989, p.2).

YOUTH & EMPLOYMENT: OUTLOOKS & EXPERIENCES

Demographic studies reveal startling statistics about young people and their employment status. O'Neil

(1992a) cites from a report, "The William T. Grant Foundation Commission on Work, Family and Citizenship," that 50 percent of all non-college bound students face a reduction in employment opportunities, a widening earnings gap between them and their counterparts who have some college education and high employment rates. In addition, the report states that these high school graduates are generally unprepared for either a job or continued study because their high school curriculum was neither strongly academic nor strongly vocational.

Compounding this employment dilemma, minority populations such as non-white and handicapped youth suffer even greater difficulties in finding a job that allows them economic independence and advancement (Hasazi, S. B., Johnson, Hasazi, J. E., Gordon & Hull, 1989; Useem, 1987). In their examination of employment and economic statistics for minorities such as black and hispanic youth, Schwarz and Taymans (1991, p. 16) report "disproportionately higher rates of unemployment and confinement to low paying jobs than their white counterparts." These researchers also surveyed learning disabled individuals who had completed high school and discovered that the majority of those studied had been employed six months or less in the three to five years following graduation. Most of these students were engaged in some vocational training programs (VTP) during high school. However, 61 percent of the respondents, who were VTP completers, reported having problems finding employment and were not qualified to work in the areas in which they were trained.

Many young people work part-time during their high school years. The question arises, though, as to the benefits they gain in terms of developing the skills required to obtain full-time positions and economic solvency after high school (O'Neil, 1992a). In a recent study by Stone, Stern, Hopkins and McMillon (1990) in which high school students were surveyed as to their perceptions of work, students in school-based work experiences such as vocational education programs reported a higher degree of positive work behaviors and attitudes then their peers in non-school based employment experiences. It appears that school supervised work experiences provided those students with relevant, applicable skills for their future employment, positive associations with adults, opportunities to demonstrate initiative and a higher degree of job satisfaction. The subjects in non-school supervised employment reported their main reason for working was to earn money to buy things and to socialize with friends. They saw little connection between their current jobs and their future career goals and felt that their jobs did not help them develop positive work-related behaviors and attitudes.

Although teenage work experiences can have some benefits for young people, real preparation for life-long employment is greatly dependent upon the type of job and its relevancy to the individual's future career goals (O'Neil, 1992a; Stone, Sterns, Hopkins & McMillon, 1990). Most part-time work experiences in which high school students participate do not offer opportunities to directly apply classroom knowledge and bear little resemblance to their future employment (O'Neil, 1992a). In addition, these jobs often interfere with the students' academic achievement and positive perceptions of work as they generally involve long hours of menial labor during after school hours and on weekends (O'Neil, 1992a).

Lastly, current research has shown that young people, very often, fail to see a connection between their education and the world of work and lack encouragement to achieve academic excellence (Bishop, 1992; O'Neil, 1992a). Studying hard and taking a rigorous curriculum is rarely rewarded in the job market (Bishop, 1992).

"Although most employers require a high school diploma (or its equivalent), they do not consider it a compact signifying that graduates have basic academic or social skills, so they do little to reward students for the grades they have earned" (O'Neil, 1992a, p.7,8). In many cases, recent graduates experience frequent periods of unemployment and are closed off to better paying jobs with possibilities for advancement because employers are reluctant to hire them (O'Neil, 1992a). Ironically, however, research has shown that competence in academic skills improves worker productivity (Bishop, 1992). Individual work records appear to serve as a more viable determinant in evaluating competence and reliability (Bishop, 1992). Achieving academic competence and excelling in extra-curricular activities is often a private victory for today's young people (Bishop, 1992). It is believed that if the labor market began to reward these achievements by providing employment opportunities with competitive salaries high school students would choose more rigorous curriculum and would work harder towards achieving excellence (Bishop, 1992; O'Neil, 1992a).

Students require appropriate incentives to develop the skills necessary to meet today's labor market demands (Bishop, 1992). Businesses, on the other hand, need to communicate those specific skills required for employment to the educational institutions in an effort to begin to bridge the gap between workplace needs and workforce capabilities (Carnevale & Johnston, 1989; Packer, 1992; Graham, Vitale & Schenck, 1991).

EMPLOYABILITY SKILLS: BUSINESS' NEEDS

Possessing employability skills, or "those attributes other than technical competence, that make an employee an asset to their employer" is vitally important in today's ever-changing marketplace (Buck & Barrick, 1987. p. 29). Current research is replete with information regarding the skills required of high school graduates that will enable them to gain employment, maintain employment and advance to higher positions (Bowell & Thomson, 1987; Graham, Vitale & Schenck, 1991; Packer, 1992).

In a joint initiative of the U.S. Departments of Labor, Education and Commerce entitled, "Building a Quality Workforce (BQW)," researchers surveyed numerous businesses in an effort to discover what they considered was "lacking among the new entrants into the labor force coming out of the schools, and what employers' workforce needs will be in the future," (p. 1). Employers noted that the current pool of entry level applicants were insufficiently prepared in basic skills. Deficiencies were consistently found in reading, writing, mathematics and communication skills. "In addition to the three R's, businesses also noted that today's jobs require skills, attitudes and abilities generally thought of as needed at the supervisory and managerial level," (p. 15). As a result, such worker qualities as problem solving, self-discipline, acceptance of responsibility, reliability, initiative, teamwork and independence are either underdeveloped or completely lacking in young people newly graduated from high school (BOW, 1988).

Carnevale and Johnston (1989), in their book entitled, Training America, examined job-related learning in an effort to identify strategies that would prepare our nation's workforce and use our human capital more effectively. It was revealed that the rapid technological changes in the workplace have created new challenges for the recent employee. Worker responsibilities are constantly expanding, requiring autonomy in decision making and an increased input into how an organization uses and develops it resources. These expectations require motivation, initiative and higher metacognitive abilities

(BQW, 1988; Carnevale & Johnston, 1989; Packer, 1992).

In turn, the customization of services demands flexibility and strong communication skills (BQW, 1988; Bonstingl, 1992; Cetron, 1990; Magaziner & Clinton, 1992). "Employees at the point of production and service delivery must know how to listen and to articulate their thoughts clearly" (Carnevale & Johnston, 1989, p.13). Heatley (1987) also adds that young people need to develop proficiency in written communication that enables them to relate basic elements of language and grammar to the real world of our high technological society. Research also shows that new employees need to develop effective interpersonal and negotiation skills in order to handle customer complaints as well as to work more effectively with their colleagues in cooperative and teaming situations (BQW, 1988; Carnevale & Johnston, 1989; Packer, 1992).

Lastly, employers consistently voiced their concern about young people's attitudes toward work, in general, and their seemingly disregard for the old-fashioned work ethic (Bowell & Thomson, 1987). Even when high school graduates appear to possess competent skills their values and attitudes are often woefully inadequate (Bowell & Thomson, 1987).

Specifically, employers observe increased problems with absenteeism, punctuality, respect for others, perseverance and honesty. These negative attitudes translate into poor work habits and result in monetary costs to American businesses as declines in productivity, product quality and competitiveness are realized (BQW, 1988; Bowell & Thomson, 1987; Hazler & Latto, 1987; Useem, 1987).

It is widely recognized that inadequate workplace skills, behaviors and attitudes have far-reaching ramifications for our young people as they seek employment after high school (BQW, 1988; Magaziner & Clinton, 1992). Identifying employers' needs is the first step in bridging the skills gap and preparing high school students for the world of work (O'Neil, 1992a; Magaziner & Clinton, 1992).

DEVELOPING EMPLOYABILITY SKILLS: STUDENTS' NEEDS

As the present skills gap continues to widen businesses are turning towards the educational institutions in an effort to communicate their needs and encourage educational reform (BQW, 1988; Bonstingl, 1992; Carnevale & Johnston, 1989; Magaziner & Clinton, 1992). Employers assert that the current education programs in which non-college bound students participate tend to be unfocused leaving these graduates unprepared to meet labor market demands (Carnevale & Johnston, 1989; O'Neil, 1992a). In addition, it is felt that current teaching methods are often too passive, with students working in isolation and being rewarded for merely parroting what they have learned (Carnevale & Johnston, 1989). This form of learning and the type of information that is taught rarely reflects business' expectations (Carnevale & Johnston, 1989). Research notes that this general educational tract is increasing engaging approximately 42 percent of all high school students (Carnevale & Johnston, 1989).

In a government study entitled, "The Commission on the Skills of the American Workforce," cited in Magaziner and Clinton (1992), it was revealed that one reason non-college bound students often lack the motivation to study hard in school is because they see little or no relationship between how well they do in school and the kind of job they can attain after graduation. Employers observe this disconnection between work and school as young employees appear to be unable to effectively apply their academic knowledge to various situations in the workplace (O'Neil, 1992b).

Recently, recommendations to remedy this situation have been made by numerous researchers, businessmen and policy makers. In general, it is felt that applied learning methodologies offer the best opportunities for combining academic theory with work-related experiences. Research states that this form of learning forces students to integrate interdisciplinary knowledge and facilitates the development of problem solving abilities, interpersonal skills and organizational skills (Bishop, 1992; Bowles, 1991; Magaziner & Clinton, 1992; O'Neil, 1992a; O'Neil, 1992b). Students engaged in these learning experiences appear to be more motivated to develop their skills and are better able to identify their interests and unique capabilities (Bowles, 1991; Carnevale & Johnston, 1989; Gordon, 1991).

Traditionally, vocational education programs have attempted to provide these forms of learning experiences. However, current research suggests that many of these programs overlook the importance of directly applying classroom, academic knowledge as students train for a specific occupation (Buck & Barrick, 1987; Keeley, 1990; O'Neil, 1992a; Schwartz & Taymans, 1991). Critics of current vocational education methods claim that too often these programs have become a 'dumping ground' for the less academically able students (O'Neil, 1992b).

Schwartz and Taymans (1991) state that "vocational education preparation should reflect a maximal view of employment which involves developing those skills necessary for achieving a satisfactory pattern of employment over one's life not simply obtaining some form of paid job" (p. 16). Buck and Barrick (1987) suggest that employability skills can be taught both directly and indirectly as students participate in their job training. They propose that vocational education teachers develop strategies that identify, operationally define and measure employability skills needed in the workplace and provide feedback to their students within a structure that meaningfully rewards progress. Keeley (1991) reports that when vocational programs successfully interface with classroom academics and workplace expectations dropout rates decrease while motivation, test scores, grades and self-esteem increase.

The interplay between academic instruction and vocational education training cannot be overlooked. Greater attention is now being given to the work-bound students' needs as our nation begins to view education as a means for employment (Warnat, 1991). Research cites several programs that have been designed to provide the optimal balance between classroom learning and job training. These programs promote cooperation among schools, communities and businesses in the formation of applicable curriculum, preferred performance standards and relevant evaluation policies (BQW, 1988; Carnevale & Johnston, 1989; Keeley, 1987). Work-based learning programs and apprenticeships are being implemented to reinforce classroom theory with practical experience on the job. Typically, these cooperative efforts provide educational institutions with financial assistance, personnel support and consultant services in an effort to develop programs that adequately prepare young people for their future employment and transitions from school-place to work-place (Hamilton, S. F. & Hamilton, M. S., 1992; Hull & Marsalis, 1991; Mjelde, 1990; Kelley, 1987).

TRANSITIONS: SCHOOL-PLACE TO WORK-PLACE:

As cited in Byrne, Constant and Moore (1992), employers and educators recently have begun to address the need for a successful system that provides transitional services to non-college bound students. Research estimates that nearly 20 million high school students are unlikely to go directly to college after high school (Byrne, Constant & Moore, 1992). When young people are left on their own to bridge the school-to-work gulf, their employment options become diminished, impacting on our society both socially and economically (Byrne, Constant & Moore, 1992).

While academic and job skill proficiencies are important considerations when preparing young people for their future employment, other dimensions need equal attention as well. School counselors, training specialists and classroom teachers, particularly at the high school level, need to take an active role in helping non-college bound students identify their career interests, goals, talents and competencies (Crosby & Petrosko, 1990; Miller, 1988; Wooten, 1991).

As adolescents enter the cognitive stage of development, identified by Jean Piaget as formal operations, they are better able to think in hypothetical terms and apply propositional logic (Steinberg, 1985). In turn, they are also becoming more introspective, self-conscious and socially cognizant allowing for the formation and identification of personal values, goals and unique capabilities (Miller, 1988; Steinberg, 1985). Miller (1988) reports that adolescents begin to pass from an idealistic conceptualization of career aspiration to a more realistic view as they engage in self-exploration activities. He suggests that high school students be provided with information regarding the world of work and should be exposed to a variety of work environments in order for them to discern an appropriate course of study.

In conjunction, Post-Kammer (1987) found that adolescent work values, or the degree of satisfaction rendered from a specific career, become more intrinsically grounded during the high school years. Her findings suggest that as high school students begin to correlate their personal needs, interests and abilities with specific career options their degree of career maturity deepens allowing them to make more realistic decisions.

Bandura's self-efficacy theory, or the perceived ability to perform required tasks in prospective situations, also has a bearing on the adolescent's self-knowledge, subsequent career goals and job acceptance behavior (Locke, Federick, Lee & Bobko, 1984; Wooten, 1991). In their study on the effects of self-efficacy, goals and task strategies on task performance, Locke, Federick, Lee and Bobko (1984) found self-efficacy, goal setting and performance to be interrelated. In other words, when individuals engaged in personal goal setting along with skill identification their degree of self-efficacy and task performance increased. Therefore, it can be assumed that high school students' eventual job success can be greatly influenced when they are guided to self-select realistic goals based on a thorough understanding of their abilities (Locke, Federick, Lee & Bobko, 1984).

In their study, which examined teacher and student perceptions of work attitudes, Crosby and Petrosko (1990) found positive but weak correlations between teacher ratings and students' self-perceptions on measures of 15 affective competencies such as ambition, cooperation and adaptability. All subjects were enrolled in a trade and industrial education program and worked closely with their teachers learning specific job skills.

The strongest correlations were found between the competencies of following direction and maintaining control. Researchers concluded that these traits were probably most shared and discussed between teacher and student as part of the requirements for satisfactorily completing tasks leading to employment. The weakest correlations were discovered with the competencies of pleasantness, considerateness, neatness and dependability. Crosby and Petrosko (1990) suggest that teacher-student perceptions differ most with these competencies because they are not defined and/or communicated directly during the training sessions. "Accurate student self-perception is especially important for competencies that are high priorities to employers who are hiring new workers" (p. 50). These researchers suggest students need frequent feedback concerning their development of work attitudes and values in order for them to accurately perceive their competencies.

Wooten (1991) found that self-efficacy also affects job acceptance behavior but to a lesser extent than personality characteristics. From his findings, he suggests that personality variables affect how abilities are perceived and, consequently, affect job acceptance behavior. Such personality traits as personal adjustment, autonomy and self-confidence contributed more to job acceptance behavior than perceived abilities. For example, individuals in the high self-efficacy group tended to consider personal adjustment to the job as a determining factor for acceptance before they considered their perceived abilities. Although the subjects in Wooten's study were college students, assumptions can be made concerning high school students' job acceptance as well. Individuals may accept or decline particular jobs based upon their personality traits rather than on their ability to perform the job. Work-bound high school students, therefore, may require opportunities to examine other dimensions of specific jobs such as working conditions and the amount of supervision they will encounter before making career choices (Wooten, 1991).

Career counselors need to take advantage of this 'realistic' stage of development and facilitate the adolescent in formulating appropriate attitudes toward their future employment as well as in planning relevant curriculum and job training programs (Crosby & Petrosko, 1990; Miller, 1988; McNulty & Borgen, 1988; Steinberg, 1985; Wooten, 1991).

Engaging students in a variety of career-related activities will facilitate their self-exploration and enable them to smoothly transist from school-place to work-place (Byrne, Constant & Moore, 1992; Miller, 1988). Participation in small discussion groups and the use of self-report surveys will guide the students in developing appropriate work values, enhance the students' image as workers and enable them to make the important connections between their education and the labor market (Miller, 1988).

EDUCATION FOR EMPLOYMENT: PROPOSED POLICIES & PROGRAMS

The Job Training Partnership Act (JTPA) (1985), as cited in Cantor (1990) and Thistlewaite (1989), was enacted to provide academic training and job placement for disadvantaged youth and has been the impetus for numerous cooperative ventures between businesses and vocational education programs. The primary purpose for this legislation was to prepare a competent and trained work force through individualized, self-paced, remedial instruction in reading, writing and mathematics (Thistlewaite, 1989). Students are generally taught a traditional, skill-oriented curriculum using drill procedures, worksheets and multiple choice evaluations (Cantor, 1990; Thistlewaite, 1988). However, Thistlewaite (1988) examined a JTPA program that changed its focus, making reading and writing both functional and personal through a comprehension-based instructional approach. Reading for the purpose of problem solving and writing for the purpose of communication was implemented using materials specifically geared for the work place. Pre- and posttests revealed statistically significant gains in the students' reading and writing abilities as well as improvements in their attitudes towards learning in general. Teacher observations also showed increases in their students' interest to learn, their willingness to participate in cooperative learning groups and their ability to take leadership roles resulting in improved self-esteem and a belief in themselves as proficient readers and writers.

In an effort to identify the current problems facing American businesses regarding the skills of entry level employees, "The Commission on the Skills of the American Workforce" (1989) researched 550 industries in the United States and abroad (Bishop, 1992; Magaziner & Clinton, 1992). Based on their findings the Commission revealed five major areas of concern and has recommended changes to remedy the problems (Magaziner & Clinton, 1992).

First, it was found that American schools lack a clear standard of achievement that accurately reflects the current skill needs of American businesses. The Commission, therefore, recommended that each student, at or around the age or 16, be awarded a Certificate of Initial Mastery after successfully passing a series of performance-based assessments. This certificate would then qualify the student for choosing either a job training program, college preparatory courses or continued study in a Technical/Professional Certification program. Secondly, the Commission addressed the needs of high school drop-outs and recommended that greater attention be paid to these young people who currently make up more than one third of our front line workers. If these students are unable to achieve a Certificate of Initial Mastery, private sector as well as federal funding should be provided to establish alternative learning environments that would enable these students to reach national standards. Third, multi-year career-oriented educational programs should be implemented combining general education with specific occupational skills. Fourth, to move American businesses to develop high-performance work organizations the Commission proposed that all employers invest one percent of their payroll for the education and training of their workers. Finally, to ensure that highly-skilled workers match emerging high-performance work organizations "a system of employment and training boards should be established together with local leadership, to organize and oversee the new school-to-work transition programs and training systems" (p.13). It is believed that these recommendations would produce a "more comprehensive system where skills development and upgrading for the majority of our workers becomes a central aim of public policy" (Magaziner &

Clinton, 1992, p. 13). As a result of the Commission's research a bi-partisan congressional committee was formed and has introduced the High Skills, Competitive Workforce Act of 1991 (H. R. 3470 and S. 1790). This bill hopes to "ensure that the United States businesses remain competitive in the global marketplace" (Magaziner & Clinton, 1992, p.13).

O'Neil (1992a) and Packer (1992) cite findings from yet another federal report issued by the United States Department of Labor's Secretary's Commission on Achieving Necessary Skills (SCANS) (1991). This systematic examination of the labor market, in which interviews were conducted from the factory floor to the board room, recommends a broader preparation for entry level workers where academic curriculum is made applicable to the workkplace (O'Neil, 1992a). The SCANS report proposes "three-part foundation of skills and personal qualities needed for high-performance work as well as corresponding competencies" (Packer, 1992, p. 28).

The three-part foundation of skills encompasses basic academic skill development in reading, writing, mathematics, speaking and listening; cognitive skills development in the areas of creativity, decision making, reasoning and problem solving; and development of personal qualities as, individual responsibility, self-management and integrity. The accompanying competencies include improvement in resource use, interpersonal skills, information, technology and various systems. SCANS researchers believe that these areas are universal and can be applied to most academic/job training programs (Packer, 1992).

In addition, it is felt that "assessment and certification form a natural bridge between school and work" (Packer, 1992, p.30). Therefore, broad areas of evaluation have been proposed that measure performance, review portfolios and evaluate projects. Certification would then be awarded based on these assessments. Rather than relying on a single device to evaluate worker qualities this study suggests that quality assessment be built in throughout the educational process allowing for early indentification of problems and interventional strategies (Packer, 1992).

Recently, an ancient practice whereby students receive high-quality vocational education has reemerged (Hamilton, S. F. & Hamilton, M. A., 1992). Apprenticeships offer work-bound students opportunities to develop job competencies as they observe and assist a master at work. This form of education provides quality vocational education, a sense of purpose for academic schooling and smooth transitions from adolescence to adulthood. "Two key features that distinguish apprenticeships from classroom teaching are (1) the student performs 'real' work, and (2) the teacher demonstrates and coaches rather than tells the student how to do a task" (Hamilton, S. F. & Hamilton, M. A., 1992, p.44).

There are several advantages for implementing apprenticeship programs that benefit both student and employer. First, these programs serve as an ideal in-between role for adolescents just about to enter the adult world. Secondly, apprenticeships are worker/learners who must produce and are paid for doing so. Thirdly, employers expect to pay the cost of supervising and training in exchange for the students' present and future productivity. Lastly, this form of education allows the student to make mistakes and to ask questions during the learning process as mastery is achieved when the student demonstrates proficiency (Hamilton, S. F. & Hamilton, M. A., 1992).

Cornell University in conjunction with several school districts in Broome County, New York, initiated the "Youth Apprenticeship Demonstration" (1991) and placed 11th grade high students with a manufacturing firm, two health care providers and an insurance company (Hamilton, S. F. & Hamilton, M. A., 1992). Results of this effort are presently under study, however, based on Cornell's extensive research of apprenticeship programs in Germany, it appears that young people can learn what they need to know as workers and citizens if sound principles are developed and consistently followed. Cornell developed several principles, adapting elements of German apprenticeships, that guide their project. (See Appendix B).

Education for employment programs are numerous and diverse in nature, but commonalities are frequently found. The majority of the programs mentioned, propose and/or facilitate strong links between communities, schools and business (BQW, 1988; Bishop, 1992; Carnevale & Johnston, 1989; Hamilton, S. F. & Hamilton, M. A., 1992; Magaziner & Clinton, 1992; O'Neil, 1992a; Packer, 1992). Before educational reforms can be realized, educational institutions must know what is required and expected in order for work-bound students to successfully enter the job market. Businesses, on the other hand, must communicate these needs and communities must be willing to facilitate and support these important linkages (BQW, 1988; Carnevale & Johnston, 1989; O'Neil, 1992a; Packer, 1992).

SUMMARY:

As American businesses struggle to maintain a competitive edge in the global market place many innovations are being implemented. These reorganizational components greatly impact American students seeking employment after high school. Schools, businesses and communities must address these changes by designing programs that facilitate our young people's transition into adulthood and adequately prepare them for their future employment.

CHAPTER III

This study was designed to determine what employability skills vocational education students feel they have to offer a prospective employer. In addition, the researcher hoped to identify those skills, behaviors and attitudes the subjects rated as most important for their future employment.

QUESTIONS:

The following questions were investigated:

1. What employability skills, behaviors and attitudes do vocational education students feel they have to offer a prospective employer?

2. Which employability skills, behaviors and attitudes do vocational education students rate as most important for their future employment?

SUBJECTS:

The subjects for this study were chosen from the We-Mo-Co (Western Monroe/Orleans County) Vocational Education and Technological Center serving a rural/suburban area of Western New York State. This job training center is part of the Board of Cooperative Educational Services II (BOCES II) which provides educational, administrative and vocational services to 11 public school districts and two private educational institutions. Approximately 400 students attended WE-MO-CO during the 1991-1992 school year.

The WE-MO-CO vocational education program is offered to all students in grades 10-12 and provides job training in 31 different occupations (15 one-year programs and 16 two-year programs). Students choosing to attend WE-MO-CO are provided with occupational evaluations, career counseling and job placement in conjunction with their occupational training. Students receive their occupational training in half day sessions and return to their school district or private schools to receive their academic coursework in half day sessions. This allows them to complete their required high school credit obligations.

60 high school students from the WE-MO-CO Vocational Education and Technological Center participated in this study returning a total of 54 usuable surveys. 11 surveys were completed by students who had attended WE-MO-CO for one year, 43 surveys were completed by students who had attended WE-MO-CO for two years and 6 surveys were unusuable because they were not completed correctly.

SURVEY INSTRUMENT

The survey instrument used in this study consisted of a list of 25 worker qualities and four short-answer questions. (See Appendix A)

This survey was adapted from a survey instrument cited in Weisenstein and Koshman (1991). The original survey consisted of 35 worker qualities and was developed to elicit employer perceptions of worker traits which may be necessary for success or continued employment. These researchers used a response scale utilizing the options of VN - very necessary for job success, SN - somewhat necessary for job success, NVN - not very necessary for job success and NN - not necessary for job success.

As the present study was surveying high school students it was deemed necessary to modify the original instrument in an effort to glean more accurate responses from the subjects and to make the survey easier to complete. Therefore, after conducting an extensive review of the literature concerning the worker qualities required of prospective employees and modifying Weisenstein's and Koshman's (1991) survey, a 25 item list of worker qualities was developed.

Subjects were asked to circle 10 of the 25 worker qualities they felt they had to offer a prospective employer and to rate five of the circled qualities they felt were most important for their future employment. Students rated the five circled responses in order of importance from one to five with one being most important and five being least important.

Two field tests were performed on this survey to determine if the vocabulary of the items was understandable, if the directions for completing the survey were clear and concise, the ease of completion and the time it took the respondents to complete the survey. An 11th grade English class of approximately 30 students and a high school Occupational Education class of approximately 25 students were used in the field test. Adjustments were made to the directions of the survey based on an analysis of the field tested results. Vocabulary was considered understandable. Students in these two classes completed the survey in approximately five minutes.

PROCEDURE:

After consulting with the Coordinator of Student Services at WE-MO-CO it was decided that the researcher would address the faculty at their monthly meeting to present the purpose of the study and explain the survey instrument. Participation in the study was strictly voluntary. Surveys were left for the faculty to take if they chose to participate and administered at the beginning of each of their classes. The surveys were then collected by the vocational instructor and returned to the Coordinator within three days. The researcher picked up the surveys at the WE-MO-CO Vocational Education and Technological Center from the Coordinator within five days.

CHAPTER IV

ANALYSIS OF DATA

The purpose of this study was two-fold. The researcher attempted to determine the perceived worker qualities of vocational education students who have participated in a job training program at the WE-MO-CO Vocational and Technological Center for at least one year. In addition, this study was designed to elicit what these young people rated as the five most important qualities needed for their future employment.

PERCEIVED WORKER QUALITIES:

Table 1 shows the distribution of responses for each of the survey's items. Items in the table are arranged according to the percentages of responses from greatest to least. Subjects responses revealed that they felt they possessed mainly those qualities that reflect self-management behaviors and positive work-related attitudes as opposed to academic abilities. For example, 88.8% of the subjects felt they were able to accept responsibility, 83.3% felt they were able to cooperate with others while only 51.8% felt they could carry out written directions, 35.1% felt they had to ability to add, subtract, multiply or divide and 27.7%

felt they could write complete sentences. Only two of the top ten worker qualities involved academic abilities with 51.8% being able to carry out written directions and 48.1% being able to carry out verbal directions.

TABLE 1

PERCENTAGES OF RESPONSES TO SURVEY ITEMS

ITEM #	WORKER QUALITY	% of RESPONSES
1	Good Attendance	88.8
5	Ability to accept responsibility	87.0
12	Ability to cooperate with others	83.3
9	Ability to complete job/task	79.6
2	Punctuality	70.3
10	Ability to work as a team member	70.3
8	Flexibility to perform different jobs	62.9
7	Ability to be organized	53.7
15	Ability to carry out written directions	51.8
13	Ability to carry out verbal directions	48.1
6	Ability to solve problems	42.5
3	Ability to accept supervision	38.8
11	Ability to accept criticism	35.1
18	Ability to add, sub., mult., divide	35.1
4	Ability to keep information confidential	33.3
17	Ability to write complete sentences	27.7
20	Ability to measure	25.9
14	Ability to relay accurate messages	22.2
19	Ability to work with fractions/decimals	22.2
16	Ability to write legibly	20.3

RATINGS OF WORKER QUALITIES:

In addition to identifying the worker qualities the subjects felt they had to offer a prospective employer these students also rated five of their identified worker qualities they felt were needed for their future employment. A rating of one (1) was given to the quality they thought was the most important and a rating of five (5) was given to the they quality they thought was the least important.

Table 2 shows the percentages of the top five ratings for those identified worker qualities. 59.2% of the subjects who chose 'Good Attendance' as the worker quality they possessed rated it number one (most important). 40.7% rated 'Punctuality', second; 27.7% rated 'Ability to Accept Responsibility', third; 22.2% rated 'Ability to Complete Job/Task', fourth and 18.5% rated 'Ability to Cooperate With Others', fifth.

TABLE 2

TOP FIVE RATED WORKER QUALITIES (N=54)

	#1 RATING	#2 RATING	#3 RATING	#4 RATING	#5 RATING
WORKER QUALITY	1	2	9	5	12
%	59.2	40.7	27.7	22.2	18.5

Lastly, an examination of the subjects' responses to the survey's short-answer questions revealed that 20.4% had completed one school year at WE-MO-CO and 79.6% had completed two school years. The following job training programs and the percentages of participants is shown in Table 3.

TABLE 3

% OF SUBJECTS IN SPECIFIC JOB TRAINING PROGRAMS

WE-MO-CO PROGRAMS	% OF PARTICIPATION (N=54)
BAKING	18.5
WORD PROCESSING	3.7
COMPUTER TECHNOLOGY	12.9
COSMETOLOGY	7.4
ELECTRONIC/ROBOTICS	11.1
FOOD PREPARATION	14.8
HYDRAULIC/HEAVY EQUIPMENT OPERATOR	11.1
INDUSTRIAL/RESIDENTIAL ELECTRICITY	20.3

The majority of students in this study plan on careers in the food service industry (22.2%), the field of electricity (18.5%) or were undecided (14.8%). The subjects' plans after graduating high school include: Finding a job (37.1%), College (53.7%), Military Service (5.5%) or undecided (3.7%).

SUMMARY:

The purpose of this study was to determine the perceived worker qualities of vocational education students who have participated in a job training program for at least one year. In addition, it also sought to discover what worker qualities these students rated as most important for their future employment.

In answer to the first question, the majority of respondents in this study revealed that they had to offer a prospective employer the employability skills that reflected personal management behaviors and positive work-related attitudes. The least identified worker qualities were academic abilities.

The subjects' ratings of the worker qualities most important for their future employment also tended to center around personal management behaviors and positive work-related behaviors. Students did not rate academic abilities as important to their future employment.

Eight job training programs were represented in this study. The majority of students identified that they were choosing careers in the food service industry or the field of electricity. Also, the majority of the subjects revealed that they planned to go on to college after graduating high school.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

This study endeavored to determine what vocational education students at the WE-MO-CO Vocational and Technological Center felt they had to offer prospective employers and what these young people rated as the five most important worker qualities needed for their future employment.

CONCLUSIONS:

The data appear to indicate that vocational education students participating in various job training programs at WE-MO-CO have developed the appropriate work-related behaviors and attitudes needed by prospective employers. One could conclude that these behaviors and attitudes are identified and reinforced by the vocational education instructors as the students engage in their various job training sessions. However, it could also be possible that these particular qualities were chosen by the students because they appeared first on the survey.

It is important to note that the majority of subjects in this study did not identify or rate academic abilities as worker qualities they possessed or important to their future employment. Since the students were forced to choose only ten of the 25 worker qualities in the survey they felt they had to offer a prospective employer it could be assumed that they chose the employability behaviors and attitudes that are reinforced in their job training programs. However, it could also be assumed that these students fail to see a connection between their academic abilities and their future employment. If direct application of academic knowledge is not facilitated in their job training programs students may not feel these qualities are important or needed by prospective employers.

Also, the findings may suggest that these students chose to attend WE-MO-CO because they are not proficient in their academic skills. If this is true these students would not, necessarily, identify academic abilities as worker qualities they possess. However, since the majority of the subjects are choosing to go to college as reported in the short-answer section of the survey, it would seem that academic abilities would be important qualities to possess. Again, this may be a result of these students' inability to see a connection between work-place needs and school-place capabilities.

Lastly, the findings may suggest that these students need more adequate career counseling and preparation before choosing vocational education training. Eight job training programs were represented in this study however, only two major career fields were identified by the students as future career goals; the food service industry and the electronics field. The question arises as to why the other job training programs were chosen by the students if they were not being pursued as careers after graduating high school.

IMPLICATIONS FOR EDUCATION:

Perhaps the most important implication for vocational training instructors is the need for facilitating the application of academic curriculum into their job training programs. Where personal management behaviors and positive work-related attitudes are important to future employers students need to see how reading, writing and mathematic knowledge is used on the job as well. Communication and curriculum planning need to be fostered between schools, vocational education programs and businesses in order to identify where improvements can be made if preparing a qualified workforce is the goal. An emphasis should be made in developing the full gamut of employability skills in our young people, not only to help them gain employment but to maintain employment and to choose careers that match their unique talents and interests.

In addition, high school students need adequate preparation in choosing their courses of study whether vocational education or college preparatory. Vocational education should not be chosen as an easy way out or last resort for students finding college preparatory curriculum too rigorous. All courses of study in high school should be rigorous with direct application to the students' future goals.

IMPLICATIONS FOR FURTHER RESEARCH:

The area of vocational education and preparing young people for the world of work is greatly in need of research particularly in regards to how students view work, make career choices and choose courses of study in high school. Further research is needed in the area of students' perceptions concerning their own capabilities and career development. Demographic studies may reveal differences between male/female perceptions, minority perceptions, age differences and length of time in specific job training programs.

In addition, more studies need to be conducted as to how vocational education programs interface their curriculum with businesses' needs in an effort to identify areas needing reform. Along those same lines, research should also focus on ways of fostering collaboration between businesses, communities, schools and vocational education programs in order to develop new ways of preparing our young people as they transist from school-place to work-place.

References

A Joint Initiative of the U. S. Departments of Labor, Education and Commerce (1988). Building a Quality Workforce, Washington, D. C.: U. S. Government Printing Office.

Barram, D. KJ. (1988). Partners for the nineties: Business and education. Educational Horizons, 66, 144-147

Bishop, J. H. (1992). Why U. S. students need incentives to learn. Educational Leadership, 49, 15-18.

Bonstingl, J. J. (1992). The total quality classroom. Educational Leadership, 49, 66-70.

Bowell, D. W. & Thomson, R. (1987). Private business, public schools: Partners for reform. Curriculum Review, 26, 12-15.

Bowles, B. (1991). Education for employment: The future is now! Wisconsin Vocational Educator, 15, 16-19.

Buck, L. L. & Barrick, R. K. (1987). They're trained but are they employable? Vocational Educational Journal, 62, 29-31.

Byrne, S. A., Constant, A. & Moore,G. (1992). Making Transitions from school to work. Educational Leadership, 49, 23-26.

Cantor, J. A. (1990). A Study of two potentially compatible activities: Job training and economic development. The Journal of Vocational Education Research, 15, 55-75.

Carnevale, A. P. & Johnston, J. W. (1988). Training America: Strategies for the Nation. Virginia: American Society for Training and Development.

Cetron, M. J. (1990). Career directions during the '90's. Journal of Career Planning & Employment, 50, 29-36.

Crosby, r. K. & Petrosko, J. M. (1991). Teacher and student preceptions of work attitudes in trade and industrial education. Journal of Industrial Teacher Education, 28, 41-51

Ebersole, P. (1992, January 31). Area jobless rate up: But figures some of state's lowest. Democrat and Chronicle, pp. 1,6.

Feller, R. (1991). Employment and Career development in a world of change: What is ahead for the next twenty-five years? Journal of Employment Counseling, 28, 13-20.

Gordon, J. (1991). Measuring the 'goodness of training. Training, 28, 19-25.

Graham, S. A., Vitale, E. & Schenck, M. L. (1991). Developing methodologies to integrate content and behavioral skills: A pragmatic approach to curriculum design. Community/Junior College Quarterly of Research and Practice, 15, 285-294.

Hamilton, S. F. & Hamilton, M. A. (1992). A progress report on apprenticeships. Educational Leadership, 49, 44-47.

Hasazi, S. B., Johnson, R. E., Hasazi, J. E., Gordon, L. R., & Hull, M. (1989). Employment of youth with and without handicaps following high school: Outcomes and correlates. Journal of Special Education, 23, 243-255.

Hazler, R. J. & Latto, L. D. (1987). Employers' opinions on the attitudes and skills of high school graduates. Journal of Employment Counseling, 24, 130-136.

Heatley, K. R. (1987). A voice from industry: The communications gap. Curriculum Review, 26, 29-30.

Hull, D. & Marsalis, C. (1991). Work-based learning. Vocational Education Journal, 66, 22-23,43

Keeley, M. (1990). Literacy at work: Matching instruction to the job. Vocational Education Journal, 66, 28-29.

Kelley, T. (1987). Reaching out to schools: Three model companies. Curriculum Review, 26, 25-27.

Kozol, J. (1985). Illiterate America. New York: Anchor Press/Doubleday.

Lee, W. W. (1990). Bridging the gap with IVD. Training and Development Journal, 44, 63-65.

Locke, E. A., Federick, E., Lee, C. & Bobko, P. (1984). Effect of self-efficacy, goals and task strategies on task preformance. Journal of Applied Psychology, 69, 241-251.

McNulty, W. B. & Borgen, W. A. (1988). Career expectations and aspirations of adolescents. Journal of Vocational Behavior, 33, 217-224.

Magaziner, I. & Clinton, H. R. (1992). Will America choose high skills or low wages? Educational Leadership, 49, 10-14.

Miller, M. J. (1988). Career counseling for the middle school youngster. Journal of Employment Counseling, 25, 172-179.

Mjelde, L. (1990). Labour and learning: The apprenticeship program in Norway. Interchange, 21, 34-47.

Nagy, D. R. & Wolf, L. G. (1990). Workforce 2000: A recruiting challenge. Journal of Career Planning and Employment, 50, 51-55.

O'Neil, J. (1992a). Preparing for the changing workplace. Educational Leadership, 49, 6-9.

O'Neil, J. (1992b). On education and the economy: a conversation with Marc Tucker. Educational Leadership, 49, 19-22.

Packer, A. H. (1992). Taking action on the SCANS Report. Educatonal Leadership, 49, 27-31.

Post-Kammer, P. (1987). Intrinsic & extrinsic work values & career maturity of 9th & 11th grade boys and girls. Journal of Counseling and Development, 65, 420-423.

Rhodes, L. A. (1992). On the road to quality. Educational Leadership, 49, 76-80.

Schwartz, S. & Taymans, J. (1991). Urban vocational/technical program completers with learning disabilities: A follow-up study. The Journal of Vocational Special Needs Education, 13, 15-20.

Steinberg, L. (1985). Adolescence, New York: Adolf A. Knopf, Inc.

Stone, J. R., Stern, D., Hopkins, C., & McMillon, M. (1990). Adolescents' perceptions of their work: School supervised and non-school supervised. Journal of Vocational Education Research, 15, 31-49.

Thistlewaite, L. (1989). Reading, writing, and cooperative learning in a JTPA summer program. Adult Literacy and Basic Education, 13, 81-88.

Useem, E. L. (1987). Improving values through school-business alliances. Curriculum Review, 26, 16-20.

Warnat, W. (1991). Preparing a world class workforce. Vocational Education Journal, 66, 22-25.

Weisenstein, G. R. & Koshman, H. L. (1992). the influence of being labled handicapped on employer preceptions of the importance of worker traits for successful employment. Career Development for Exceptional Individuals, 14, 67-76.

Wooten, W. (1991). the effects of self-efficacy on job acceptance behavior among American college students. Journal of Employment Counseling, 28, 41-48.

APPENDIX A

SURVEY OF WORKER QUALITIES

DIRECTIONS: 1. Please CIRCLE ten (10) worker qualities from the list below that you feel you have to offer a future employer.

2. Choose five (5) of you circled qualities and number them in order of importance, with 1 being most important and 5 being least important.

RATINGS	WORKER QUALITIES
1.___	Good attendance
2.___	Punctuality
3.___	Ability to accept supervision
4.___	Ability to keep information confidential
5.___	Ability to accept responsibility
6.___	Ability to solve problems
7.___	Ability to be organized
8.___	Flexibility to perform different jobs
9.___	Ability to complete job/task
10.___	Ability to work as a team member
11.___	Ability to accept criticism
12.___	Ability to cooperate with others
13.___	Ability to carry out verbal directions
14.___	Ability to relay accurate messages
15.___	Ability to carry out written directions
16.___	Ability to write legibly

(Survey, continued)

17.___ Ability to write complete sentences

18.___ Ability to add, subtract, multiply and divide

19.___ Ability to work with fractions/decimals

20.___ Ability to measure

PLEASE ANSWER THE FOLLOWING QUESTIONS:

1. My future job will be______________________________

2. Vocational program now in___________________________

3. Length of time in current program___________________

4. Plans after graduating high school__________________

____

____

APPENDIX B

"YOUTH APPRENTICESHIP DEMONSTRATION"
Cornell University, Broome County, New York

Guiding Principles for establishing Apprenticeships:

1. Apprenticeships are organized by career areas, not specific jobs.

2. Employers develop a learning environment for apprentices.

3. Schools adapt instruction to take maximum advantage of apprentices' work experiences.

4. Training and support are provided to classroom teachers, training directors, area coordinators, coaches, and mentors.

5. Youth apprenticeship is potentially appropriate for anyone.

6. Apprentices are employees.

7. Employers and schools assume operating costs for the apprenticeship programs.

8. Apprenticeships lead youth toward academic diplomas and certification.

9. Cornell's primary contribution to the apprenticeship project is research and development.
(Hamilton, S. F. & Hamilton, M. A., 1992)

APPENDIX C

NUMBER OF RESPONSES TO SURVEY ITEMS

WORKER QUALITIES	# OF RESPONSES (N=54)
1. Good attendance	48
2. Punctuality	38
3. Ability to accept supervision	21
4. Ability to keep information confid.	18
5. Ability to accept responsibility	47
6. Ability to solve problems	23
7. Ability to be organized	29
8. Ability to perform different jobs	34
9. Ability to complete job/task	43
10. Ability to work as a team member	38
11. Ability to accept criticism	19
12. Ability to cooperate with others	45
13. Ability to carry out verbal directions	26
14. Ability to relay accurate messages	12
15. Ability to carry out written directions	28
16. Ability to write legibly	11
17. Ability to write complete sentences	15
18. Ability to add, subtract, mult., div.	19
19. Ability to work with fractions/decimals	12
20. Ability to measure	14

APPENDIX D

NUMBER OF RESPONSES OF RATINGS TO SURVEY ITEMS (N=54)

	RATINGS				
ITEM #	1	2	3	4	5
1	32	7	3	1	2
2	9	22	3	0	0
3	1	0	4	1	1
4	1	0	2	0	0
5	5	9	12	4	5
6	0	2	3	5	0
7	0	1	4	6	2
8	3	1	1	1	7
9	1	2	6	15	6
10	1	4	4	2	9
11	0	1	2	3	2
12	0	4	4	6	10
13	0	0	0	2	4
14	0	0	0	1	0
15	0	0	1	1	1
16	1	0	3	2	0
17	0	0	0	0	1
18	0	1	2	1	3
19	0	0	0	1	1
20	0	0	0	2	0