THE EFFECTIVENESS OF SAUDI ARABIA'S SECONDARY INDUSTRIAL INSTITUTES COOPERATIVE EDUCATION PROGRAM AS PERCEIVED BY THEIR ORGANIZATIONAL PARTNERS

DISSERTATION

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ABSTRACT

The purpose of this study was to examine the effectiveness of cooperative (co-op) education programs in secondary industrial institutes (SII) in Saudi Arabia as perceived by their organizational partners. The study sought to identify the relationship between the perceived impact of cooperative education programs and five variables: 1) the presence of a training plan, 2) the role of the cooperative education coordinator, 3) the frequency of communication contacts between the schools and the SIIs, 4) the characteristics of students in terms of their technical skills and work ethic, and 5) the characteristics of the organizational partners.

Thirty-eight organizations from Riyadh and Jeddah participated in the study. Each organization had sponsored a cooperative education program during the 2003-2004 academic school year. The results showed that the presence of a training plan and how the training plan was developed affect perceptions of the organizational impacts. In addition, the results showed that both student characteristics – technical skills and work ethic – were important to the organization partners. The results also showed that the organization partners viewed communication contacts as a significant factor. Finally, there was a modest but not significant relationship between organizational effectiveness and coordinator's role, organizational location, size, type of business, and number of years participating in the cooperative education programs.

The study extended knowledge about cooperative education programs by investigating the perceptions of the organization partners, a perspective that has often been overlooked in previous research on the topic. Overall, the results of the study were consistent with previous findings. However, a revised conceptual framework omitting the non-significant variables is presented to guide future research.

Finally, the results suggest that the organization partners viewed cooperative education programs in Saudi Arabia as being beneficial to them. However, the organization partners provided specific suggestions on how schools could improve cooperative education programs in Saudi Arabia, which also can be generalized to cooperative education programs in other nations as well. That is, to be effective, the schools should ensure that the curriculum matches the demands of local labor market, the schools should involve the organizational partners during the planning and implementation processes, and in global situations the schools should focus more on using the English language.

To my beloved mother, the soul of my father,
my wife and kids, and brothers and sisters

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FIELDS OF STUDY

Major Field: Education

Cooperative Education

Technical Education

Human Resource Development

Needs Assessment

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Figure

CHAPTER 1

INTRODUCTION

Today, more than ever, students are required to be familiar with the work environment and to be prepared for entry level jobs before leaving school. However, not all students enter the workforce fully prepared. Schools and employers are often critical of each other. Schools blame employers for not hiring their graduates, and employers blame schools for not preparing students for work (Bottoms, 1992). Coll, Taylor and Grainger (2002) observed that there is a mismatch between what employers value and what schools produce.

Cooperative education is viewed as an important program to facilitate the school-to-work transition and to prepare students for the labor market. Cooperative education aims to familiarize students with work related skills, enable them to apply classroom theory into actual work environments, and prepare them for employment in the public and private sectors (Kariya and Rosenbaum, 1989). When students are involved in a cooperative program they work closely with experts, who pass their skills on to the students. The students acquire and apply the skills through actual hands-on-experience (Young, 1995).

Cooperative education, a term often used interchangeably with work-based learning, has been applied and practiced worldwide for many years.

Cooperative education refers to a program of education consisting of in-school instruction alternating with on-the-job work experience in a business or industrial establishment (Cantor, 1997). Heinemann (1983) defines cooperative education as a curriculum plan designed to help students integrate classroom theory with practical work experience by having them alternate specific period of classroom attendance with specific periods of professional employment. This experience must be planned and supervised by the school and the organizational partner to ensure that each phase contributes to the student's education and career objective (University of Kentucky, 1989). To ensure high quality in the training provided to cooperative education students, organizational partners should have a role in program planning and implementation (Rosenbaum, 2001).

The purpose of cooperative education programs is to develop occupational competence by using employment in a real life job as a source of learning (Ascher, 1994). Schools differ by country in the way they select training firms (their organizational partners). Countries like Japan and Germany have a system for selecting cooperative education training firms and schools have training contracts with some training firms to train a certain number of students during a certain period of time. In these countries schools select training firms that can provide occupational experiences for students, and coordinate this experience to ensure the high quality of the training. However, in other countries like Saudi Arabia there is no system for selecting the training firms and schools send students to cooperative education at any available training firms (Abdulaziz & Hawley, 2002). In the United States, cooperative education programs are concentrated in the vocational areas of marketing, trade, industry, and business. Although cooperative education is governed by national laws and regulations, specific

arrangements are worked out locally between partners and school staff, subject to state laws and local customs (Ascher, 1994).

Cooperative education programs have advantages for students, schools and organizations alike (Armstrong, 1988). Students find that cooperative education programs provide the opportunity to demonstrate their skills and ability, to learn about employers, and to connect with their future jobs (GOTEVT, 2001). Schools can save money and increase the quality of training when they send students to adult work-based learning environments. Organizational partners provide schools with additional business and industry facilities, training materials and other equipment that would otherwise be difficult to finance. Organizational partners can assess trainee job competence in face-to-face situations, thereby making their hiring decisions with considerably more confidence in their potential employee's productivity (Traylor, 1984; Irvin & Irvin, 1985).

Cooperative education programs rely on the integration among the student, the organizational partners, and the school. Over the past three decades research has examined issues of concern to all three parties involved in cooperative education (student, school and organizational partner) and much has been learned about the process and the product of cooperative education (Hurd & Hendy 1997). Braunstein (2000) stated that there are four types of cooperative education research 1) student benefits, 2) employer benefits, 3) training and experiential learning models, and 4) employer perspectives.

A survey of the literature reveals that researchers have not focused on organizational partners (Hurd & Hendy 1997). Most of the cooperative education research has evolved from the needs, issues, and concerns of practitioners rather than

academicians (Bartkus & Stull, 1997). Research in cooperative education has focused on such issues as program development, administrative practice, benefits, attitudes, program outcomes, and the impact of participation on students, graduates, and employers. Research on the quality of the training provided to students in the work place has been identified as a high priority yet it is the least represented in reported studies (Braunstein, 2000).

The current debate in school-to-work focuses on whether work placements will be of sufficiently high quality to provide real education to students or whether they will be low quality placements in which students are performing routine and unskilled labor, as many work experience programs have become (Grubb & Villeneuve, 1996). One of the most compelling arguments for effectiveness of the cooperative education program is the involvement of the organizational partners. Granovetter (1995) emphasized that the perception of the organization as an outside partner in cooperative education varies and that variation in contacts may affect work-entry processes and outcomes. Therefore, the collection of information from organizational partners about the quality of the cooperative education program is vital to predictions of success in meeting educational goals (Rosenbaum & Kariya, 1991).

The Ad Hoc Committee formed by the Cooperative Education Association in 1985 to examine the position of cooperative education in the USA recommended research into the area of the quality of cooperative education programs (Heinmann, 1988). A study conducted by Flinders University of South Australia about the most valued work place skills demanded by employers found that capacity for cooperative educationeration and team work, communication/presentation skills, and capacity to learn new skills and

procedures are the skills highly demand for both public and private sector employers. The ideal cooperative education graduate exhibit potential for career advancement, theoretical knowledge in the professional field, and the capacity to learn new skills and procedures (Marchmet, 1998).

Problem Statement

In recent years the concept of cooperative education at the secondary school level has become increasingly more important and visible (Taylor, 2002). Cooperative education has been used as proven approach to move youth from school to work. Therefore, developed countries such as Germany and Japan have given a great deal of attention to the quality of the cooperative education by involving the organizational partners in the program planning and development (Rosenbaum, 2001). The involvement of the organizational partners is essential to better program outcomes and results in producing skillful local labor and lower youth unemployment rates over longer periods of time (Hess, Peterson & Mortimer 1994). In a four year study (1990-1993), youth unemployment was 5.1% in Japan and 11.0% in Germany, compared to 19.7% in Canada, 25.0% in Ireland, and 30.5% in Finland. The authors attributed the low unemployment rate in Germany and Japan to the organizational partners' involvement in cooperative education program planning and implementation (Stern & Wagner, 1999).

Although there has been discussion in the literature about the importance of organizational partners, few studies have been conducted that relate to program effectiveness and the perceptions of organizational partners. Coll & Chapman (2000), Bartkus & Stull (1997), and Cohen & Manion (1994) found that research in cooperative

education has been largely pragmatic in nature, without a strong theoretical underpinning. Research in cooperative education is generally recognized as action-research (Coll & Chapman, 2000). Action-research comprises research initiated by teachers or other education practitioners, conducted within the environment of practitioners, typically small-scale, and highly contextually based (Denzin& Lincoln, 1998).

Cooperative education researchers such as Rosenbaum (2001), Hurd & Hendy (1997), Kariya (1989), Rowe (1988) and Wilson (1988) argue that research into organizational partners' concerns and perceptions is of most value to the continued effectiveness of cooperative education programs and to improve the quality of cooperative education outcomes.

However, in spite of calls to involve organizational partners in cooperative education programs, not all nations have progressed to this point. Specifically, a review of the literature shows that no studies exist to describe the level of involvement in or perceptions of organizational partners about the quality of cooperative education in Saudi Arabia. Several researchers have addressed the more general issue of student preparation for the Saudi labor market. Al-Megren (1996) analyzed the perceptions of private sector firms toward the quality of the vocational education system in Saudi Arabia. Al-Romi (2001) analyzed the school-to-work transition process by exploring employer expectations concerning the success of the general high schools in terms of preparing their graduates for the Saudi labor market.

Some research articles have been published about cooperative education in Saudi Arabia in general. For instance, Al-Mannie (2000) pointed out that research on the quality of cooperative education in Saudi Arabia from an organizational partner

perspective is needed to find the reasons behind the unemployment of technical and vocational education graduates. Aleisa & Alabdulhafez (2002) conducted research about the successes and challenges of cooperative education in the Riyadh College of Technology. They emphasized the importance of the organizational partner involvement in cooperative education program design and implementation as a key to success in closing the gap between the employability of technical education graduates and Saudi labor market demands. However, no study has investigated the perceptions of organizational partners concerning the quality of the cooperative education program in the Secondary Industrial Institutes (SII) and the readiness of the SII graduates for the labor market (Abdulaziz, Hawley, & Zirkle, 2002, and Al-Romi, 2001).

The Ministry of Planning in the Kingdom of Saudi Arabia criticized vocational education in the Fifth National Strategic Development Plan (1986-1990). The plan states that there is a gap between vocational and technical education outcomes and the occupational needs in the Saudi labor market. In order to bring the vocational and technical education outcomes and the occupational demands into alignment, the Ministry of Planning recommended GOTEVT create a relationship with business organizations through cooperative education programs (Ministry of Planning, 1991).

If the effectiveness of cooperative education programs depends on the involvement of the organizational partners, then more needs to be known about the perceptions of organizational partners of cooperative education programs in Saudi Arabia. The purpose of this study was to examine the effectiveness of cooperative (co-op) education programs in secondary industrial institutes (SII) in Saudi Arabia as perceived by their organizational partners.

Research Questions

This study has sought to learn the perceptions of the organizational partners about the effectiveness of the cooperative education program in the Riyadh and Jeddah SIIs in SA. The following variables were examined: organization size, type, cooperative education structure in the firm, years of experience in cooperative education, student major, and degree of involvement in planning and evaluation. The survey instrument measured how organizational partners assess the skills and work ethics of their placements.

The study sought to answer the following questions:

Research questions

1. Is a training plan an important element to employers when they participate in cooperative education programs?
2. What is the relationship among cooperative education student characteristics and organization impact?
3. What is the relationship among organization and SIIs contacts and organization impact?
4. What is the relationship among cooperative education coordinator roles and organization impact?
5. What is the relationship among organizational partners' characteristics and organization impact?

Definition of Terms

Organizational Partner

Organizational Partner refers to the industries and governmental agencies that host student "interns" from the SIIs to provide real work experiences as part of the training program.

Cooperative Education Coordinator

Cooperative Education Coordinator in the Secondary Industrial Institutes refers to the person who is responsible for cooperative education students in the workplace. There is one coordinator in each Institute.

Work-based Learning

Work-based Learning refers to the learning that occurs at the job site and benefit the individual and the organization.

Skills

Skills refer to the capacities needed to perform a set of tasks that are developed as a result of training and experience (Dunnette, 1976).

Organizational Skills

Organizational Skills refer to the technical and soft skills needed at the work site.

Technical Skills

Technical Skills refer to the system or tool specific skills and can be either information or hardware oriented. It is generally thought of as people-thing or people-procedure, or people-process focused (Jacobs, 2001).

Soft Skills

Soft Skills refer to the informal term for non-technical related work skills. It is responsive to situational needs in the work place. Examples include leadership, listening, negotiation, conflict management, problem- solving, and team work (E-learning, 2004).

Limitations of the Study

This study was limited to the cooperative education organizational partners in the Riyadh and Jeddah SIIs who participated in the cooperative education program in the 2002/2003 academic year. The time frame for conducting the study and gathering the data was winter 2004, which was the second semester of the 2003 academic year in the Kingdom of Saudi Arabia.

Significance of the Study

This study will make a contribution to both the scholarly literature and the practice of cooperative education. Rosenbaum (2001) stated that for the cooperative education to be effective and successful opinions of the organizational partners should be

considered. Since the organizational partner is the cornerstone of the cooperative education program, this study investigated the perceptions of organizational partners about the effectiveness of the cooperative education program in the Saudi Arabian Secondary Industrial Institutes.

The significance of the study is that it will determine how positively the effectiveness of cooperative education is viewed by those directly affected by the training of SII students - the organizational partners. Hopefully, this study will contribute as well to Saudi technical and vocational education system reform. The study will contribute to the body of knowledge about the school-to-work transition and will provide baseline data for researchers of secondary industrial education in Saudi Arabia.

The results of the study could be used to promote and assist in the evaluation of cooperative education programs for the purpose of program improvement. The results also could be used to characterize the effectiveness of the cooperative education program in SIIs from the organizational partner perspective. The study findings will help practitioners, policy makers and program developers to learn more about the effectiveness of cooperative education and the school-to-work program.

The sincere hope of the researcher is that the results of the study will find their way to the decision makers in Saudi Arabia, who may assign organizational partners a stronger role and more involvement in technical and vocational program planning and implementation, as a suggested solution to fill the gap between SIIs student employability and labor market demands.

CHAPTER 2

REVIEW OF THE LITERATURE

This chapter is organized into five sections. The first section defines cooperative education and explains its purpose and history. The second section reviews the work-based learning program. The third section summarizes the literature on employer perceptions of cooperative education. The fourth section highlights the cooperative education in the SIIs in Saudi Arabia and focuses on the cooperation between technical education and the labor market. The final section offers a conceptual framework of the study.

Cooperative Education

This section is divided into three parts. The first part provides the definition and purpose of cooperative education. The second section summarizes the history of cooperative education. The third part explores the types of cooperative education research.

Definition and Purpose of Cooperative Education

Cooperative education is defined in part as a process of education that formally integrates a student's academic and/or career interests with a productive work experience in a cooperating employer organization (National Commission for Cooperative 1989). There are four different constituencies involved in making decisions about cooperation education. These four parties are 1) public funding agencies (government), which provide

operating grants to educational institutions; 2) employers (organizational partners); 3) administrative and faculty members in postsecondary education institutions; and 4) students (Cut & Loken, 1995).

Cooperative education combines academic study with actual work. Thrasher (1992) stated that the term cooperative education means "the provision of alternating or parallel periods of academic study and public or private employment in order to give students work experiences related to their academic or occupational objectives and an opportunity to earn the funds necessary for continuing and completing their education." Cooperative education may be defined as a structured program in which periods of study alternate with periods of related work experience. This program gives students experience as employees of business and industry before their actual professional employment. Students are provided with an environment where they are able to have “hands on” experience with the newest equipment and technologies. Cooperative education programs are concentrated in the vocational areas of marketing, trade and industry, and business. Although the program is national, specific arrangements are worked out locally between individual employers (organizational partners) and school staff, subject to state laws and local customs (Ascher, 1994). The main purpose of cooperative education is to allow students to participate in a working environment that is of interest to them while attending classes related to that profession (Thrasher, 1992).

History of Cooperative Education

Cooperative education is a critical pedagogical strategy to help students make the transition between school and work (Ascher, 1994, Steinberg, 1997). Cooperative

education was started in 1906 when Herman Schneider, Dean of the College of Engineering at the University of Cincinnati adopted the apprenticeship approach to learning a trade. Cooperative education can be linked to crafts training in old societies. Craftspeople would pass their skills on to an apprentice who would practice and acquire that skill through actual hands-on experiences. Cooperative experience evolved into a more formal type of training called apprenticeship (Young, 1995). Evans and Herr (1978) state, "apprenticeship attempted to combine the best of family instruction and OJT [on-the- job training] by having an experienced worker agree to teach the full range of an occupation, acting in lieu of the parent". These early apprenticeship programs sometimes lasted as long as ten years (Young, 1995). Apprenticeship reached its peak in Europe just prior to the beginning of the industrial revolution. The apprenticeship program flourished in Europe and continues to this day as major mode of instruction (Evans & Herr, 1978).

Types of Research on Cooperative Education

Cooperative education is one of the most successful work-based learning programs. It aims to equip students with the organizational skills needed in the labor market. Much of the literature published in cooperative education field can be divided into four thematic areas: 1) student benefits, 2) employer benefits, 3) training and experiential learning models, and 4) employer perspectives. The successful interaction of these four areas to improve the quality of cooperative education programs (Braunstein, 2000).

The primary partners in Cooperative Education program are the student, school, and organizational partner. They interact with each other in meaningful ways that improves the effectiveness of the program. Cooperative education is structured around a

conceptual framework that integrates classroom education with on the job training. It is unified by a program model that includes employer participation and work experience for the student. The purpose of the program is to meet the needs of the labor market, help students fulfill career goals, and to promote the workplace as a learning environment. Research studies point to the value of collaboration between the educational institution and employers in designing cooperative education experiences for students.

According to researchers like Rosenbaum (2001), Hurd & Hendy (1997), Kariya & Rosenbaum (1989), and Stern & Wagner (1999), the relationship between the three cooperative components is very important to program success and achievement. When the relationship between these three components is strong and correlated it leads to desired outcomes. One essential outcome is the production of workers who have sufficient theoretical knowledge and practical experience about their professions. Therefore, the success of a cooperative education program depends on the quality of its product, which is the "student". The quality of a cooperative program is best measured by the rating it is given by its organizational partners the "employers" (Hurd & Hendy 1997).

Many reports in the literature underscore common features for effective cooperative programs (Ad Hoc Committee, 1986; Wilson, 1988). Researchers highlight the importance of good teachers, a well-planned and executed curriculum, careful sequencing and timing of the student experience, well-organized work experiences, employer and educator communication, knowledgeable liaisons, and the strength of student preparation. An important point made by authorities in the fields that while employers are interested in the preparation of students for productive roles in the

workplace, with an emphasis on commitment, flexibility, adaptation, team work, and problem solving, most cooperative education studies examine specific trade skill competencies and organizational efficacy as measures of program success. The focus of this literature review will be on studies that address the quality of cooperative education program as a function of these four areas.

Work-Based Learning

This section is divided into four parts. The first part defines work-based learning and explores the relationship between the work-based learning and cooperative education. The second part reviews the differences between learning in formal classroom and learning at a work site. The third section explains the relationship between work-based learning and school-to-work transition. It also explains the relationship between school to work transition and the youth unemployment and summarizes the organizational partners role in work-based work.

Definition of Work-based Learning

Work-based learning is learning that occurs at the job site and refers to learning that occurs at the job site. Work-based learning is defined as learning gained from work experience that involves the development of program content from work roles. Based on the principle that learning, wherever it takes place and provided that it can be assessed, can be used to provide credit towards the achievement of academic awards (Fairweather, 2004).

Work-based learning is considered a primarily strategy to prepare students for imminent work. Therefore, work-based learning should have a major role in high schools curriculum. Work-based learning provides the foundational basis for cooperative education programs. Cooperative education is an effective learning strategy for young people who have chosen their occupational direction. Cooperative education helps these young people to get experience in the actual activities of their chosen profession (Bailey, Hughes & Moore 2004). The core of cooperative education program is to put theory into practice under the supervision of the school and the experts at the job site. Jacobs (2003) identified three features of the effective work-based learning: 1) the amount of time that elapses between theory and practice should be reduced, 2) the learning experience should match or in fact duplicate the behavior that are in the work setting, 3) and there should be an interaction between the theoretical information and the work environment.

Work-based learning is an essential part of school-to-work transition because it provides a dimension of reality that schools alone have difficulty providing for students. The spectrum of work-based learning includes youth apprenticeship, paid work experience, cooperative education, job shadowing, business and industry mentoring, simulated work tasks at school or through vocational student organizations, school-based enterprises, and community service.

Through work experience, students have an opportunity to practice what they have learned in school in the labor market. It provides them the opportunity to develop their skills in communication and problem-solving and puts them in contact with adults who may act as mentors and positive role models. It gives students a taste of what various

careers entail on a day-to-day basis, which alone may be an invaluable career exploration activity (Paris & Mason, 1995).

Learning in Formal Classrooms and Learning at a Work Site

Learning in a work site is very different from formal learning in the classroom. Classroom learning is based on formal, intentionally planned educational activities while work-based learning is mostly informal in nature (Marsick & Watkins, 1990). In general there are four types of differences between classroom and worksite learning. First, classroom learning is based on individual activities while work-based learning is socially shared. Although group activities of various kinds are gradually becoming more common at school, students are usually evaluated on the basis of individual tasks and tests.

In contrast, many activities at the work site require collaboration with other people, and each person's ability to function successfully depends on performances of several individuals. Second, classroom learning focuses on mental activities like mathematics, reading and writing but in work-based learning the focus would be on the use of tools and equipment. Third, symbol manipulation is characteristic of classroom learning while work-based learning is characterized by contextualized reasoning. People in the workplace use objects and events directly in their reasoning, without necessarily using symbols to represent them, while the classroom is mostly symbol based, and connection to the events and objects symbolized are often lost. Fourth, classroom learning aims towards generalized skills and principles but learning at work develops situation-specific competencies (Resnick, 1987).

However, the difference between classroom learning and work-based learning is not always so clear. Workplace learning also may be a context for formal employee training. Large companies especially have put a lot of effort into corporate training. In recent years, the role of school is joined with corporate training programs, with school extending its reach to organizations and work places through the cooperative education programs (Jussi & Annali, 2003).

Cooperative education is a branch of work-based learning. High quality cooperative education programs include both conceptualized (theoretical) and contextualized (practical) learning (Boud, 1998). When examining cooperative education as a type of work-based learning it is important to understand the fundamental nature of learning at work. What is workplace learning? How does learning at work take place? What are the constraints and prerequisites of learning at work place learning? Jussi & Annali (2003) stress that organizational experience, business type, conceptions of expertise, models of learning have a key role in developing a high quality cooperative education program.

Work-Based Learning and School-To-Work Transition

Work-based learning is rooted in the larger school-to-work movement. School to work comes out of the sense that the labor market and schools are not closely aligned with one another. Calls for work-ready graduates are rooted in the convergence of the types of economic growth in different countries (Hawley, 2001). Therefore, schools and the labor market increasingly are being encouraged to come closer and bridge the gaps between them by preparing youth for job entry before they leave their school.

School to work programs combine school-based learning and on the job instruction in a structured learning experience. School to work program requires a broad

coalition of community partners, (including students, parents, high schools, employers, workers, postsecondary educational institutions, community based organizations and government) participate in the development and maintenance of the program. Often, schools to work programs provide a transition and academic credit from high school to postsecondary institutions. A primary goal of school to work programs is to provide a regional or nationally recognized certification of occupational and academic skills mastery (McCarthy, 1994).

School-to-Work and Youth Unemployment

School to work programs have a big impact on lowering the youth unemployment rate and provide many advantages for students and society. Germany and Japan, for example, have experienced dramatically lower youth unemployment rates than many countries over longer periods of time (Hess, Peterson, Mortimer 1994). Japanese and German employers see advantages to hiring young workers who, besides being less expensive, are often more energetic and easier to teach, especially in the area of new technology. Japan and Germany have a clear system for helping high school students enter work. In addition, Japan and Germany have a strong and systematic communication between schools and employers, which results in dramatic benefits for employers, students, and school (Rosenbaum, 2001).

There is a relationship between the youth unemployment rate and school to work programs. The low youth unemployment in Germany, in particular, is attributable to the employment of many young people as apprentices. In addition, the direct involvement of employers in the training of young people facilitates the transition to stable employment.

For example, in the Netherlands, the rate of unemployment among young people (15-25 years old) has decreased from 24.9 in 1983 to 9.7 in 1993 (Stern and Wagner, 1999). The reason is that the number of apprentices grew by 50% between 1986 and 1992. From 1980 to 1991, the number of students enrolled in secondary vocational education nearly doubled and at the same time, employers were taking on a bigger role through provisions of work-based learning (Streumer, 1999). On the other hand, American youth were two and a half times more likely to be unemployed than adults in 1965, and four times more likely by 1979, this ratio was much lower and did not increase in Japan and Germany (Rosenbaum, 2001).

The Academy for Educational Development's National Institute for Work and Learning (AED/NIWL) in 1996 undertook a four-year study of school to work transition in the USA. The study reported that school to work programs (STW) help students graduate from high school with the skills needed by employers and that STW programs prepare students for job entry. School to work programs have a short and long-term outcomes. The long term outcome is that the program provides the graduates with the work skills for long term work stability. A few sites in the study had gathered sound data providing evidence that there is a relationship between school to work programs and long-term employment. The study indicated that, a few years after graduation, STW graduate were more likely to be employed and had higher incomes and professional standing than their peers who did not experience STW. The short term outcomes that were documented have value, both because of their intrinsic importance, and because they enable students to achieve the long-term outcomes that are the ultimate goal of STW. Short-term outcomes for students include skills and knowledge, career direction,

motivation, and empowerment. Specific outcomes for students include: occupational skills development, employability skills, sense of career direction, career planning process skills, motivation and personal empowerment.

The study also found evidence of positive benefits for business and industry as well. Business and industry were pleased to have the immediate benefits of the extra workers provided through school to work internships. Some business also reported as a positive outcome the development of a better-trained pool of potential employees, who understood the industry and its needs (U.S Department of Education, 1996).

Organizational Partners Role in Work-Based Learning

Organizational partners play an important and critical role in work-based learning. The main reason is that they are the ones who own the jobs and who know the skills most needed in the labor market. Therefore, their contribution and involvement in program planning and development will help secure job opportunities for graduates. Another reason their role is critical is their contribution to training in general and youth training in particular. Based on a 1995 survey, the US government found that in firms with more than 50 workers, 95.8% of people surveyed had received some form of informal training while on the job with that employer. Some 69.8% had received some type of formal training in the previous 12 months. The most frequent type of training included occupational skills training, safety training, or communications and the younger workers were much more likely to receive training than the older ones (Hawley, 2001). The findings of this study give us indicators that the private sector and employers in general

pay more attention to training. Therefore, their training experience will have a positive impact on school to work students assigned to them.

Organizational Partners and Cooperative Education

This section is divided into two parts. The first part contains information about two research studies that were conducted by Flinders University of South Australia in 1993 and 1998. The Flinders University of South Australia intends to conducted a study entitled "Key Accountability Process and Measures" to capture trend changes in employers' perceptions of the graduates work skills. The University conducted the study as a response to requirement to demonstrate quality improvement. The results of the research identified the work skills that were in demand by employers. The second part focuses on the factors that influence the involvement of employers in cooperative education like Organizational size, business type, cooperative education structure in the organization, organizational familiarity with cooperative education, years of organizational experience in cooperative education, and student major.

These studies are 1)-Braunstein (2000) from the Utah State University who studied the employer benefit of and attitudes toward cooperative education 2)- Bowers (1989) from the Florida State University who studied employer, student, and cooperative education coordinator perceptions about cooperative education 3)- Al-Megren (1996) who studied the perceptions of the private sector toward the quality of the vocational education system in Saudi Arabia, and 4)- Al-Romi (2001) who analyzed the existing school-to-work transition in Saudi Arabia.

Organizational Skills from the Employer Perspective

In 1998, the Flinders University of South Australia conducted their second five-year survey on “Key Accountability Process and Measures” to examine the perspectives of the private and public sectors about the most valued organizational skills that students should have. The goal of the study was to identify the priority employers place on a range of workplace skills in their perception of the ideal graduate. Respondents were presented with a list of seventeen workplace skills and asked to rate their priorities for the "ideal graduate" on a five point scale where 1 was "very low", 2 was "low", 3 was "moderate", 4 was "high" and 5 was "very high" (Figure 2.1).

Ideal Graduate Workplace Skills Priority Order (N=177)	Mean	SD	Public Sector Priority Order (n=79)	Private Sector Priority Order (n=97)
1. Capacity for cooperative education and teamwork	4.54	0.57	1	1
2. Communication/presentation skills	4.49	0.61	2	2
3. Capacity to learn new skills and procedures	4.43	0.57	3	3
4. capacity to appreciate different viewpoints and cultural perspectives	4.26	0.79	4	4
5. adaptability/capacity to cope with change	4.22	0.68	6	5
6. ability to apply knowledge to the work place	4.21	0.76	5	6
7. ability to access and use relevant information	4.12	0.61	7	10
8. ability to think creatively	4.11	0.70	8	8
9. analytical/problem-solving skills	4.08	0.73	9	9
10. time management	3.99	0.76	13	7
11. Capacity to make decision	3.94	0.79	12	11
12. adequacy of knowledge in appropriate field	3.91	0.78	10	13
13. writing/report writing skills	3.91	0.78	11	14
14. capacity to work with minimum supervision	3.81	0.78	14	12
15. other computer skills	3.21	1.01	15	15
16. management/supervisory skills	3.15	0.94	17	16
17. word processing skills	3.15	0.95	16	17

Figure 2.1: Workplace skills as prioritized by employers' of Flinders University study.

All seventeen organizational skills were viewed by employers are having "moderate" to "very high" importance. However, public and private sectors employers were in agreement that the most valued organizational skills from their perspectives are capacity for cooperation and team work, communication and presentation skills, and capacity to learn new skills and procedures. This 1998 survey followed a 1993 telephone survey of employers' perceptions of workplace skills and qualities of graduates. In the 1993 telephone survey, Yann Wheeler studied the organizational partners' perspectives about eight organizational skills. Two of the eight were not carried forward to the 1998 survey. They are theoretical knowledge of the professional field and potential for career and advancement. These skills are:

- communication skills,
- The capacity to learn new skills and procedures,
- The capacity to make decisions and solve problems,
- The ability to apply knowledge in the work place,
- The theoretical knowledge in the professional field,
- The capacity to work with minimum supervision,
- The capacity for cooperative educationeration and team work,
- The potential for career and advancement.

The list of workplace skills in the 1998 research more than doubled the options for employers, yet the "capacity to learn new skills and procedures" remains the enduring highly valued attribute of the ideal graduate as viewed by employers. A significant connotation of graduate status identified by employers is thus an employee who is willing and able to learn. Moreover, Marchmet (1998) who analyzed both studies stated that the

ideal cooperative education graduate from the organizational partners' perspectives would exhibit "potential for career advancement" "theoretical knowledge in the professional field," and the "capacity to learn new skills and procedures." In both studies organizational partners differ in their ranking of workplace skills due to the organization size, type, and number of employees in the organization. For example, private sector employers gave significantly higher value to "communication and presentation skills" than did public sector employers. Private sector employers also gave significantly higher value to "capacity to work within minimum supervision" than did public sector employers. Both studies also found that organizations with 20-50 employees were significantly more likely to value adaptability, or the capacity to cope with change, compared to smaller organizations and those with over 300 employees. Organizations with more than 300 employees gave significantly less value to the "adequacy of knowledge in appropriate field", and "capacity to work with minimum supervision", than did smaller employers.

Factors that Influence the Involvement of Partners in Cooperative Education

Braunstein (2000) studied the benefits of cooperative education to organizational partners and their attitudes toward postsecondary cooperative education. Organizational size, business type, cooperative education structure in the organization, organizational familiarity with cooperative education, years of organizational experience in cooperative education, and student major were examined to determine if any relationship existed between these variables and perceptions of employer benefits, cooperative education outcomes, and structural features of cooperative education. Respondents identified many

benefits to participating in cooperative education. The top three benefits were hiring motivated new employees, screening students for permanent employment, and providing positive interactions with the college/university.

Outcomes of cooperative education identified by respondents included that the cooperative education student was more likely to be hired, tended to progress faster in the organization, tended to remain for a longer employment period, and tended to receive a higher starting salary. Structural features identified as important by respondents included students receiving a formal evaluation from the organization, receiving a formal evaluation from the institution, completing an end-of-term work report, completing specific learning objectives, spending more than one term in the organization, receiving academic credit, and receiving on-site visits from faculty/staff members.

Statistical significant differences were found between different sizes of organizations concerning Affirmative Action goals, specifically recruiting minorities, and students working more than one term in the organization. Statistical differences were also found between type of organization (profit, nonprofit, and government) and completing one-time projects and between respondents with different levels of personal knowledge of cooperative education concerning screening students for permanent employment. Moreover, a statistical difference was found between organizations hiring engineering students and organizations hiring business or other majors concerning screening students for permanent employment.

For example, concerning size of organization, respondents from small organizations showed statistically significant differences in their response to meeting Affirmative Action goals than did respondents from medium size organizations. The

variable of student major had one significant difference concerning screening students for permanent employment. Ninety-two percent of respondents from organizations hiring engineering majors indicated this was a benefit or great benefit, and sixty percent of respondents hiring other majors indicated this was a benefit or great benefit.

Braunstein also asked employers to evaluate 17 interpersonal skills and competencies of employees with cooperative education experience against employees without cooperative education experience. Respondents indicated employees with cooperative education experience were better than employees without cooperative education experience especially, in the areas of technology, technical knowledge, team skills, resource utilization, thinking skills, self-esteem, self management, communication skills, human relation skills, computer literacy, responsibility, customer service skills, and overall quality of work. On the other hand, Braunstein found that employees with cooperative education experience were the same as those without cooperative education experience in training/facilitation skills and leadership skills. Moreover, Braunstein found that employees without cooperative education experience were more highly than those with cooperative education experience in the area of integrity and honesty. Additionally, the personal knowledge of the work site instructor about cooperative education was found to affect the quality of cooperative education. Of the employers in the study who were not well learned in cooperative education, only 50% found important the knowledge of the work site instructors about cooperative education. Of respondents with in-depth knowledge of cooperative education 80% felt this to be of benefit or great benefit (Braunstein, 2000).

Bowers (1989) studied employer, student, and cooperative coordinator perceptions about cooperative education in Florida. Employers were asked to respond to a variety of questions concerning their type of business, whether the goals of cooperative education had been explained to them, whether the student had a training plan to which the employer agreed, coordination visits, advisory committees, and in-school learning activities. Seventy nine percent of the respondents indicated that the cooperative education goals were explained to them. Similarly, seventy five percent of the employers responded positively that their cooperative education had a training plan to which they agreed. Eighty eight percent of the respondents viewed cooperative education coordinator visits as being frequent enough. Ninety seven percent of the employers were very satisfied with the cooperative training experience and with the program in general. However, they wanted more emphasis on basic literacy skills, listening skills, work ethics, goal setting, and communication between school and organizational partners. All the respondents indicated that the quality of instruction needs to be improved. Respondents focused on improving the ability to use good judgment, to accept criticism, to use machine transcription and data/word processing equipment, and to demonstrate initiative.

Al-Megren (1996) studied the perceptions of the private sector toward the quality of the vocational education system in Saudi Arabia. The major findings of the study were that vocational education programs and curricula were not sufficient to fulfill the employers' needs. Employers believe that vocational education students are less experienced, poorly trained, and that they lack awareness of job requirements, discipline, self-confidence and aspiration.

Al-Megren found that the organization size and the organization years of experience dealing with vocational students create great differences in their responses. For example, smaller and newer firms have a positive perception towards the level of experience of vocational educational students but bigger organizations have negative perceptions. Also firms with very low capital tend to hesitate to cooperate with vocational education programs. The majority of the study respondents emphasized the importance of the technical and soft skills in their future employees and reported the absence of these skills in the current GOTEVT graduates. Despite the negative perception of students' attributes and the vocational education system, employers were welling to hire vocational education graduates and to cooperate with GOTEVT in student preparation for the labor market (Al-Megren, 1996). However, the Al-Megren study was conducted before the implementation of cooperative education in GOTEVT.

Al- Romi (2001) analyzed the existing school-to-work transition process in Saudi Arabia. He examined students and employers' perceptions about the existing high school curricula and skills preparation of the graduating high school students for the labor market. He found that the high school curricula do not prepare students for the labor market. Employers in the Al-Romi study emphasized their need for employees with employability skills like teamwork, communication skills, leadership skills, and computer skills, in addition to personal, social, and capacity building skills. The study concluded that in Saudi Arabia there is no system responsible for preparing youth for the labor market and there is no link between education systems and the labor market (Al- Romi, 2001).

The Saudi Context

This section is divided into four parts. The first part provides general information about the Saudi Arabian educational system. The second part explains the existing system of school to work transition in the Saudi context. The third part describes the current situation of the cooperative education the SIIs. The fourth part explores the cooperation between technical and vocational education and the labor market.

Educational System in Saudi Arabia

The Saudi Arabian education system is divided into three main categories; general education, higher education and technical and vocational education. General education is under the supervision of the Ministry of Education, which was established in 1954. General education consists of six years of elementary school, beginning at age six, three years of intermediate and three years of general secondary school. General education students do not study any subject related to vocational and technical skills. Higher education is under the supervision of the Ministry of Higher Education. There are eight universities in the Kingdom of Saudi Arabia that grant bachelor, master and doctorate degrees in many different fields. Student can pursue higher education after graduating from general secondary school. Technical education and vocational training in the Kingdom of Saudi Arabia started in the early 1950s and it was integrated with general education. Nowadays technical and vocational education is a totally independent organization and all technical and vocational education (public or private) is under one umbrella, the General Organization for Technical Education and Vocational Training,

GOTEVT, (GOTEVT, 1989). The system was formally established in 1980 when technical education and vocational training was separated from the general educational system to give it the autonomy and impetus it needed in order to play a critical role in the development of the Kingdom's national workforce.

Cooperative Education in the Saudi Context

In Saudi Arabia, over the past thirty years, Six National Development Plans have focused on establishing and expanding technical and vocational education. The Seventh Development Plan (2000-2004) came to enhance the cooperation and coordination between technical education and training institutions and related agencies. The government is building the school to work transition gradually by encouraging schools to build and maintain good relationship with business and industries. The government relies on the higher institutions research and studies to put school and work in alignment. In the recent years universities funded many research in how to facilitate school-to-work transition. However, most of the research is theoretical in nature (Al-Zalabani, 2002). Saudi Arabia like most of the Middle East countries, are still striving to establish school to work programs. Saudi Arabia has developed many vocational and training programs, but it still lacks clear policies and transition systems. In Saudi Arabia there is as yet neither a clear policy nor a specific action plan to carry out reforms needed to improve the effectiveness and efficiency of school-to-work transition (Mellahi, 2000).

Cooperative Education in SIIS

Recently, GOTEVT has modified the SII curriculum in response to both increasing bodies of knowledge and changing work and professional demands. By the

beginning of the academic year 2003/2004, SII students will spend the last semester of their three years of study in an SII at a Cooperative Education Program.

Cooperative education in Secondary Industrial Institutes SIIs in Saudi Arabia commenced in the early 1989 when it was introduced in the Royal Industrial Institutes in Riyadh and the Secondary Industrial Institute in Dammam for only few days in the last year for the automobile mechanical department (Abdulaziz, A. Hawley J. & Zirkle C., 2002).

Cooperative Education Program in SIIs is defined as an activity for the third year students in some fields when they spend few weeks in a training firm to practice the knowledge, skills, attitude that they have learned in the classrooms. Cooperative Education Program in the Secondary Industrial Institutes is better described as an outside activity deducted from the practical workshops period. Students go to practice the profession in a training firm outside the school for few weeks. But, these few weeks, which differ among each institute and among each specialist in the same institute, are not continual. Students alternate the cooperative time with the regular classroom.

Cooperation between Technical and Vocational Education and the Labor Market

GOTEVT believes that in order to meet the needs of the labor market for highly trained Saudi manpower, the utmost importance should be given to development of a strong relationship with the organizations in the labor market (GOTEVT, 1989). GOTEVT, together with competent Saudi advisors, exerted great effort to achieve these goals especially in the area of cooperative education programs and curricula development. On the other hand, the opinion of the labor market is viewed continuously

by the parties concerned by means of questionnaires, field trips, official discussions and meetings which all have a positive effect in producing appropriate programs to fulfill the needs of the vocational, technological and technical and services sectors in the Kingdom (GOTEVT, 1999). In addition, advisory committees have been formed for the technical and vocational programs. These committees comprise of members from governmental institutions and the labor market who provide GOTEVT with their advice and counseling on the process of developing programs (GOTEVT, 1999). The connection of the Chamber of Commerce and Industry to these advisory committees is of crucial importance for the development of curricula and programs (GOTEVT, 1999).

Thus GOTEVT started developing its programs and instruction materials according to the contribution of the labor market in identifying the type of materials and programs necessary to ensure that the trainees required by the labor market would be well prepared. In order to achieve these goals, GOTEVT adopted a number of ways and means such as:

1. Close study of the labor market.
2. A number of officials from GOTEVT met with officials from other sectors to identify the needs required in instructional materials.
3. GOTEVT invited a number of officials from the public and private sectors as members of the advisory committees for the purpose of identifying the format and the sequence of the programs and courses, so that, the material would not be isolated from the needs of the labor market.
4. Conduct special studies to identify carrier patterns in the labor market and to follow up the progress of the graduates in the labor market (GOTEVT, 2001).

In this regard, GOTEVT endeavored to make Cooperative Education, which is considered as one of the modern techniques in developing technical and vocational skills, and which is suitable to skills required for the local market, as part of the instructional

materials (Al-Ghafis, 1997). The implementation of the cooperative education can be accomplished by identifying different fields, where training and educational institutions will benefit from them. Students of a certain level of education are sent to these fields to spend a period of time training in the appropriate program which is carried out in the training and educational facilities.

This type of cooperative education between the governmental training institutions and the private sector or the governmental producing sector, has some advantages:

1. The student will acquire the appropriate behaviors and instructions by practicing the job on the spot;

2. The load of work on governmental training areas will be eased by increasing the employment capacity because a number of these students will be outside the institute or center during the year of study;

3. Allowing the employer to get acquainted with the students and observe their performance, behavior, and commitment for potential and direct placement after graduation (GOTEVT, 1999).

To accomplish this, a direct contact has been made with the officials of most of the sectors that employ GOTEVT graduates. This can be done by showing the parties concerned the available careers practiced in the industrial institutes and technical colleges so that their needs for qualified technical manpower could be fulfilled. Additional discussion matters of cooperative educationeration and practical training with these sectors during the study period help to burnish the graduate skills (GOTEVT, 1999). For the purpose of acquiring the training skills required for employment in these sectors the field trips, which followed, resulted in the drawing up of the framework for cooperative education (GOTEVT, 1999).

This study addresses the effectiveness of cooperative education in Saudi Arabia, particularly when it comes to how cooperative education graduates are perceived in the

labor market. Therefore, a survey was developed to allow us to document the experience of employers with the cooperative education system. The survey will help to collect information about the quality of the cooperative education program as perceived by these employers and plan better policy and practices for the future.

Conceptual Framework of the Study

The conceptual framework of this research targets the employer as the centerpiece of cooperative education, seeking to understand the needs, goals, and perceptions of this critical partner. From the literature communication between the organizational partner and the educational institution is essential, that the educators must be responsible and accountable for preparation of students, that the employer role is equally important, and that cooperative education benefits student, employer, and nation. In preparing students the literature underscores the importance to employers of workplace skills in addition to technical skills. Workplace skills include problem solving, adaptability, attitude, cooperation, etc. This study incorporated the organizational skills identified in six studies as the most valued by employers (Bowers 1989 the Flinders University of South Australia 1993 & 1998, Al-Megren 1996, Braustein 2000, and Al-Romi2001).

Based on the literature review, complex relationships exist among the training plan, coordinators role, history and characteristics of the organizational partner, communications, student preparation, and benefits of the cooperative education program. The primary conceptual framework of the study is presented in Figure 2.2.

The dependent variable for the study is the organizational impact of the cooperative education. The independent variables of the study are: cooperative education training

plan, cooperative education coordinator role, interactions between the SIIs and their partners, characteristics of the organizational partners like type and size, experience by the organizational partners, student characteristics, such as technical and workplace skill, and work ethics.

I originally hypothesized (not validated by the findings) that size of organizational partner will be the strongest predictor of effectiveness, thinking that larger employers will likely have more staff devoted to training and to interaction with SIIs, will better support the training experience, will supplement more easily any SII training deficiencies, and will be more likely to employ cooperative education students after they graduate, thereby making the program more effective.

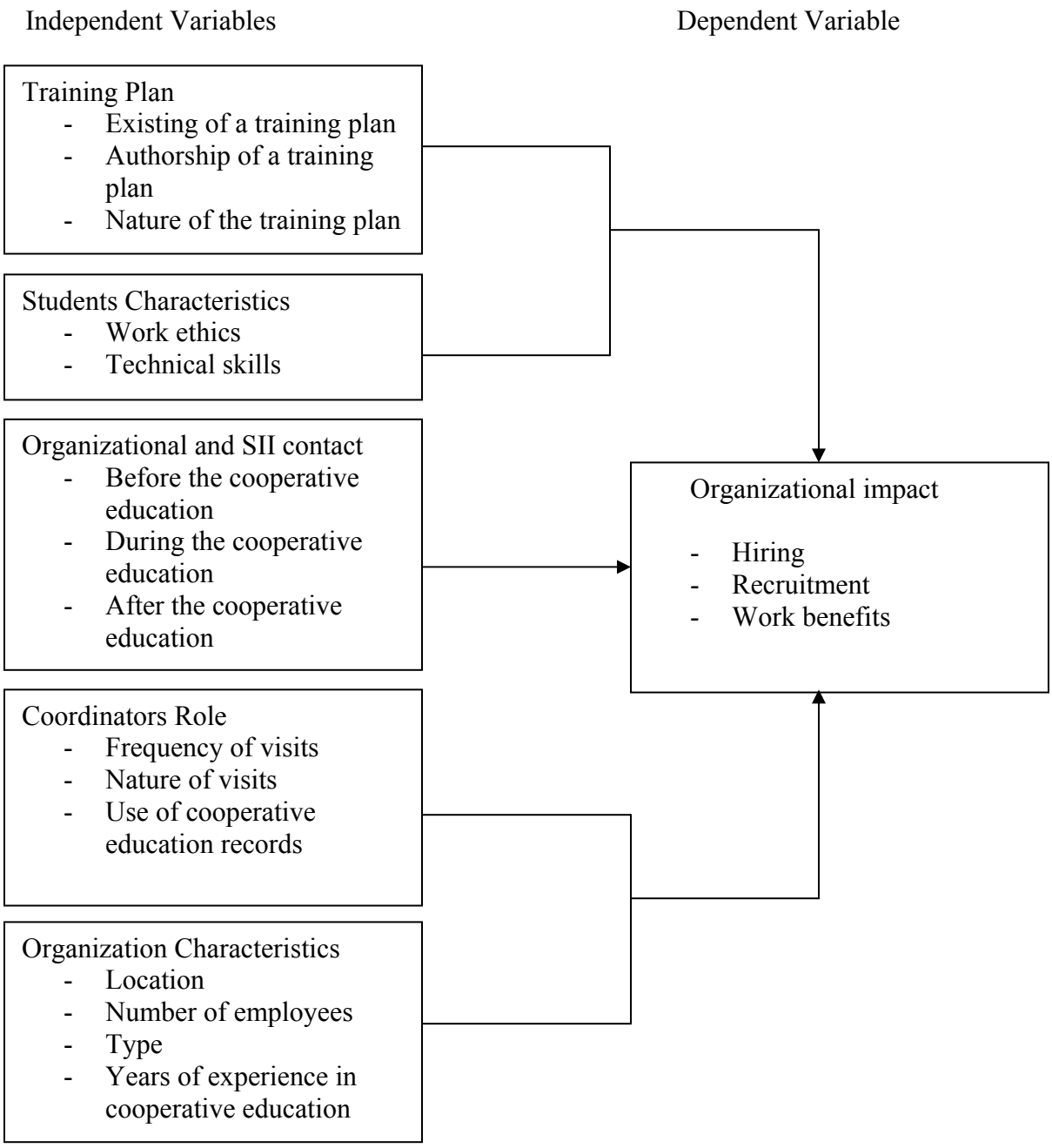


Figure 2.2 Conceptual Framework of the Study

CHAPTER 3

METHODOLOGY

This chapter is divided into four sections. The first section discusses the research population and sample, access to the research site and the variables to be measured. The second section describes the instrument that was used to collect the research data. It covers survey type, questionnaire design, language translation and cultural adaptation, validity, reliability and pilot study. Section three provides information about the study questions and the data collection procedures. The fourth section describes the data analysis.

Population and Sample

Population is the group to which the researcher would like the results of the study to be generalizable (Gay, 1981). The target population for the study is comprised of the forty eight organizational partners, twenty seven in Jeddah and twenty one in Riyadh, who participated in the cooperative education program of the SIIs in the academic year 2003-2004.

Sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they were selected (Gay,

1981). A sample is a collection of sampling units drawn from a frame or frames. Data are obtained from the elements of the sample and used in describing the population (Scheaffer, Mendenhall & Ott, 1996. In this study we surveyed the largest two of the ten areas in Saudi Arabia where the Industrial Institutes are located. The other eight are relatively small in comparison. Therefore, sampling was purposive. All of the cooperative education organizational partners in Jeddah and Riyadh were surveyed. They were considered to represent the organizational partners in all the SIIs.

Access to Research Sites

A letter of permission to conduct the study was obtained from the General Director of Technical Supervision (GDTS) at GOTEVT, to survey the cooperative education organizational partners in the cities of Riyadh and Jeddah. The GDTS authorization to conduct the study was sent to the Riyadh and Jeddah SII directors to solicit their cooperation. The school directors were asked to submit to the researcher an alphabetized list of the organizational partners in the 2003/2004 academic year, with mailing addresses, phone and fax numbers and email addresses.

Variables Measured

The dependent variable in this research study is the organizational impact of the cooperative education. There are five independent variables that were measured for their impact on effectiveness of the cooperative education program:

1) Cooperative education training plan
2) Cooperative education coordinator role

3) Communication between SIIs and organizational partners
4) Cooperative education student characteristics
5) Organization characteristics.

Survey Method

The major purpose of a survey is to describe the characteristics of a population. In essence, what researchers want to find out is how the members of a population distribute themselves on one or more variables (Fraenkel & Wallen, 2000). Borg, Gall & Gall (1993) assert that in survey studies, questionnaires have two advantages over interviews for collecting research data: they cost less in time and they cover more respondents over a wider area. From the phone conversations, organizational partners were found to be interested in the research subject. Therefore, the mail procedure for collecting data from them was considered a sound method.

The study used a quantitative paradigm for data collection and analysis. Quantitative methods consist of two types: experiments and surveys. Since I am interested in the opinion of the workplace partners who are involved in the cooperative education programs in the Riyadh and Jeddah SIIs, a survey method were used. The survey questions focused on the organizational partners' perceptions of the effectiveness of cooperative education program and how it relates to their workplace needs.

There are two types of surveys: cross-sectional and longitudinal, using questionnaires or structured interviews for data collection, with the intent of generalizing from a sample to the population (Babbie, 1990). The method that was used in this study is a cross-sectional survey method. A cross-sectional survey is a method of collecting the

information from a sample that has been drawn from a predetermined population. The information is collected at just one point in time, although the time it takes to collect all of the data desired may take anywhere from a day to a few weeks or more. In a longitudinal survey, on the other hand, information is collected at different points in time in order to study changes over time (Fraenkle & Wallen, 2000). The study surveyed the organizational partners in Riyadh and Jeddah SIIs, seeking their opinions about the effectiveness of cooperative education programs. The questionnaire was worded in the Arabic language.

This study was conducted using an e-mail survey. The decision was to use an e-mail survey. There were some reasons for using the e-mail survey. Modern technology allows us to get faster responses. The regular mail services in Saudi Arabia are not accessible every where in the country. However, the e-mail survey is cheaper than other survey methods since the researcher is in the United States and the study was conducted in Saudi Arabia. Additionally, an e-mail survey is relatively low cost and can be accomplished with minimal staff and facilities, provide access to widely dispersed samples and samples that for other reasons are difficult to reach by the regular mail or phone and allows respondents time to give thoughtful answers, to look up records, or to consult with others.

Questionnaire Design

The design focused on developing a questionnaire that took into account how the responses will be analyzed to answer the related research questions. (Bilsborrow, Richard

& Guy, 1984). Kent (1993) advises observance of these three maxims to maximize valid responses to items on a questionnaire:

- Questions should be understandable for the respondents.
- Respondents must have the capability to answer the questions.
- Respondents must be willing to provide the needed information.

Open-ended questions were included to capture unsuspected information. Peripheral questions and subliminal wording have been avoided as suggested by Frary (1996) and Gay (1981).

Neuman (1997) reminds researchers that questions should have two main principles: "avoid confusion and keep the respondent's perspective in mind". Payne (1951) suggested that questions be simple, clear and short to avoid ambiguity and confusion. His rule of thumb is 25 or fewer words for a question. The researcher used the following guidelines to formulate the survey questions:

- Frary (1996) and Gay (1981) emphasize that questions should be specific and precise to get similar interpretation by all of the respondents.
- Edwards (1997) and Neuman (1997) speak to the use of appropriate language. They advise no slang , abbreviations or technical terms.
- Babbie (1990) and Neuman (1997) remind researchers that respondents should be able to answer all the questions and to provide reliable answers.
- Babbie (1990), Neuman (1997), and Frary (1996) emphasize the importance of not asking about more than one topic or idea in the same question.
- Rea & Parker (1992) encourage researchers to use emphasis for key words in questions like boldface, italics, capitals or underlining.

The final survey instrument included four major parts. The questionnaire was

designed to identify variables that may account for employer perceptions of the effectiveness of cooperative education. The dependent variable of the study was:

1) The organizational impact of the cooperative education:
    i. Hiring
    ii. Recruitment
    iii. Work benefits

This variable was measured by using a Likert measurement scale of 1-5. The organizational partners' responses served as the basis for determining the influence of the independent variables on effectiveness. There are five independent variables:

1) Cooperative education training plan
2) Cooperative education coordinator role
3) Communication between SIIs and the organizational partners
4) Student characteristics
5) Organizational characteristics

The questionnaire was divided into four sections. The first section was divided into six subsections presenting a 5 point Likert scale to rate from Strongly Agree to Strongly Disagree to correspond to the variables:

1. Cooperative education Training Plan
    - Is there a training plan?
    - Who developed the training plan?
    - What is the nature of the training plan?
2. The role of the cooperative education coordinators at the SII
    - What is the nature of the cooperative education coordinator visits?

- How effective is cooperative education coordinator visits?
- Visits and contributions of the SII cooperative education coordinator.

3. Communication between organizational partners and SIIs:
    - Involvement in development of the training plan
    - Partner and SII overall communications
4. Evaluation of student
    - Evaluation of student performance
    - Who evaluates the cooperative education student?
5. Student Characteristics:
    - Workplace skills
    - Job skills
    - Student contribution
    - Student performance
6. Benefits of the cooperative education to the organizational partners:
    - Do they use the cooperative education to choose their future employees?
    - What is the affect of cooperative education on reducing the training cost for the organizational partners?
    - How do organizational partners benefit from cooperative education student?
    - What is their opinion about the effectiveness of the cooperative education in SII?

The second section of the questionnaire collected demographical information about the organizational partners. Here the respondents were asked to select the appropriate answers to provide information about:

- Business location
- Type of industry
- In-house training
- Number of employees
- Percentage Saudi employees
- ISO certification
- HRD department

The Third section of the questionnaire collected information about the cooperative education structure within the organization. Here the respondents were asked to select the appropriate answers to provide information about:

- Which department manages the cooperative education?
- Number of years involved as a cooperative education partner
- Training credentials of organization's cooperative education supervisor
- Experience of the organization's cooperative education supervisor
- Cooperative education records
- Number of students placed
- Job placement relationship to student major
- Willingness to pay the cooperative education student

The fourth section was open ended questions about how they were selected as cooperative education partners, the cooperative education program weaknesses, strengths, and the organizational partners' comments and suggestions. Confidentiality was assured by coding the responses and treating each questionnaire response as a code. The questionnaire was designed to take no longer than 30 minutes.

Validity of the Questionnaire

Validity is the degree to which a test measures what it is intended to measure; a test is valid for a particular purpose and for a particular group (Gay, 1981). Content validity means items measure the content they intend to measure. Predictive validity means the score predicts a criterion measure. Concurrent validity means the results correlate with other results. Construct validity means the item measures hypothetical constructs or concepts. Face validity means the items appear to measure what the instrument purports to measure (Borg, Gall, & Gall, 1993, and Fraenkel & Wallen, 2000). To help establish content validity of the instrument panel of five experts in the area of cooperative education were asked to evaluate the instrument and make suggestions concerning the completeness, clearness, and relative importance of the items on the instruments. This panel of experts contained five judges who are actively involved in cooperative education and data analysis procedures. The panel consisted of cooperative education organization partners, academicians, and persons active in the cooperative education. They were pre-selected and identified as individuals with recognized knowledge and/or work experience in cooperative education. Each member of the panel

of experts was instructed to rate the relevancy of the instrument items with "yes" or "no" and explain the reasons if the "no" option was chosen.

A cover letter with two pages of instructions and the preliminary instrument were e-mailed to the five selected cooperative education experts. The panel of experts was asked to rate each proposed item as to whether or not the item should be included in the instrument (based on the questions the study addresses). All the panel of experts e-mailed their comments back to the researcher. Based upon the recommendation of the panel of experts, three questions were deleted, several questions were revised and the questionnaire design was changed.

Reliability of the questionnaire and Pilot Study:

Gay (1981) defines reliability as "the degree to which a test consistently measures whatever it measures." Reliability measures the item consistency, which tells us if the item responses are consistent across constructs, or not. It gives us indicators about our test stability by explaining if individuals vary in their responses when the instrument is administered a second time. In addition reliability tells us about the consistency in test administration and scoring (were errors caused by carelessness in administration or scoring) (Borg, Gall, & Gall, 1993).

To establish the reliability of the study instrument it is recommended to run a pilot study. A pilot study is a small-scale study administered before conducting an actual study. Its purpose is to detect any problems so that they can be remedied before the study proper is carried out and to reveal defects in the study plan (Fraenkel & Wallen, 2000). A pilot study is always used to test the suitability of procedures of a study. A pilot study can

be convincing documentation of the rigor of the proposed study without compromising the necessary "open contract" of the proposal (Rudestam & Newton, 2000).

A pilot test was conducted before the questionnaire was distributed to the main respondents to establish the reliability of the instrument. Nunnaly (1976) noted that a correlation greater than 0.65 can be considered to be an acceptable level for research purposes. The survey instrument was e-mailed to five cooperative education organization partners who were not included in the study target. These organizational partners were asked to answer the questions as though they were the subject of the study. The correlation result of the pilot test was 0.98. Therefore, the instrument was considered reliable.

Translation and Cultural Adaptation of the Questionnaire

The study questionnaire was developed in the English language and was translated into Arabic. Hambleton (1992) identified the most appropriate translation procedures that apply to research survey to ensure the high-quality of translations. The procedures start by selecting a person whose first language is the language into which the test is to be translated, and who has a good knowledge of subject matter and age-appropriate language. Maxwell (1996) identified five characteristics of an appropriate translator: a good knowledge of English, an excellent knowledge of the target language, experience in both languages and cultures, experience with the target populations, and skills in survey development. There are four types of procedures for verifying translation: multiple-forward translation, back translation, translation review by bilingual judges, and statistical review (Maxwell, 1996). The study questionnaire was translated by a bilingual

professional translator who holds a Ph.D degree in Translation. Also he is the author of the "Professional Translator Dictionary" in addition to many other books in translation from English-Arabic and Arabic-English. The Translation was reviewed by another bilingual judge, who holds a Ph.D from the United States and has many years of experience in surveys translation, to ensure the validity of the questionnaire translation. Translation review by bilingual judges is favored because in addition to checking the accuracy of the translation, it allows checking cultural adaptations and comparison of the level of reading difficulty.

Research Questions and Data Collection Procedures

The study was designed to answer the following questions:

1) What is the relationship among training plan, cooperative education in the organization and organizational impact? The independent variable is the type of the training plan that a partner brings to its role in supporting cooperative education. The factors are: A) is there a training plan for the cooperative education? B) who developed the training plan whether the SIIs, the organizational partners, or it is developed jointly between both of them, and C) What is the nature of the cooperative education training plan and were the goals and objectives of the training plan explained to the organization partners or not?
2) What is the relationship among cooperative education coordinator role, cooperative education in the organization and organizational impact? The independent variable is the cooperative education coordinators' role in term of their frequency of visits and nature of visits.

3) What is the relationship among organization characteristics, cooperative education in the organization and organizational impact? This question was answered by an analysis of the vector of independent variables included in "demographics." Each of the following demographic items: location, sector, type of industry, size, percentage of Saudi workforce, HRD department, and training certification, were analyzed separately. Descriptive statistics were utilized to reveal the intersection between the dependent variable (the organizational impact of the cooperative education) and independent variables, using as a basis responses to "yes" and "no" questions, and fill-in-the blanks. Fill-in-the blanks questions were examined for frequency counts and regression analysis was applied.
4) What is the relationship among organizational partners and SII contact, cooperative education in the organization and organizational impact? This question includes the following factors – partner participation in the development of a training plan, outreach by the SII through its coordinator, dialogue between SII and partner, and joint participation in student evaluation. This question was answered by ANOVA to check effect significance of the Likert scale responses summed, correlation coefficients, and regression to spot positive correlations of the predictor variables.
5) What is the relationship among student characteristics, cooperative education in the organization and organizational impact? This question provided the data for the characteristics of the cooperative education students in term of the work ethics and technical skills and its relationship with cooperative education in the organization and the organizational impact.

The researcher asked the respondents 4 open-ended questions to identify the weaknesses and strengths of the cooperative education program from the perspective of the organizational partners. Open-ended responses were reported and coded for correlation to other variables. Respondents were asked about how they were selected to participate in the cooperative education program and what are their perspectives about the current situation of the cooperative education program.

Follow up Procedures

The study was conducted during the spring/summer quarter of 2004. Every organizational partner has assigned one of their employees as a cooperative education supervisor. This cooperative education supervisor is in charge of supervising the cooperative education student and activities at the work site. The researcher communicated and explained the nature of the study by phone to 100% of the cooperative education supervisors. Ninety-two percent of the cooperative education supervisors agreed to participate while 8% expressed their apology for not participating in the study. The reason they unable to participate in the study was because they were newly hired in this position and they do not have the sufficient experience in the cooperative education system in the company yet and/or because they have no time to answer the questionnaire.

The participants were given a choice to give their answers by the e-mail or fax. The researcher provided a local fax number in Saudi Arabia to make it easier for the participants who are not familiar with the computer and e-mail system. A committee of three members was formed in Medina College of Technology to receive the faxes and then e-mail them to the researcher. The committee members processed and completed the

study questionnaires and fax'd and e-mailed them to the researcher. To insure validity and to avoid any mistakes in the fax'd information a phone conference were held with the committee and the work procedures were explained to them to work jointly on each questionnaire they filled in. Another task was given to the committee members which to follow up by phone with the non respondents. Each committee member was responsible to follow up with fifteen companies. A total of fourteen faxes which represent 38.8% were received by the local fax and twenty-two respondents, 62.2%, e-mailed their responses to the researcher.

First contact:

The phone contact with organizational partners started on April, 18th 2004 when the researcher started calling the cooperative education supervisors. On May 2nd 2004 forty-eight calls were made to 100% of the research subjects. It was not easy for the researcher to get hold of the cooperative education supervisor in the organization because the phone list that was provided by the SII contained the main numbers of the companies with no direct or extension numbers and also because of the timing difference between the USA and SA. The nature and the goals of the study were explained to the organizational partners over the phone and their agreement to participate or not to participate in the study was obtained. Four organization partners declined to participate in the study; they represented 8.3% (two from Jeddah and two from Riyadh). Fourteen organization partners preferred to receive the letter and the questionnaire by fax; they represented 38% (nine organizations from Riyadh and five from Jeddah).

First E-mail:

The implementation of the survey began in May, 8th 2004. A personal letter addressed to the name of the cooperative education supervisor in the organization, accompanying the questionnaire, was e-mailed or faxed to the research subjects individually. The letter explained the nature of the study. Participants were given the choice to participate or not to participate in the study. Also participants were told that they had the right to discontinue answering the questionnaire any time they wanted. The research subjects were also informed that their participation was absolutely voluntary.

Second E-mail:

Twenty-two emails were sent to those participants who chose to receive the questionnaire through the e-mail. Fifteen e-mails came back with wrong e-mail addresses which represented (68%) (eight from Jeddah and seven from Riyadh). The researcher contacted the fifteen cooperative education supervisors again and obtained the right e-mail addresses and e-mailed the questionnaire again.

Third E-mail:

The response rate of the initial e-mails and faxes was very low. Only five e-mails and one fax were received in the first two weeks after the e-mails and faxes were sent. Follow up e-mails and calls were made to the non-respondents. Participants were given June 1st as the due date to respond. Daily phone calls were made to all of the non-respondents till we obtained 86% responses on June the 10th.

Data Analysis

Data are the information obtained about the sample in a study. Data analysis is the process of simplifying data in order to make it comprehensive. The first step in data analysis is to describe, or summarize, the data using descriptive statistics. Data collected from the questionnaires was analyzed using frequency and percentage responses to ascertain if responses to questionnaire items indicate any identifiable patterns of agreement among the organizational partners regarding the item statements. The responses were coded and keyed into a computer for general statistical analysis using the SPSS data analysis program.

In order to analyze the survey the five data analyses steps recommended by Creswell (1994) were used.

1- Table about the numbers of returns and non-returns of the survey was drawn. Special attention was given to number of respondents and non-respondents. In addition to non-respondents, I focused on the unanswered questions in the returned surveys.

2- Non respondents were followed up till 86% responses obtained.

3- Descriptive analysis of all independent and dependent variable in the study were reported. The report indicated the means, standard deviations, and range of scores for these variables.

4- Factor analyses to discuss how the survey items are combined into scales on the independent and dependent dimensions was used. Further, I used the Statistical Package for Social Science (SPSS) program to report how the reliability of these scales were checked statistically for internal consistency, a measure also demonstrating the construct validity of the scales on measurement.

5- (See also section on regression) I identified the statistics to be used to compare groups or relate variables and answer the research questions. A rationale for choice of statistics was provided based on (a) the unit of measurement of scales in the study, (b) the intent of the research to either relate variables or compare groups, and (c) whether the data meet the assumptions of the statistics.

Regression Analysis

Regression analysis is a method for determining the association between a dependent variable and one or more independent variable (GAO, 1992). Gravetter & Wallnau (2000) explain that the statistical technique for finding the best-fitting straight line for a set of data is called regression, and the resulting straight line is called the regression line. Regression analysis was performed with modern graphical and numeric residual analysis.

In multiple regression, there is one dependent variable and many independent variables. The independent variables may be correlated and can be continuous. In this non-experimental study, the dependent variable (the organizational impact of the cooperative education), was hypothesized to be a measure of effectiveness whose variation may be explained in terms of a number of other independent variables – characteristics of the organizational partner, structuring by the partner of the student's cooperative education experience, interactions with the SII, preparation of the students by the SIIs, and benefits to employers, students, and the Saudi workforce.

Reliability of the statistics

The Cronbach Alpha was used to check the reliability of 4 of the 5 independent variables 1) Training Plan, 2) Coordinator Role, 3) Communication between SII and Organizational Partners, and 4) Student Characteristics. The item total correlation of the training plan was low (a = 0.056). Three of the 5 items were negatively related to the total; item number 1(a = -0.051), item number 4 (a = -0.200), and item number 5 (a = -0.233). Therefore, those discriminated items were deleted from the scale. A re-run of the

Coronbach Alpha resulted in reliability of the training plan at (a = 0.741). For this reason only item 2 and 3 in the questionnaire were considered measures of the training plan with items 1, 4 and 5 being deleted.

No other items in any of the other four independent variables expressed a negative correlation and all of them were greater than (a = 0.5). The Chronbach Alpha for the first IV, the cooperative education training plan, is (a = 0.741), *M =7.18*, and *SD = 2.39*. The second IV, the coordinators role ,is (a = 0.756), *M = 30.34*, and *SD = 5.51*. The third IV, communication between SII and the organizational partners, (a = 0.805), *M = 13.95*, and *SD = 3.69*. The fourth IV, student characteristics, (a = 0.887), *M = 65.76*, and *SD = 10.11*. The fifth independent variable is the organization partners' characteristics which is not a Likert scale item.

Additionally, the correlation between the study independent variables and the dependent variable "organizational impact" was tested. All the IVs and DV are significantly correlated. However, there are some outliers in the student characteristics variable. The analysis reported that items number 31 "Cooperative education students can work under minimum supervision", and item number 40 "we receive no complains from our customers about work cooperative education students performed" look significantly different.

Factor Analysis

Examination of the correlation matrix, which shows the correlation between the variables, revealed a number of correlations exceeding 0.30, suggesting that the matrix was suitable for factoring (Hair *et al.,* 1995). The anti-image correlation matrix was also

examined, indicating that all measures of sampling adequacy were at or above the acceptable level of 0.50 (Coakes and Steed, 2001). The Bartlett test of sphericity, a statistical test for the presence of correlations between variables, was significant and the Kaiser-Meyer Oklin measure of sampling adequacy was at the acceptable level of 0.50 (Coakes and Steed, 2001). These measures all indicated that factor analysis was appropriate.

The factor analysis of the 58 variables, using principle axis factoring and oblique rotation, surfaced 16 variables loaded across eight factors, representing 87 % of the total variance. All 16 variables had a communality of 0.50 or more and a factor loading of 0.25 or more; variables with factor loading less than 0.25 were considered insignificant. Interpretation of the pattern matrix resulting from the factor rotation (>.6) revealed 3 definable factors – student characteristics (various 0.618- 0.821), training plan (jointly developed 0.681), and benefits to organizational partners/employers (0.603- 0.673). Two of these three factors are used to investigate two of the research questions. Factor one, "the cooperative education student characteristics", is used to represent the research question *What is the relationship between cooperative education student characteristics and organizational impact?* Factor two, "the development of the cooperative education training plan", is used to represent the research question *Is a training plan an important element to employers when they participate in cooperative educationerative education programs?* Factor three, "the benefits to organizational partners", is used to support the discussion of the findings and conclusion of this research.

Chapter 4

RESULTS

This chapter is divided into three sections. The first section presents the demographic information on the subjects of the study. The second section provides the descriptive statistics of the survey items. The third section responds to the five research questions posed by the study.

Demographic Information

Organization Demographics

This section presents the organization demographics and the respondents' demographics. Table 4.1 presents the frequency and the percentage regarding geographic location of the 38 organizations that participated in the study. Out of the thirty eight companies, nineteen were from Jeddah (50%) and nineteen companies were from Riyadh (50%). During 2003-2004, forty-eight companies served as organizational partners in Jeddah and Riyadh (the two largest cities in Saudi Arabia). There were twenty- six in Jeddah and twenty-two in Riyadh. Four of these organizational partners, two from Jeddah and two from Riyadh, did not participate in the study. The total number of respondents was 38 out of 44, which represents 86%.

Table 4.2 presents the frequency and the percentage regarding type of business the study participants represented. Manufacturing organizations were the largest percentage (41%) of responding organizations that host cooperative education training.

		Frequency	*Percent*	*Valid Percent*	*Cumulative Percent*
Valid	Riyadh	19	50.0	50.0	50.0
	Jeddah	19	50.0	50.0	100.0
	Total	38	100.0	100.0	

Table 4.1: Business Location

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Health and community services	3	7.9	7.9	7.9
	Manufacturing	16	42.1	42.1	50.0
	Auto dealership	10	26.3	26.3	76.3
	Publishing and printing	2	5.3	5.3	81.6
	Agriculture	2	5.3	5.3	86.8
	Utility services	3	7.9	7.9	94.7
	Communication Services	1	2.6	2.6	97.4
	Transportation Services	1	2.6	2.6	100.0
	Total	38	100.0	100.0	

Table 4.2: Type of Business

Table 4.3 presents data about whether the organizational partners provide in-house training. Most of the respondents (90%) have in house training. Table 4.4 presents the average number of days for in- house training during the year for managerial training, technical training, and awareness training. The average number of days in managerial and awareness training during the past calendar year was very low at 12 and 7 respectively.

Table 4.4 presents the average number of days of managerial, technical and awareness training during the past calendar year 2002/2003. Tables 4.5, 4.6, and 4.7 respectively provide the frequency and percentage by type of training. Sixty-three percent of the companies report zero managerial training, 45% report zero technical training, and seventy-four percent report zero awareness training. Managerial training ranges from 0 to 150 days with a mean of 12.8 during the year. Technical training ranges from 0 to 230 days, with a mean of 35.9 during the year. Awareness training is the least offered training, ranging from 0 to 120 days with a mean of 7 during the year.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	3	7.9	7.9	7.9
	yes	34	89.5	89.5	97.4
	2	1	2.6	2.6	100.0
	Total	38	100.0	100.0	

Table 4.3: Formal In House Training in the Organization

		Managerial training	Technical training	Awareness training
N	Valid	38	38	38
	Missing	0	0	0
	Mean	12.08	35.9211	7.2105
	Median	.00	9.5000	.0000
	Std. Deviation	28.460	56.84278	22.93841

Table 4.4: Average Number of Days of Managerial, Technical and Awareness Training During the Past Calendar Year 2002/2003

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	24	63.2	63.2	63.2
	5	2	5.3	5.3	68.4
	6	1	2.6	2.6	71.1
	12	1	2.6	2.6	73.7
	20	2	5.3	5.3	78.9
	21	2	5.3	5.3	84.2
	24	1	2.6	2.6	86.8
	25	1	2.6	2.6	89.5
	30	2	5.3	5.3	94.7
	90	1	2.6	2.6	97.4
	150	1	2.6	2.6	100.0
	Total	38	100.0	100.0	

Table 4.5: Managerial Training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	17	44.7	44.7	44.7
	1.00	1	2.6	2.6	47.4
	5.00	1	2.6	2.6	50.0
	14.00	1	2.6	2.6	52.6
	15.00	1	2.6	2.6	55.3
	21.00	2	5.3	5.3	60.5
	25.00	1	2.6	2.6	63.2
	30.00	1	2.6	2.6	65.8
	45.00	1	2.6	2.6	68.4
	48.00	1	2.6	2.6	71.1
	50.00	2	5.3	5.3	76.3
	60.00	4	10.5	10.5	86.8
	90.00	1	2.6	2.6	89.5
	120.00	1	2.6	2.6	92.1
	150.00	1	2.6	2.6	94.7
	210.00	1	2.6	2.6	97.4
	230.00	1	2.6	2.6	100.0
	Total	38	100.0	100.0	

Table 4.6: Technical Training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	28	73.7	73.7	73.7
	1.00	1	2.6	2.6	76.3
	2.00	1	2.6	2.6	78.9
	3.00	1	2.6	2.6	81.6
	7.00	1	2.6	2.6	84.2
	10.00	2	5.3	5.3	89.5
	16.00	1	2.6	2.6	92.1
	30.00	1	2.6	2.6	94.7
	75.00	1	2.6	2.6	97.4
	120.00	1	2.6	2.6	100.0
	Total	38	100.0	100.0	

Table 4.7: Awareness Training

Table 4.8 presents the number of employees in the organizations. Larger companies (more than 100 employees) represented the majority, 74%, of the organizations that host cooperative education program compared with 16% from medium sized companies (51 to 100 employees), and 11% from small sized companies (10 to 50 employees).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10-50 (small)	4	10.5	10.5	10.5
	51-100 (medium)	6	15.8	15.8	26.3
	more than 100 (large)	28	73.7	73.7	100.0
	Total	38	100.0	100.0	

Table 4.8: Number of Employees in the Organization

Table 4.9 presents the frequency and the percentage regarding Saudi employees in the organization. Among all the organization employees, two-thirds of the respondents (66%) report that between 20-30% are Saudis. A little over one-fourth (26%) report that 40 to 60% of their employees are Saudis.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 10%	3	7.9	7.9	7.9
	from 20%-30%	25	65.8	65.8	73.7
	40%-60%	10	26.3	26.3	100.0
	Total	38	100.0	100.0	

Table 4.9: Percentage of Saudi Employees

Table 4.10 presents information on whether the respondents have an HRD department. Over 63% of the respondents have HRD departments in their organizations. Table 4.11 shows that over 63% of the cooperative education program organizational partners hold an ISO certificate.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	14	36.8	36.8	36.8
	yes	24	63.2	63.2	100.0
	Total	38	100.0	100.0	

Table 4.10: Availability of HRD Department

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	13	34.2	35.1	35.1
	yes	24	63.2	64.9	100.0
	Total	37	97.4	100.0	
Missing	System	1	2.6		
Total		38	100.0		

Table 4.11: Availability of ISO Certificate

Demographics of Respondents

This section provides information about the structure of cooperative education in the organization. Table 4.12 shows that over 26% of the study respondents have been involved in the cooperative education program for more than 8 years. Each organization has assigned one of its employees to serve as a cooperative education supervisor. This person supervises and manages the cooperative education program in the organization. Table 4.13 shows that the majority of the cooperative education supervisors (74%) hold bachelor degrees. The number of years of experience for the cooperative education supervisors is presented in table 4.14.

Years of experience varies among the organizations, however, 32% of the cooperative education supervisors have more than 15 years of experience in the job they supervise and 43% of the cooperative education supervisors do hold certificates in cooperative education training. Table 4.15 shows that more than 57% of the cooperative education organizational partners give attention to professional development for their cooperative education supervisors by sending them to cooperative education training workshops, conferences and seminars. Table 4.16 shows that 42% of the cooperative education program supervisors have never attended any cooperative education training workshop, conference or seminar. Table 4.17 shows that the majority of cooperative education program organizational partners (82%) maintain records for the cooperative education students at their organization.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-2 years	8	21.1	21.1	21.1
	3-4 years	9	23.7	23.7	44.7
	5-6 years	6	15.8	15.8	60.5
	7-8 years	5	13.2	13.2	73.7
	more than 8 years	10	26.3	26.3	100.0
	Total	38	100.0	100.0	

Table 4.12: Number of Years Organization Has Been Involved in the Cooperative Education Program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MA	7	18.4	18.4	18.4
	BA	28	73.7	73.7	92.1
	less than BA	3	7.9	7.9	100.0
	Total	38	100.0	100.0	

Table 4.13: Education Level of the Person Who Manages the Cooperative Program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	2.6	2.6	2.6
	1-5	10	26.3	26.3	28.9
	6-10	10	26.3	26.3	55.3
	11-15	5	13.2	13.2	68.4
	15 +	12	31.6	31.6	100.0
	Total	38	100.0	100.0	

Table 4.14: Years of Experience of the Person Who Manages the Cooperative Program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	22	57.9	57.9	57.9
	yes	16	42.1	42.1	100.0
	Total	38	100.0	100.0	

Table 4.15: Cooperative Education Training Certificate Held By Person Who Manages the Cooperative Education Program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	16	42.1	42.1	42.1
	yes	22	57.9	57.9	100.0
	Total	38	100.0	100.0	

Table 4.16: Cooperative education Supervisor Participation in Conferences, Seminars and Workshop

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	6	15.8	15.8	15.8
	yes	31	81.6	81.6	97.4
	2	1	2.6	2.6	100.0
	Total	38	100.0	100.0	

Table 4.17: Cooperative Education Program's Students - Records Availability in the Organization

Table 4.18 shows that nearly forty-five percent of the cooperative education organizational partners who participated in the study train between six to ten cooperative education students during the academic year. Table 4.19 shows that the majority of the cooperative education students come from two majors: general mechanics and electricity, 29% each. Organizational partners differ in the job titles they give to cooperative

education students. Table 4.20 shows that 58% of the organizational partners give the general job title "Technician" to the cooperative education students during their training. Table 4.21 shows that the cooperative education students are placed in jobs that relate to their majors, with 95% of the study participants reporting that they match the student major with the job. Table 4.22 shows that when the cooperative education student is sent to the cooperative education partner's business for training, 66% of the organizational partners have orientation training for the student before the cooperative education experience starts.

Table 4.23 shows that a large percentage of the study participants (82%) expressed their willingness to accept cooperative education students for a longer period of training time, and 68% are able to accept more cooperative education students during the academic year (table 4.24). Table 4.25 shows that only 21% of the study participants are willing to pay cooperative education students during their training.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5 student	8	21.1	21.1	21.1
	6-10	17	44.7	44.7	65.8
	11-15	12	31.6	31.6	97.4
	16 +	1	2.6	2.6	100.0
	Total	38	100.0	100.0	

Table 4.18: Number of Cooperative Education Students during the Academic Year 2003-2004

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	G. Mechanic	11	28.9	28.9	28.9
	Electric	11	28.9	28.9	57.9
	Auto	9	23.7	23.7	81.6
	Sheet Metal	2	5.3	5.3	86.8
	Printing	5	13.2	13.2	100.0
	Total	38	100.0	100.0	

Table 4.19: Cooperative Education Program Student Majors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Technician	22	57.9	57.9	57.9
	Electrician	4	10.5	10.5	68.4
	sheet metal professional	8	21.1	21.1	89.5
	car mechanic	3	7.9	7.9	97.4
	others	1	2.6	2.6	100.0
	Total	38	100.0	100.0	

Table 4.20: Job Titles Given to the Cooperative Education Program Students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	1	2.6	2.7	2.7
	yes	36	94.7	97.3	100.0
	Total	37	97.4	100.0	
Missing	System	1	2.6		
Total		38	100.0		

Table 4.21: Match Between the Cooperative education Program Experience and Student Major

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	13	34.2	34.2	34.2
	yes	25	65.8	65.8	100.0
	Total	38	100.0	100.0	

Table 4.22: Orientation Training for the Cooperative Education Students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	7	18.4	18.4	18.4
	yes	31	81.6	81.6	100.0
	Total	38	100.0	100.0	

Table 4.23: Willingness to Accept Cooperative Education Program Students for Longer Period of Time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	12	31.6	31.6	31.6
	yes	26	68.4	68.4	100.0
	Total	38	100.0	100.0	

Table 4.24: Ability to Accept More Cooperative Education Students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	30	78.9	78.9	78.9
	yes	8	21.1	21.1	100.0
	Total	38	100.0	100.0	

Table 4.25: Willingness to Pay Cooperative Education Students During Cooperative education Program Time

Descriptive Statistics

This section provides the descriptive statistics for the variables used in this study. The cooperative education training plan, cooperative education coordinator role, organizational and SII contact, students characteristics, and the organization characteristics. The descriptive statistics for each item of the independent and dependent variables are presented in Appendix C.

The respondents are likely to perceive that the cooperative education program is effective (M= 4.11, SD = .764). Findings shows that the goals and objectives of the cooperative education program are explained to the organizational partners before the cooperative education takes place (M = 3.82, SD = 1.136). In term of the training plan development, the respondents tend to mainly agree to the training plan of the cooperative education before the training (M = 3.71, SD = 1.206) and the respondents also participate in the cooperative education training plan development (M = 3.47, SD = 1.466).

Respondents indicated that SII cooperative education coordinators visits are effective and efficient (M = 3.89, SD = 1.034). Cooperative education coordinators participate effectively in solving the cooperative education students problems (M= 4.18, SD = .834) and they have access to the student records at the organization (M= 4.13, SD = .991).

Organizational partners and SII have good and effective communication before a cooperative education student is placed (M = 3.87, SD = 1.095). This communication become stronger during the cooperative education (M = 4.08, SD = 912). At the end of the cooperative education period organizational partners and SII communicate with each others to discuss the student employability (M = 3.18, SD = 1.291).

Cooperative education student is evaluated effectively (M = 4.05, SD = .899) and jointly between the organizational partner and the SII (M= 3.92, SD = 1.421). Cooperative education students have a good work attitude (M = 3.84, SD = .754) and they are hard workers (M = 3.42, SD = .976). Cooperative education students are willing to accept responsibility (M = 3.53, DS =.862). Cooperative education students are able to work as a part of a team (M = 3.92, SD = .749), learn new things easily (M = 3.89, SD = .727), they are willing to take instructions from others (M = 3.82, SD = .801), come to work on time (M = 3.68, SD = .962), finish their work within the time limit of performing the job (M = 3.76, DS = .751), and they are well prepared by the SIIs in technical skills (M = 3.47, SD = .893). However, the work of cooperative education student does not meet the organizational partners' expectations for offering quality products to their customers (M = 2.87, SD = .991).

Research Questions

Research Question One: Is a Training Plan an Important Element to Employers when they Participate in Cooperative Education programs?

Items 2 and 3 in part one of the questionnaire were used to address this research question. Table 4.26 shows the regression coefficients, $\beta = .54, p < .01$ for the "jointly developed" and $\beta = .08, p > ,05$ for "agreed to training plan". The jointly developed plan demonstrated significant effect, $t = 3.173, p < .01$. Agreed to training plan is not a significant predictor, $t = .467, p > .05$.

There was a significant linear relationship between the criterion variable organizational impact and the two training plan predictors, $F(2,35)=9.42$, $p<.01$. Organizational impact was regressed on jointly developed training plan and agreed to training plan. These two predictors accounted for a third of the variance in organizational impact ($R^2 =.35$). The model as a whole has explanatory power.

Thus this study shows that having a training plan predicts organizational impact. However, a jointly developed training plan is the factor that is significant in explaining the variance.

	B	SE	Beta	T	Tolerance	VIF
(Constant)	2.879	.219		13.118		
Agree to the training plan	.032	.069	.080	.467	.641	1.561
Training plan was developed Jointly	.180	.057	.540	3.173	.641	1.561

Table 4.26: Standard Multiple Regression Analysis to Test the Impact of Training Plan (Jointly Developed and to Which the Employer Agreed) on Organizational Impact (n=38)

	B	SE	Beta	T	Tolerance	VIF
(Constant)	1.792	.453		3.960		
Technical Skills	.270	.120	.366	2.250	.708	1.412
Work Ethic	.258	.138	.303	1.862	.708	1.412

Table 4.27: Standard Multiple Regression Analysis to Test the Impact of Student Characteristics on Organizational Impact (n=38)

Research Question Two: What is the Relationship between Cooperative Education Student Characteristics and Organizational Impact?

Items 24 through 36 in part one of the questionnaire were used to address this research question. As shown in Table 4.27, the results of regression analysis point to a significant relationship between student characteristics and organizational impact. The predictor variables were technical skills and work ethic. The criterion variable was organizational impact, which is defined as hiring, recruitment, and work benefits. Over one-third of the variance in the sample can be accounted for by student characteristics (R^2 =.35). There was a significant linear relationship between the criterion variable and the set of predictor variables, $F(2,35)=9.2$, $p < .01$.

Table 5 also shows that the Beta weights of technical skills and work ethic are nearly equal. The coefficients show that technical skills are significant predictors of organizational impact, $t=2.250$, $p<.05$. Work ethic does not show the same significance, $t=1.862$, $p=.07$, though it is suggestive. The model as a whole has explanatory power. Thus this study shows that student characteristics predict organizational impact.

Research Question Three: What is the Relationship between SII and Organizational Partner Contact and Organizational Impact?

Items number 2 and 3, and 6 through 23 in part one of the questionnaire were used to address this research question. Table 4.28 shows the correlation matrix among the independent variables, which are Training Plan, Coordinator Role, Contact Between Organizational Partner/Secondary Industrial Institute, and Student Evaluation. The results show that they are not highly correlated with each other.

Table 4.29 shows the results of regression analysis. The overall relationship between Employer/SII contact and Organizational Impact is significant, F (4, 33) 6.646, $p<0.001$. Table 4.29 shows that Communications (t =2.522, $p<.05$) and Training Plan (t=2.479, p<.05) are the two independent variables in this set of four that reveal significance

The regression is a very good fit with $R^2 = 45\%$. Thus nearly half of the variance can be accounted for by this variable.

Table 4.30 shows there is a potential problem of collinearity in this model for the independent variable Evaluation (Condition Index 20). However, as Table 4.29 shows, the Variance-Inflation Factor value is less than 6, and the tolerance level is high enough. The Durbin-Watson statistic is close to 2, which means the assumption of no auto-correlation among the residuals is not violated. Plots of standardized residuals against estimated values of the dependent variable show that the homoscedasticity assumption is not violated.

	Training Plan	Coordinator Role	Communication	Evaluation
Training Plan	1.000	.376**	.518***	.324**
Coordinator Role		1.000	.326**	.254
Communication			1.000	.218
Evaluation				1.000

*p<01, **p<.05, ***p<.001

Table 4.28: The Correlation Matrix among the Independent Variables and Dependent Variable Organizational Impact

	B	SE	Beta	*t*	Tolerance	VIF
(Constant)	2.598	.460		5.642		
Training Plan	.162	.065	.397	2.479	.653	1.532
Coordinator Role	.030	.109	.040	.278	.818	1.223
Communication	.205	.081	.387	2.522	.711	1.406
Evaluation	-.120	.110	-1.52	-1.094	.873	1.145

Table 4.29: Standard Multiple Regression Analysis to Test the Impact of Contact Between the SII and the Organizational Partner on Organizational Impact (n=38)

Dimen-sion	Eigenvalue	Condition Index	Variance Proportions				
			(Constant)	*Training Plan*	*Coordinator Role*	*Commu nication*	*Evalua tion*
1	4.864	1.000	.00	.00	.00	.00	.00
2	.064	8.724	.05	.60	.02	.04	.06
3	.037	11.464	.00	.32	.00	.86	.09
4	.023	14.590	.03	.01	.42	.08	.65
5	.012	20.113	.93	.07	.55	.02	.20

Table 4.30: Collinearity of Training Plan, Coordinator Role, Communications, and Evaluation

Research Question Four: What is the Relationship between the Cooperative Education Coordinator Role and Organizational Impact?

Items 6 through 13 in part one of the questionnaire were used to address this research question. Table 4.31 shows the correlation matrix among the independent variables. The results show that they are not strongly correlated with each other. There is a weak correlation between the independent variables *Appropriate Number of Visits and Effective/Efficient Visits* ($r=.631$, $p<.001$) and between the independent variables *Access to and use of student records at the work site* and *Using those records to adjust to problems as they arise* ($r=.685$, $p<.001$).

Table 4.32 shows there is a potential problem with collinearity in this model between *access to and use of student records at the work site* (Condition Index 20), *effective and efficient coordinator visits* (Condition Index 25), and *use of work site student records to adjust to problems that arise* (Condition Index 29). However, Table 4.33 shows the Variance-Inflation Factor values are less than 6, and the tolerance levels are $\geq .16$. The Durbin-Watson statistic is close to 2, which means the assumption of no auto-correlation among the residuals is not violated. Plots of standardized residuals against estimated values of the dependent variable show that the homoscedasticity assumption is not violated.

Table 4.33 shows the results of regression analysis conducted to evaluate how well the coordinator role predicted organizational impact. The predictor variables were pre-set schedule of visits, appropriate number of visits, effective and efficient visits, visits during all student work shifts, solving problems that arise, accessing and using student records at the work site, using the records to respond to problems that arise, and how well

trained the coordinator is to supervise the program. The criterion variable was organizational impact.

Only 24% of the variance in the sample can be accounted for by the coordinator's role ($R^2 = .24$). The overall relationship is not significant $F(8,29)$ 1.148 p >.05. Table 4.33 shows that of the independent variables, the standardized Beta values of solving problems as they arise (β =.392), accessing (β =.415) and using student records at the work site (β =-.371) are the highest of the coefficients. However, they are not significantly related to organizational impact (t=1.659, p>.05), (t=1.684, p>.05), and (t=-1.325, p>.05) respectively. The coefficients of appropriate number of visits, effective/efficient visits, use of student records to solve problems, and how well trained the coordinator is, are negative, although they are not significantly related to organizational impact.

	1	2	3	4	5	6	7	8
Preset schedule of visits	1.000	.252	.366**	.304**	.071	-.175	-.001	.137
Appropriate number of visits		1.000	.631***	.280**	.328	.065	.005	.243
Effective and efficient visits			1.000	.268	.431**	.119	.198	.189
Visits to students, all shifts				1.000	.402	.322**	.339**	.208
Solving problems as they arise					1.000	.428**	.603***	.498***
Access to and use of student records at the work site						1.000	.686***	.533***
Use of work site student records to solve problems as they arise							1.000	.602***
Training of the coordinator to supervise the program								1.000

***p<01, **p<.05, ***p<.001**

Table 4.31: The Correlation Matrix among the Independent Variables of the Coordinator Role.

Dim en- sion	Eige nv- alue	Conditi on Index	Variance Proportions								
			(Con - stant)	Set of visits	Num b-er of visits	Effective ness of visits	All shif t visi ts	Solvin g proble ms	Access to record s	Use of infor matio n	Well traine d
1	8.596	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.129	8.165	.00	.15	.02	.02	.01	.00	.03	.05	.01
3	.108	8.936	.01	.00	.01	.01	.74	.00	.00	.00	.01
4	.064	11.555	.00	.45	.16	.05	.03	.00	.00	.02	.01
5	.033	16.089	.09	.00	.07	.34	.02	.01	.04	.20	.07
6	.025	18.623	.26	.00	.17	.05	.00	.00	.11	.05	.31
7	.021	20.372	.07	.05	.02	.05	.00	.43	.38	.00	.00
8	.014	24.835	.01	.08	.54	.42	.08	.00	.00	.43	.53
9	.010	28.968	.56	.26	.00	.06	.11	.55	.44	.24	.06

Table 4.32: Collinearity of Coordinator Visits

Coordinator Role	B	SE	Beta	*t*	Tolerance	VIF
(Constant)	2.541	.553		4.599		
Set of visits	.066	.080	.165	.828	.657	1.523
Number of visits	-.066	.107	-.144	-.623	.489	2.043
Effectives and efficient of visits	-.043	.112	-.091	-.383	.467	2.142
All shift visits	.065	.074	.175	.878	.657	1.523
Problem solving	.229	.138	.392	1.659	.470	2.129
Access to records	.204	.121	.415	1.684	.431	2.319
Use of the information	-.167	.126	-.371	-1.325	.333	3.001
Well trained to do his job	-.041	.131	-.072	-.310	.487	2.051

Table 4.33: Standard Multiple Regression Analysis to Test the Impact of Coordinator Visits on Organizational Impact

Research Question Five: What is the Effect of Demographics on Organizational Impact?

Items 1, 2, and 5 in the second part of the study questionnaire and item 2 in the third part were used to address this research question. Table 4.34 shows the correlation matrix among the independent variables. The results show that they are mostly negatively correlated with each other. Table 4.35 shows the results of regression analysis conducted to evaluate how well student characteristics predicted the benefits of cooperative education to employers. The predictor variables were size, years of experience in cooperative education, and type of business. The criterion variable was organizational impact. Only 12% of the variance in the sample can be accounted for by size, experience, and type of business. There was not a significant linear relationship between the criterion

variable and the set of predictor variables, F(4,33)=1.139, p >.05. This model was not a good fit.

	1	2	3	4
Business location	1.000	-.455*	.158	-.350**
Business type		1.000	-.279**	.220
Size (number employees)			1.000	.000
Number years experience				1.000

***p<01, **p<.05**

Table 4.34: The Correlation Matrix among the Demographic Independent Variables

	B	SE	Beta	T	Tolerance	VIF
Business location	-.212	.185	-.220	-1.148	.725	1.379
Business size	.003	.036	.014	.076	.743	1.345
Number of employees	-.012	.123	-.016	-.094	.915	1.093
Number of years in cooperative education	.062	.056	.193	1.104	.867	1.153

Table 4.35: Standard Multiple Regression Analysis to Test the Impact of Demographics on Organizational Impact (n=38)

CHAPTER 5

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

This chapter is divided into three sections: The first section summarizes the results of the study. The second section presents the conclusions drawn from results. The third section provides recommendations for research and practice.

Summary

This section summarizes the findings of the study. Data from demographic items are presented as are data analyzed to answer the five research questions. The subjects were the Saudi Arabian cooperative education organizational partners in Jeddah and Riyadh.

Demographic Information

The study collected 38 respondents. Manufacturing organizations were the largest percentage of responding organizations that host cooperative education program. Most of the respondents have in-house training. Big companies represented the majority of the organizations that hosted cooperative education program. The largest percentage of the study respondents expressed their willingness to accept cooperative education students for longer period of training time, and their ability to accept more cooperative education students during the academic year. However, less than quarter of the study respondents are willing to pay cooperative education students during their training.

There was no difference in the respondents' perception of organizational impact among organizational partners in terms of their location, size, experience with the cooperative education program, and number of students trained since 1996.
The most striking exception is with respect to the percentage of Saudis among their employees. Companies with fewer than 10% total Saudi workers report they agree with the benefits of cooperative education they receive.

Research Questions

There were five research questions in the study. A summary of the results for each question are as follows:

Research Question One: Is a Training Plan an Important Element to Employers When They Participate in Cooperative Education Programs?

The results showed that having a training plan is an important element to employers when they participate in cooperative education programs. Particularly, a training plan contributes to the effectiveness of the cooperative education program when employers co-create it with the technical institute. Two different items support this criterion of effectiveness of the cooperative education program. One is the existence of a training plan to which the employer has agreed. The other is that the plan was jointly developed. Together these items indicate the important role a training plan plays. Separately, the jointly developed aspect carries much greater weight.

Research Question Two: What Is the Relationship between Cooperative education Student Characteristics and Organizational Impact?

The results showed that there is a relationship between cooperative education student characteristics and organizational impact. There are two dimensions that define student characteristics from the employer perspective, technical skills and the work ethic. The data show that both are equally important to employers when they consider the benefits to their organization from having student apprentices.

Research Question Three: What Is the Relationship Between SII and Organizational Partner Contact and Organizational Impact?

The results of the study showed that there is a relationship between SII and organizational partner contact and organizational impact. The contact between the organizational partner and the Secondary Industrial Institute is a significant factor in assessing the effectiveness of the cooperative education program from the employer perspective. Contact between SIIs and organizational partners bears a strong linear relationship to organizational impact. Of the four factors constituting "contact" – 1) training plan, 2) coordinator visits, 3) communications, and 4) evaluation, the two that carry the greatest weight and the only two of the four that are statistically significant, are communications and training plan. Evaluation shows a negative relationship and the coordinator role is a very weak factor.

Research Question Four: What Is the Relationship Between the Cooperative education Coordinator Role and Organizational Impact?

The results of the study showed that there is a modest relationship between the coordinator's role and organizational impact. None of the items defining that role – visits, access to/use of student records at work site – is significant, though solving problems as they arise and success to/use of student records at the work site are variables that have a little more weight than the others.

Research Question Five: What Is the Effect of the Organization Demographics on Organizational Impact?

The results of the study showed that neither location, size, type of business, nor years participating in the cooperative education program has any bearing on perceived benefits to employers.

Discussion

Figure 5.1 presents the conceptual framework that was used to frame the study. The results showed that some variables in the conceptual framework were confirmed and some variables were not confirmed. Based on the results of the study a revised conceptual framework is presented in figure 5.2. The revised conceptual framework omits two variables that were included in the original framework. These two variables are 1) the cooperative education coordinator role and 2) the organization characteristics. The following discussion presents each of the variables and their contribution to the results.

Existence of the Training Plan

The literature underscores the value of cooperative education programs when the foundation for training is constructed jointly and when the students are considered assets by employers. When employers are involved in the cooperative education plan development they will enrich the program with their training experience. Employers reduce the training time for their new employees when they use cooperative education as training orientation for their future employees (Hawley, 2001). Our results showed that respondents who participated in the training plan development reported that cooperative education helps them to provide better services for their customers and increase their production quality. These respondents also reported that cooperative education helps them to reduce training cost and time for their new employees.

Rosenbaum (2001) attributed the success of the cooperative training programs in Germany and Japan to the involvement of organizational partners in the program development. Aleisa & Alabdulhafez (2002) found that the effective involvement of the organizational partner in cooperative education program design and implementation is the key of success for the cooperative education graduates' employability. Results showed significant relationships between the involvement in the cooperative education training plan development and the future employment. This study found that organizational partners who were involved in the cooperative education training plan development depend on the cooperative education program to select their future employees. The study also found that there is a high correlation between organizational partners' involvement in the cooperative education training plan and the cooperative education student's good

work attitude like accepting the responsibilities, the ability to work as a team, and learning new things easily. Hess, Peterson & Mortimer (1994) reported that involvement of the organizational partners is essential to better program outcomes and results in producing skillful local labor and lower youth unemployment rates over longer periods of time. Organizational partners' contribution and involvement in program planning and development help in securing jobs for the program graduates (Rosenbaum, 2001).

On the other hand, there is a negative effect on the student's employment after graduation when organizational partners are excluded from involvement in the training plan development. Study results showed a weak relationship to student employment after graduation when the SII alone develop the training plan comparing with the jointly developed plan. There is correlation when the SII alone develops the training plan and the negative employers' attitude toward the cooperative education student. Respondents who are not involved in the training plan development reported that they do not depend on the cooperative education training to select their future employees and they look at cooperative education students as extra hands to complete one-time projects.

Cooperative Education Student Characteristics

Historical studies conducted in the 1970s and 1980s about cooperative education indicated that cooperative education student contributes to an organization in areas of technical knowledge, communication, quality of work, interpersonal skills. In addition, recruitment costs for cooperative education graduates were found to be lower than for regular graduates, salary and promotional progression was faster for cooperative education graduates than for regular graduates, and employee retention was better for

cooperative education graduates than for regular graduates (Braunstein, 2000). The study found that the organizational partners are satisfied with the quality of work that is performed by the cooperative education student. Over half of the respondents agreed or strongly agreed that the quality of the cooperative education students' work meets their expectations for offering quality products to their customers. The same number of respondents agreed/strongly agreed that cooperative education students help them offer better service to their customers. In general, respondents reported that cooperative education students bring new knowledge to the organization and that the cooperative education program in the SII is beneficial to them.

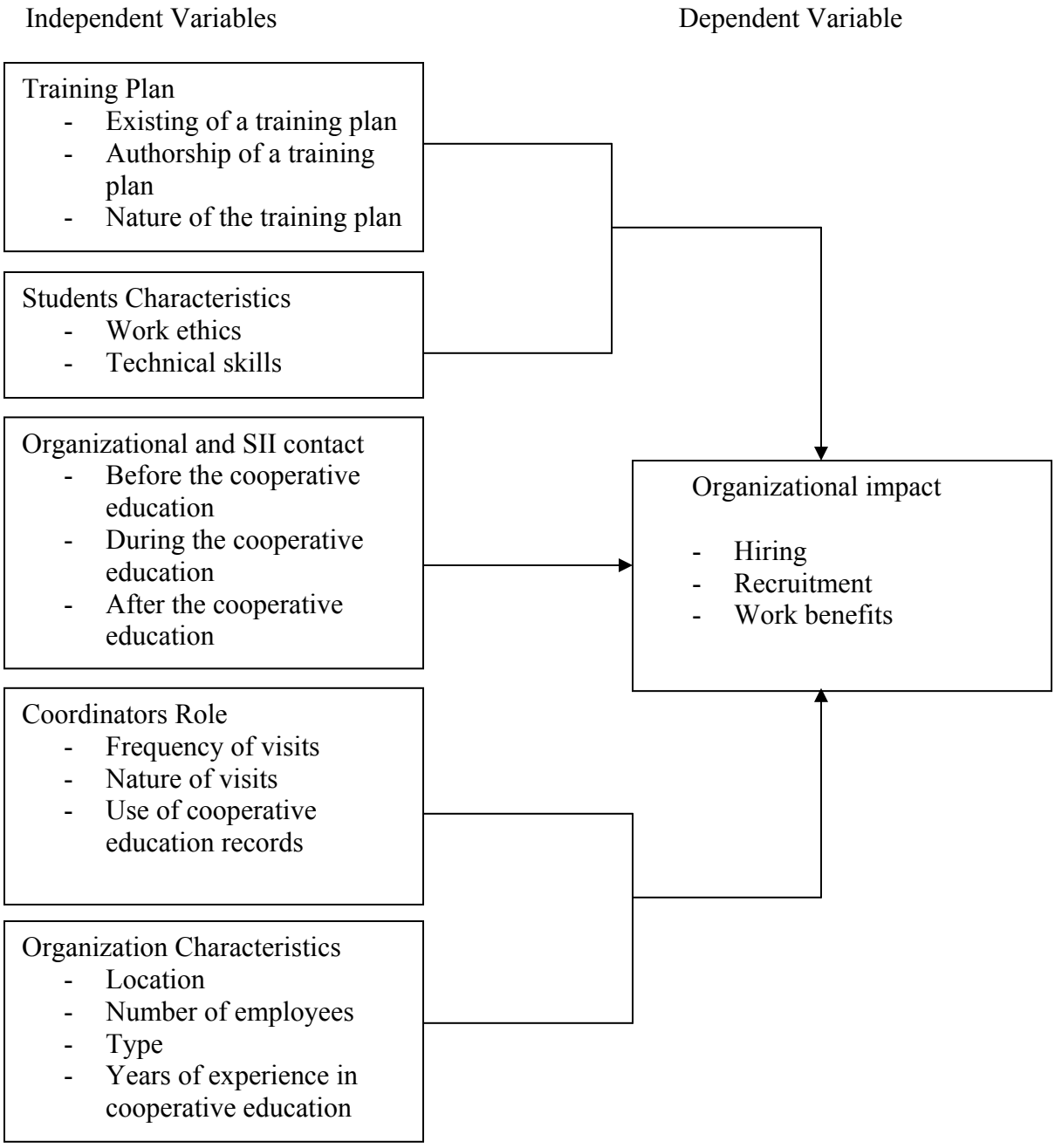


Figure 5.1 Conceptual Framework of the Study

Contact between SII and Organizational Partners

The literature points to the important role of sustained and substantive communication between organization partners and training institutions in contributing to effective cooperative education programs. This was explored by Rosenbaum (2001) when he identified the driving factors behind the successful cooperative education training programs in Japan and Germany. Stern and Wagner (1999) related the low youth unemployment in Germany, in particular, to the direct contact and substantive communication between schools and employers. Results of the study showed that communication between SIIs and organizational partners before, during, and after the cooperative education has a positive effect on the student employment after graduation. Respondents who have communication with SIIs are willing to employ cooperative education graduates, are willing to accept more cooperative education students, and willing to host the cooperative education for longer time. Ninety percent of the respondents who reported that cooperative education is effective indicated that they have continued contact with SII. Results found that there is continuous communication between SII and organizational partners, which strengthens the effectiveness of the cooperative education program in the SII.

Cooperative Education Coordinator Role

The literature points to the important role of the cooperative education coordinator in the effectiveness of the cooperative education program. Searle and Igwe (1985) referred to the quality of the coordination as the corner stone of the effective cooperative

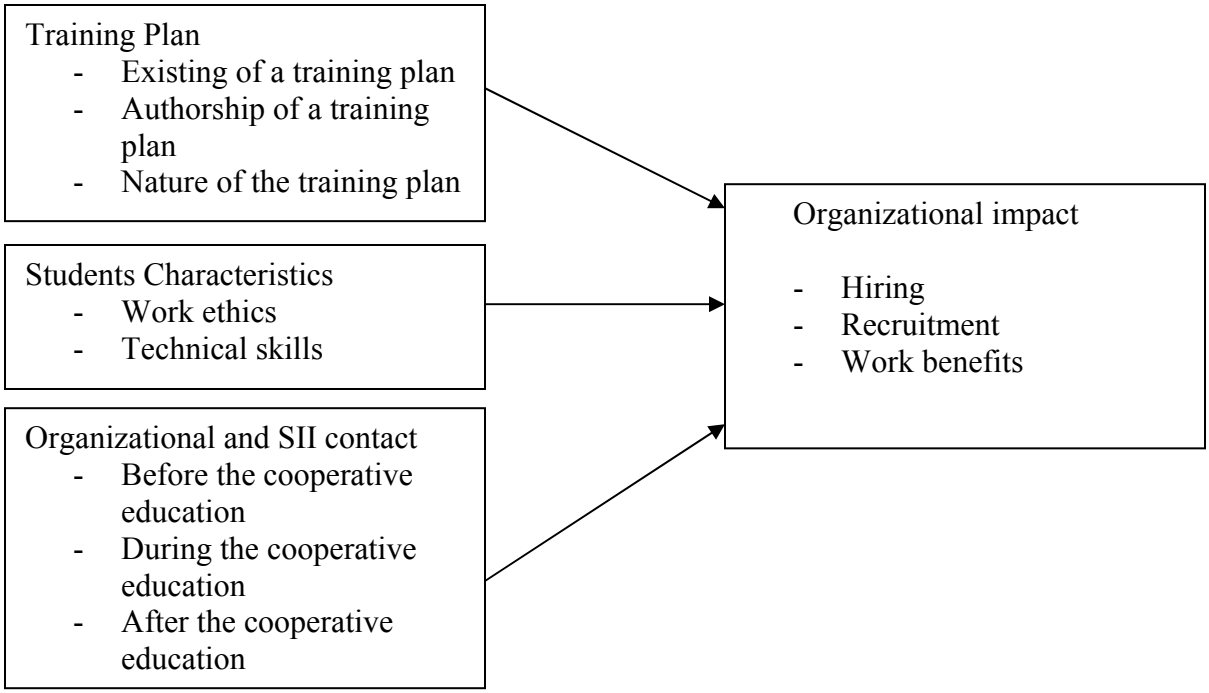
education program. The cooperative education coordinator role includes many activities like administration functions, teaching, supervising, and job placement (Laske and Persico, 1984). Seventy-seven percent of the study participants stated that the cooperative education coordinator visits are effective and efficient. However, the results showed that the cooperative education coordinator role does not itself drive the success or effectiveness of cooperative education. It is an important role but it seems to be more valuable when other factors are present, particularly a jointly developed training plan. The regression analysis showed that there is a poor relationship between the cooperative education coordinator role and the effectiveness of the program. The regression seems to be a poor fit between the coordinator role and organization impact. This results might be attributed to the small sample size.

Organization Characteristics

The literature points to the impact of organization size, years of experience in cooperative education and type of business are contributing to effective cooperative education programs. Organizational partners differ in their ranking of workplace skills due to the organization size, type, and number of employees in the organization (Marchmet, 1998). Statistical differences have been found between size, type, personal knowledge and years of experience that the organization has been involved in cooperative education (Braunstein, 2000). However, the findings of this study do not support the literature. There was no relationship between the organizational characteristics and the impact of the cooperative education on the organization. Therefore

the result of this study about the demographical information of the respondents shows that it does not impact the effectiveness of the cooperative education in the SII.

Independent Variables Dependent Variable



Variables that have no relationship with the organizational impact:

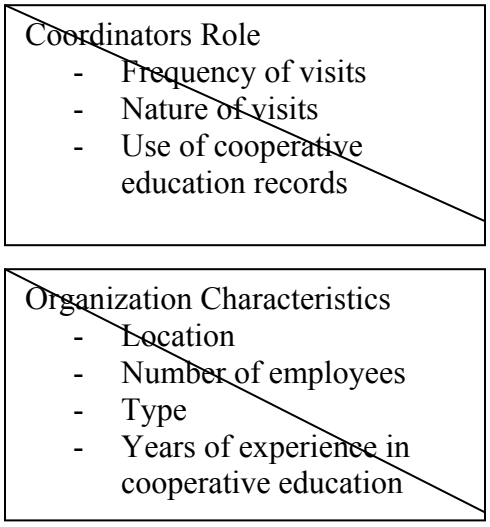


Figure 5.2 Revised Conceptual Framework of the Study

Recommendations for Research and Practice

In this section there are three sets of recommendations based upon the findings of the study (questionnaire and open-ended questions). The first set of recommendations is for future researchers of cooperative education in Saudi Arabia. The second set is directed to the General Organization for Technical Education and Vocational Training (GOTEVT). The third set of recommendations is for cooperative education organizational partners.

Recommendations for Future Research

As shown in Figure 5.1, the proposed conceptual framework was based on a review of the literature. In general, the results of this study supported three variables of the conceptual framework and rejected the other two as shown in Figure 5.2. It is believed that the results are attributed to the small sample size of the study respondents and the limitation of the research location and business sectors. Even though, the study was conducted in cooperative education in one country the results have important to other development countries' cooperative education programs. The following recommendations are offered to future researchers:

1. Increasing the number of the study subjects. There is ten Secondary Industrial Institutes spread all over the country. This research was conducted in only two cities (the major two cities) Riyadh and Jeddah. It is recommended that a study be conducted that involves all ten SIIs to learn if there are any geographical

differences among the kingdom areas and if the nature of the geographic area affects the quality of the cooperative education training.

2. The study should be replicated in the other GOTEVT educational units like the Commercial and Agricultural Institutes, Colleges of Technologies, and the Vocational Training Centers. In this way we will learn more about the impact of the organizations' demographics and the cooperative education coordinator role.
3. This research investigated the perceptions of the organizational partners about the effectiveness of cooperative education in the SIIs. It is recommended that a similar study to be conducted to investigate the perceptions of the cooperative education students and cooperative education coordinators.
4. This research used a quantitative paradigm and survey methodology. It is recommended that similar studies be conducted using different methodologies to add more to the cooperative education literature about the barriers of the cooperative education program and to cover areas that were not covered in this study, like the opinion of the all the parties who are involved in the cooperative education program in the Kingdom of Saudi Arabia.

Recommendations to the General Organization for Technical Education and Vocational Training (GOTEVT)

The cooperative education program is designed to bridge the gap between labor market demands and job opportunities for graduating students. Based on the study findings it is recommended that GOTEVT make substantial changes to the SII

cooperative education program to strengthen its role in benefiting its contribution to the economy.

1. SII curriculum development should jointly involve the organizational partners.
    a) One of the most important things to improve is the English language skill of the SII students. Ninety three percent of the study participants complained about the level of cooperative education student proficiency in the English language. Therefore, it is suggested that GOTEVT develop better training for English language instruction.
    b) The SII curriculum needs to match new labor market demands. Respondents indicated that cooperative education students need additional labor market skills.
    c) The SII curriculum needs to focus more on teaching safety in the work environment.
    d) GOTEVT could add cooperative education to the SII curriculum, thereby treating it as one of the main subjects that has grades. One of the weaknesses of the cooperative education program as it was stated by the study respondents is that some students do not take seriously their cooperative education because there are no grades for it.
2. It is recommended that GOTEVT create criteria for appointment as a cooperative education coordinator and that more intention be given to developing and improving the skills of the cooperative education coordinators. Based on the findings of this study and the study that was conducted in 2002 about SII cooperative education staffing, it appears that fewer than 10% of the SII

cooperative education coordinators attend cooperative education workshops, seminars or conferences. There appear to be no criteria for selecting cooperative education coordinators. In each SII there is only one full time cooperative education coordinator who manages and coordinates the cooperative education activities in all majors. This cooperative education coordinator has to visit all the cooperative education students at the work place. It is recommended that GOTEVT assign more "full time" cooperative education coordinators to the SIIs. The cooperative education coordinators are running the program without adequate funding or procedures in place. They use their own transportation and must themselves cover the expenses of their visits to the work place. GOTEVT should provide some financial assistance to the SII cooperative education coordinators to defray their expenses.

3. It is recommended that GOTEVT establish a cooperative education office in each area of the kingdom to organize and facilitate the cooperative education activities for all GOTEVT educational units in the area. This cooperative education office should be operated jointly between GOTEVT and the private sector to facilitate the hiring and the providing of job opportunities for cooperative education graduates. These offices can provide a data base for the organizational partners in every area of the Kingdom of Saudi Arabia. Presently there are three different types of technical education in each area of the country. These three educational units are the colleges of technology, technical secondary institutes, and the vocational training centers. Each educational unit has a cooperative education program. It is diffuse and uncoordinated.

4. It is recommended that GOTEVT expand the cooperative education training period from a few weeks in the final year to continuous participation throughout the three years of study.
5. Presently cooperative education students go to employer on-site training only during school time, which means they work only morning shifts. It is recommended that cooperative education students work all shifts and follow the work days of the organization rather than limiting their training to the school day.
6. Since cooperative education does not cover all majors in the SII, It is recommended that GOTEVT expand the program to involve all study majors, especially in electronics.

Recommendations to the Organizational Partners

Study findings show that cooperative education is beneficial to the organizational partners. It provides them with additional and free labor and brings some new knowledge to the organization. Based on the study findings it is recommended that organizational partners invest more in the program by providing in-house training for employees involved in cooperative education, to improve supervision skills and to more completely develop the potential asset that cooperative education students represent.

1. Organizational partners should give more attention to awareness, managerial, and technical training. Study findings show that the number of training days during the year is very low in the most of the companies. Seventy-four percent report zero days for awareness training, 63% percent report zero days for managerial training, and 45% report 0 days for technical training.

2. Based on the study findings and the findings of our 2002 study it is recommended that cooperative education supervisors be sent to cooperative education conferences and seminars and/or that in-house workshops be offered to them.
3. Based on the literature and the study findings the organizational partners should have more involvement in the cooperative education activities and to develop explicit training plan for the cooperative education students.
4. Cooperative education students are extra workers who provide “free” labor to the organization and help the organization provide better quality products to their customers. It is recommended that organizational partners motivate cooperative education students financially and hire the students after they graduate.
5. The new policy of the Saudi workforce is that private sector should hire Saudi employees, so that organizational partners are recommended to take the initiative of selecting their future employees from the cooperative education students.

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APPENDIX A

ENGLISH VERSION OF INSTRUMENT

Cooperative education Organizational Partners Questionnaire

This questionnaire is designed to draw upon your knowledge, experience and understanding of the Cooperative Education Program in the SIIs. The information you provide will be used in this research study only. Your information will be kept confidential and will be merged, so that in no way it can be singled out in the report of the results.

I- Communication between Organizational Partners and SIIs

How do you rate the cooperative education training system in the SII? Please use a 5 point scale as follows: **[SA]** strongly agree, **[A]** agree, **[U]** undecided, **[D]** disagree, or **[SD]** for strongly disagree.

I. Training Plan					
Statement	SA	**A**	U	**D**	**SD**
1. The Cooperative education program goals and objectives have been explained to us by the SII cooperative education coordinator					
2. The Cooperative education students who work in our business have a training plan to which we have agreed.					
3. We develop the training plan jointly with SII					
4. The SII alone develops the training plan for cooperative education students					
5. We alone develop the training plan for co-o students					
II. SII Cooperative education Coordinators Role					
6. The SII Cooperative education coordinator visits students on the basis of a pre-set schedule					
7. The number of SII cooperative education coordinator visits are about right					
8. The SII Cooperative education coordinator visits are effective and efficient					
9. The SII Cooperative education coordinator visits cooperative education students on all shifts					
10. The SII Cooperative education coordinator helps to solve problems that arise with the cooperative education students					
11. The SII Cooperative education coordinator has access to and use of cooperative education student records at the training place					
12. The SII Cooperative education coordinator uses information obtained from the student records to adjust to problems that arise relative to the program					
13. The SII Cooperative education coordinator is well trained to supervise the cooperative education program					

III. Overall Contact with SII					
Statement	SA	**A**	U	**D**	**SD**
14- We have good and effective communication with the SII before a cooperative education student is placed					
15- We have good and effective communication with the SII during the cooperative education program.					
16- We have effective communication with the SII after a student's cooperative education experience to discuss student employability					
17- We communicate with the SII to discuss program improvements					
IV. Cooperative education Student Evaluation					
Statement	SA	**A**	U	**D**	**SD**
18-Cooperative education students are evaluated before job placement					
19- Cooperative education students are evaluated by the cooperative education coordinator only					
20-Cooperative education students are evaluated by the job instructor only					
21- Cooperative education students are evaluated jointly by the cooperative education coordinator and the job instructor					
22-Cooperative education students are evaluated effectively					
23- Cooperative education students are evaluated after the cooperative education program					

V. Student Characteristics					
Statement	SA	**A**	U	**D**	**SD**
24- Cooperative education students can solve unanticipated problems that arise on the job					
25- Cooperative education students in general are hard					
26- Cooperative education students are willing to accept responsibility					
27-Cooperative education students have a good work attitude					
28- Cooperative education students are able to work as a part of a team					
29- Cooperative education student productivity meets our job standards					
30- Cooperative education students are able to deal with the new technologies/innovations					
31-Cooperative education students can work under minimum supervision					
32-Cooperative education students learn new things easily					
33- Cooperative education students are willing to take instructions from others					
34- Cooperative education students come to work on time					
35-Cooperative education student finish their work within the time limit of performing the job					
36-Students are well prepared by the SIIs in technical skills					

Student Characteristics (continue)					
Statement	SA	**A**	U	**D**	**SD**
37- I think SIIs should teach all of these skills (26-36) to their students					
38- I think it is the responsibility of employers to teach cooperative education students all the skills identified in questions 26-36					
39- The work of cooperative education student meets our expectations for offering quality products to our customers					
40-We receive no complains from our customers about work cooperative education students performed					
41-Cooperative education students help us offer better service to our customers					
42-Cooperative education students help us deliver better products to our costumers					

VI. Benefits of Cooperative Education

To Employers and country economy

Our participation in the cooperative education program…

Statement	SA	**A**	U	**D**	**SD**
43- Gives us access to new workers					
44- Reduces the recruitment cost of hiring new workers					
45-Reduces training time for new workers					
46-Reduces the cost of training					
47-Allows our organization to screen students for permanent employment					

Benefits of Cooperative Education (continue)					
Statement	SA	**A**	U	**D**	**SD**
48- Provides us the extra help to complete one-time projects					
49-Brings new knowledge into the organization					
50-We depend on the cooperative education program to select future employees					
51-We employ cooperative education students after they graduate					
52-Students who have participated in the cooperative education program and are hired full-time in our organization tend to progress faster than non cooperative education employees					
53-Students who have participated in cooperative education and are hired full-time in our organization tend to receive higher starting salaries than non cooperative education employees					
54-Students who have participated in cooperative education and are hired full-time in our organization tend to remain in our employment for a longer time period than non cooperative education employees.					
55-We believe that the cooperative education program is beneficial to us					
56-We believe that the cooperative education program should continue					
57-We believe that the cooperative educationerative education program of the Secondary Industrial Institutes is effective					
58-The cooperative education program is adding trained Saudi workers to the labor force.					

Second:

Demographics of Organization

1- Business Location:
[ ] Riyadh [ ] Jeddah

2- Business Sector:

[ ] Health and Community Services
[ ] Manufacturing
[ ] Property and Business services
[ ] Auto dealership
[ ] Publishing and printing
[ ] Constructions
[ ] Agriculture
[ ] Electricity, Gas and Water Supply
[ ] Communication Services
[ ] Retail Trade, Whole sale Trade
[ ] Transportation Services

3- Does your organization have any formal in-house training for employees?
[ ] Yes [ ] No

4- During the past calendar year what has been the average days of training in the following categories:
a- Managerial training [ ]
b- Technical training [ ]
c- Awareness training [ ]

5- Number of employees in your company:
a- from 10-50 employees [ ]
b- from 51-100 employees [ ]
c- more than 100 employees [ ]

6- Percentage of Saudi employees in your company:
a- less than 10% [ ]
b- from 20%-30% [ ]
c- from 40%-60% [ ]

7- Does your organization have an HRD department?
[ ] Yes [ ] No

8- Does your organization have any type of ISO Certificate?
[ ] Yes [ ] No

Third:
Organizational Structure for Cooperative education Training

1- Which Department manages the cooperative education program in your organization?

_____

2- How many years has your organization been involved in the cooperative education program?
a- 1- 2 years [ ] b- 3-4 years [ ]
c- 6-5 years [ ] d- 8-7 years [ ]
e- more than 8 years [ ]

3- Educational level of the person who manages the cooperative education students in your organization
[ ] Ph.D [ ] Master
[ ] B.A [ ] less than B.A

4- **Job title of the person who manages the cooperative education program in your organization:** _____

5- Job title of the person who manages the cooperative education program in your organization:

a- 1- 5 years [ ]
b- 6-10 years [ ]
c- 11-15 years [ ]
d- more than 11years [ ]

6- **Does the person who manages the cooperative education program hold any certificate in cooperative education training:**
[ ] Yes [ ] No

7- **Has the person who manages the cooperative education program attended any training workshop, conference or seminar about cooperative education training?**
[ ] Yes [ ] No

8- **Does your organization keep records of its cooperative education students?**
[ ] Yes [ ] No

9- **Number of cooperative education students during the academic year of 2003-2004:**

a- 1- 10 students [ ]
b- 11-20 students [ ]

c- 21-30 students [ ]
d- more than 30 students [ ]

10- Number of cooperative education students who have been trained in your organization since the cooperative education started in 1996

a- 1- 25 students [ ]
b- 26- 50 students [ ]
c- 51- 75 students [ ]
d- 76- 100 student [ ]
e- more than 100 students [ ]

11- From which SII majors do you receive the most students? Number these from most (1) to least (6)

[ ] General mechanic
[ ] Electricity
[ ] Automotive
[ ] Sheet metal
[ ] Printing
[ ] other, please specify:_____

12- Job titles given to the cooperative education students

[ ] Technician
[ ] Electrician
[ ] Sheet metal professional
[ ] Car mechanic
[ ] Other, please specify: _____

13 -During cooperative education training we place cooperative education student in jobs that are related to their majors

[ ] Yes [ ] No

14- We have orientation training for the cooperative education students

[ ] Yes [ ] No

15-We are willing to accept cooperative education students for a longer period of time.

[ ] Yes [ ] No

16- We have the ability to accept more cooperative education students

[ ] Yes [ ] No

17- We are willing to pay cooperative education students during cooperative education time

[ ] Yes [ ] No

Fourth
Comments about cooperative education program in the SII

1- How were you selected to participate in the cooperative education program?

2- What do you see as the basic strengths of the current cooperative education program in the SII?

3- What do you see as the basic weakness of the current cooperative education program in the SII?

4- Please make any comments that you think might be helpful to improve the quality of the Cooperative Education Program in the Secondary Industrial Institutes.

APPENDIX B

ARABIC VERSION OF INSTRUMENT

استبيان للمؤسسات المشتركة في برنامج
التدريب التعاوني بالمعاهد الثانوية الصناعيه

عزيزي مسؤول التدريب التعاوني:
صمم هذا الاستبيان بهدف استخلاص معلومات حول معرفتك وخبرتك وفهمك لبرنامج التعليم التعاوني في المعاهد الثانوية الصناعية. وسوف ينحصر استخدام المعلومات التي تزودنا بها في أغراض هذه الدراسة، وسوف تبقى المعلومات سرية ولن يتم تعيينها في تقرير النتائج. نأمل منكم التفضل بالإجابة على جميع فقرات هذه الإستبانة و المكونة من ثلاثة أقسام.

أولاً: العلاقة بين المعهد الثانوي الصناعي و الشركة/المؤسسة

كيف تحدد مستوى نظام التدريب التعاوني في المعهد الثانوي الصناعي؟ الرجاء أن تستخدم في إجابتك ميزانا مكونا من خمس درجات كما يلي:
م ت (موافق تماما)، م (موافق)، غ (غير متأكد)، غ م (غير موافق)، غ ب (غير موافق بتاتا).

خطة التدريب التعاوني					
المعلومة	م ت	م	غ	غ م	غ ب
1. قام منسق المعهد الثانوي الصناعي للتدريب التعاوني بشرح أهداف وغايات برنامج التدريب التعاوني لنا					
2. لدى طلاب التدريب التعاوني في مؤسستنا خطة تدريب وافقنا عليها					
3. نحن نقوم بوضع خطة التدريب بالتنسيق مع المعهد الثانوي الصناعي					
4. يقوم المعهد الثانوي الصناعي وحده بوضع خطة التدريب لطلاب التدريب التعاوني					
5. نحن وحدنا نقوم بوضع خطة التدريب لطلاب التدريب التعاوني					
دور منسقي التدريب التعاوني بالمعهد الثانوي الصناعي					
6. يقوم منسق التدريب التعاوني بالمعهد الثانوي الصناعي بزيارة الطلاب بجدول زمني معد مسبقا					
7. يعتبر عدد الزيارات التي يقوم بها منسق التدريب التعاوني بالمعهد الثانوي الصناعي مناسبا					
8. زيارات منسق التدريب التعاوني بالمعهد الثانوي الصناعي فعالة وناجحة					
9. يقوم منسق التدريب التعاوني بالمعهد الثانوي الصناعي بزيارة طلاب التدريب التعاوني في جميع نوبات العمل					
10. يسهم منسق التدريب التعاوني بالمعهد الثانوي الصناعي في حل المشاكل التي تعرض لطلاب التدريب التعاوني					
11. يحق لمنسق التدريب التعاوني بالمعهد الثانوي الصناعي الرجوع إلى سجلات طلاب في جهة التدريب التعاوني واستخدامها					
12. يستخدم منسق التدريب التعاوني بالمعهد الثانوي الصناعي معلومات من سجلات الطلاب لمعالجة مشاكل ذات صلة ببرنامج التدريب					
13. منسق التدريب التعاوني بالمعهد الثانوي الصناعي مدرب جيدا للإشراف على برنامج التدريب التعاوني					

التواصل مع المعهد الثانوي الصناعي					
المعلومة	م ت	م	غ	غ م	غ ب
لدينا تواصل جيد وفعال مع المعهد الثانوي الصناعي-14 قبل بداية فترة التدريب التعاوني					
لدينا تواصل جيد وفعال مع المعهد الثانوي الصناعي-15 أثناء فترة التدريب التعاوني					
لدينا تواصل جيد وفعال مع المعهد الثانوي الصناعي -16 بعد انتهاء التدريب التعاوني وذلك لمناقشة إمكانية توظيف طالب التدريب التعاوني في مؤسستنا/شركتنا					
نتواصل مع المعهد الثانوي الصناعي-17 لمناقشة تطوير البرنامج					
تقييم طالب التدريب التعاوني					
المعلومة	م ت	م	غ	غ م	غ ب
يقيم طلاب التدريب التعاوني قبل بداية فترة التدريب-18					
تقييم طلاب التدريب التعاوني هي مسؤولية منسق -19 الصناعي وحده التدريب التعاوني بالمعهد الثانوي					
تقييم طلاب التدريب التعاوني هي مسؤولية المدرب -20 في الشركة/ المؤسسه وحده					
تقييم طلاب التدريب التعاوني هي مسؤولية مشتركة -21 بين منسق التدريب التعاوني بالمعهد الثانوي الصناعي والمدرب في الشركة/المؤسسه					
يتم تقييم طلاب التدريب التعاوني بفعالية -22					
يتم تقييم طلاب التدريب التعاوني بعد انتهاء -23 البرنامج					

الصفات التي يتميز بها طلا ب التدريب التعاوني					
المعلومة	م ت	م	غ	غ م	غ ب
24- يستطيع طلاب التدريب التعاوني حل المشاكل التي تظهر لهم أثناء العمل					
25- يعتبر طلاب التدريب التعاوني بصفة عامة عاملين مجتهدين					
26- يستطيع طلاب التدريب التعاوني تحمل المسؤليات التي يكلفون بها أثناء العمل					
27- لدى طلاب التدريب التعاوني توجه جيد نحو العمل					
28- يستطيع طلاب التدريب التعاوني العمل ضمن فريق					
29- تتوافق إنتاجية طالب التدريب التعاوني مع مستويات العمل لدينا					
30- طلاب التدريب التعاوني قادرون على استخدام التقنية والمخترعات الحديثة					
31- يستطيع طلاب التدريب التعاوني العمل تحت إشراف محدود					
32- يتعلم طلاب التدريب التعاوني أشياء جديدة بسهولة					
33- طلاب التدريب التعاوني يقبلون بأخذ الأوامر من غيرهم					
34- يأتي طلاب التدريب التعاوني إلى العمل في الوقت المحدد					
35- ينتهي طلاب التدريب التعاوني من أعمالهم في الفترة المحددة لذلك في الوظيفة					
36- أعتقد أن طلاب المعهد الصناعي معدون إعداد فني جيد					

الصفات التي يتميز بها طلا ب التدريب التعاوني (تابع)						
المعلومة	م ت	م	غ	غ م	غ ب
أعتقد أن تدريس المهارات المذكورة -37 أعلاه (26-36) هي مسؤولية المعهد الصناعي					
أعتقد أن تدريس المهارات المذكورة -38 أعلاه (26-36) هي مسؤوليتنا نحن كجهة تدريب لهؤلاء الطلاب					
إنتاجية طلاب التدريب التعاوني تطابق -39 مواصفات الجودة التي تقدم لعملائنا					
لانتلقى أي شكاوى من عملائنا -40 بخصوص الأعمال التي يقوم بها طلاب التدريب التعاوني					
طلاب التدريب التعاوني يساهمون في -41 تقديم خدمات أفضل لعملائنا					
طلاب التدريب التعاوني يساهمون في -42 تقديم منتجات أفضل لعملائنا					

فوائد التدريب التعاوني للمؤسسات/الشركات المشاركة في برنامج التدريب التعاوني					
المعلومة	م ت	م	غ	غ م	غ ب
برنامج التدريب التعاوني يتيح لنا -43 فرصة إختيار موظفين جدد					
برنامج التدريب التعاوني يقلل من -44 نفقات تدريب الموظفين الجدد					
برنامج التدريب التعاوني يقلل -45 المدة الزمنية لتدريب الموظفين الجدد					
برنامج التدريب التعاوني يقلل -46 من نفقات ا لتدريب في مؤسستنا بصفة عامه					

فوائد التدريب التعاوني للمؤسسات/الشركات المشاركة في برنامج التدريب التعاوني (تابع)					
المعلومة	م ت	م	غ	غ م	غ ب غ
47- برنامج التدريب التعاوني يتيح لنا متابعة الطلاب قبل تعينهم رسمياً					
48- برنامج التدريب التعاوني يساهم في إنجازنا لبعض المشاريع المؤقته					
49- برنامج التدريب التعاوني يزودنا بمعلومات ومعارف جديده					
50- نعتمد على برنامج التدريب التعاوني لاختيار العاملين لدينا في المستقبل					
51- نقوم بتوظيف طلاب التدريب التعاوني بعد تخرجهم					
52- خريجي التدريب التعاوني الذين تم تعيينهم كموظفين رسميين لدينا يحصلون على ترقيات أسرع من الموظفين الآخرين					
53- خريجي التدريب التعاوني الذين تم تعيينهم كموظفين رسميين لدينا يحصلون على رواتب مبدئية أعلا من غيرهم من الموظفين غير خريجي التدريب التعاوني					
54- خريجي التدريب التعاوني الذين تم تعيينهم كموظفين رسميين لدينا يستمرون في الشركة مدة أطول من غيرهم من الموظفين غير خريجي التدريب التعاوني					
55 نؤمن بأن برنامج التدريب التعاوني مفيد لنا					
56- نؤمن بأهمية استمرار برنامج التدريب التعاوني					
57- أعتقد أن برنامج التدريب التعاوني المعاهد -الثانوية الصناعية هو برنامج جيد وفعال					
58- يساهم برنامج التدريب التعاوني بتزويد سوق العمل السعودي بالأيدي العاملة المدربه					

ثانياً:

معلومات عن المؤسسة/ الشركة

1 - موقع العمل

الرياض[ ] **جدة** [ ]

2- قطاع العمل

الخدمات الصحية والاجتماعية [ ]
الصناعة [ ]
الخدمات التجارية والعقارية[ ]
وكالة سيارات [ ]
الطباعة والنشر [ ]
البناء والتعمير [ ]
الزراعة [ ]
الكهرباء، الغاز، الماء [ ]
خدمات الاتصالات [ ]
تجارة الجملة والمفرق [ ]
خدمات النقل والمواصلات [ ]

3- هل يوجد في مؤسستك تدريب لموظفيها داخل المؤسسة؟
نعم [ ] لا [ ]

4-عدد أيام التدريب التي تمت في مؤسستكم خلال السنة الماضية في المجالات الآتيه:

أ- تدريب إداري ( )
ب- تدريب فني ( )
ج- تدريب إرشادي ( )

5 - عدد الموظفين في شركتك

ا- من 10-50 ( )
ب- من 51- 100( )
ج- أكثر من 100 ( )

6- نسبة الموظفيين السعوديين في شركتك:

أ- أقل من10% ( )
ب- من20 %-30% ( )
ج- من 40%-60% ( )

7- هل يوجد في مؤسستك قسم خاص بتنمية الموارد البشرية؟
نعم [ ] لا [ ]

8- هل لدى مؤسستك أي نوع من شهادات منظمة المقاييس الدولية ISO ؟
نعم [ ] لا [ ]

ثالثاً:
الهيكل التنظيمي للتدريب التعاوني في مؤسستكم/شركتكم

1- اذكر القسم الذي يشرف على برنامج التدريب التعاوني في مؤسستك

_____

2- عدد السنوات التي شاركت فيها مؤسستكم/شركتكم في برنامج التدريب التعاوني؟

ا- من 1-2 سنه ( )
ب- من 3-4 سنوات ( )
ج- من 5-6 سنوات ( )
د- من 7-8 سنوات ( )
ه- أكثر من 8 سنوات ( )

3- المستوى التعليمي للشخص المسؤول عن برنامج التدريب التعاوني في مؤسستكم/شركتكم؟

أ- دكتوراه [ ] ب- ماجستير [ ]
ج- بكالريوس [ ] د- أقل من البكالريوس [ ]

4- المسمى الوظيفي للشخص المسؤول عن برنامج التدريب التعاوني في مؤسستكم/شركتكم

_____

5- عدد سنوات الخبرة للشخص المسؤول عن برنامج التدريب التعاوني في مؤسستكم/شركتكم

ا- من 1-5 سنوات ( )
ب- من6 -10 سنوات ( )
ج- من 11-15 سنوات ( )
ه- أكثر من15 سنه ( )

6- هل لدى المسؤول عن برنامج التدريب التعاوني في مؤسستكم/شركتكم أي شهادات في التدريب التعاوني؟

نعم [ ] لا [ ]

7- هل شارك المسؤول عن برنامج التدريب التعاوني في أي ورش عمل أو مؤتمرات أو محاضرات عن التدريب التعاوني؟

نعم [ ] لا [ ]

8- هل تحتفظ مؤسستكم/شركتكم بأي سجلات لطلاب التدريب التعاوني؟

نعم [ ] لا [ ]

9- عدد طلاب التدريب التعاوني خلال العام الدراسي 1424-1425

أ- من 1-10 طلاب ( )
ب- من 11-20 طلاب ( )
ج- من 21-30 طلاب ( )
د- أكثر من 30 طلاب ( )

10- عدد طلاب التدريب التعاوني الذين تم تدريبهم في مؤسستكم/شركتكم منذ بدأ التدريب التعاوني عام 1996

أ- من 1-25 طالب ( )
ب- من 26-50 طالب ( )
ج- من51-75 طالب ( )
د- أكثر من 100 طالب( )

11- اذكر التخصصات التي ينتمي إليها العدد الأكبر من الطلاب، ورتبها بوضع رقم في الخانة المناسبة من 1 للعدد الأكبر إلى 6 لأقل عدد

الميكانيكا العامة [ ]
الكهرباء [ ]
ميكانيكا السيارات [ ]
الطباعة والنشر [ ]
الصفائح المعدنيه [ ]

12- مسميات الوظائف التي تعطى لطلاب التدريب التعاوني:

فني [ ]
كهربائي [ ]
ميكانيكي سيارات [ ]
أخصائي في الصفائح المعدنيه [ ]
أخرى حدد _____

13- خلال فترة التدريب التعاوني يتدرب طلاب التدريب التعاوني في وظائف ذات صلة بتخصصاتهم

نعم [ ] لا [ ]

14 - لدينا تدريب إعدادي لطلاب التدريب التعاوني

نعم [ ] لا [ ]

15- نحن مستعدون لقبول طلاب التدريب التعاوني لمدة زمنية أطول

نعم [ ] لا [ ]

16- لدينا القدرة على قبول المزيد من طلاب التدريب التعاوني

نعم [ ] لا [ ]

17- نحن مستعدون لدفع مكافآت مالية لطلاب التدريب التعاوني أثناء عملهم خلال برنامج التدريب التعاوني

نعم [ ] لا [ ]

خامسا: ملاحظاتك حول برنامج التدريب التعاوني بالمعاهد الصناعية

1- كيف تم إختياركم للمشاركة في برنامج التدريب التعاوني

2- ما هي مرئياتك حول جوانب القوة في البرنامج الحالي للتدريب التعاوني في المعاهد الثانوية الصناعية؟

3- ما هي مرئياتك حول جوانب الضعف في البرنامج الحالي للتدريب التعاوني في المعاهد الثانوية الصناعية؟

4- الرجاء وضع أي ملاحظات أخرى ترى أهميتها في تطوير نوعية برنامج التدريب التعاوني في المعاهد الثانوية الصناعية:

APPENDIX C

ENGLISH AND ARABIC COVER LETTER

Organizational Partner letter

Dear Cooperative education training supervisor:

Will you please take approximately 30 -40 minutes from your busy schedule to complete the attached questionnaire and e-mail it back to me before 04/08/2004. The information that you provide will be kept strictly confidential and will in no way be singled out in the study. The data will only be reported in aggregated form.

I am currently enrolled in the Ohio State University doctoral program in Workforce Development and Education in the United States of America. As partial fulfillment of the program requirements, I am in the last stage—the dissertation. The title of my dissertation is The Effectiveness of the Cooperative Education Program in Jeddah and Riyadh Secondary Industrial Institutes in Saudi Arabia as Perceived by the Organizational Partners. The major purpose of this study is to determine the organizational partners' perceptions of the effectiveness of the cooperative education program in Jeddah and Riyadh SIIs. The study will also investigate if the cooperative education program in the SIIs meets the occupational needs of business and industry. In addition, the study will provide a basis for enhancement and advancement of SII Cooperative Education Programs in the two biggest cities in the Kingdom of Saudi Arabia.

Your assistance in completing this survey will be greatly appreciated. However, your participation in the study is absolutely voluntary and you can make the decision to participate without undue influence or coercion. You can choose not to participate, you can refuse to answer questions that make you feel uncomfortable, and you can withdraw from the study at any time without penalty or repercussion.

I do look forward to your help, though, for only through feedback from those people involved in Cooperative Education Program will Saudi youth improve and grow in technical skills.

Sincerely yours,

Abdulaziz Abdulaziz,
Ph.D Candidate, Ohio State University, Columbus, USA.
Abdulaziz.3@osu.edu
Tele fax 011-614-459 7759

بسم الله الرحمن الرحيم

سعادة الأستاذ/

"مسؤول برنامج التدريب التعاوني بمعهد الإداره بالرياض" المحترم

السلام عليكم ورحمة الله وبركاته؛؛؛

أفيدكم بأنني أحد مبتعثي المؤسسة العامة للتعليم الفني والتدريب المهني للحصول على درجة الدكتوراه في مجال تنمية وتطوير القوى العاملة من جامعة أوهايو ستيت يونيفرستي بولاية أوهايو بالولايات المتحدة الأمريكيه.

وهذا الإستبيان المرفق مع الإميل/ الفاكس هو جزء مهم من بحثي الذي هو بعنوان رأي القطاعات المشاركة في برنامج التدريب التعاوني بالمعاهد الثانوية الصناعية بالمملكة في مدى فعالية البرنامج. ويهدف البحث إلى دراسة وتحليل آراء القطاعات المشاركة في برنامج التدريب التعاوني للمعاهد الثانوية الصناعية في مدنيتي جدة والرياض عن مدى فعالية البرنامج ومعرفة نقاط القوة والضعف في البرنامج الحالي للتدريب التعاوني.

وحتى تؤدي الدراسة الأهداف المرجوة منها فإنه من المهم جداً أن تتم الإجابة على جميع فقرات الإستبيان بعناية وحرص ومن ثم إعادتها للباحث بواسطة الإميل أو الفاكس رقم(40) 8401678 في أسرع وقت ممكن. وأود أن أؤكد لك أن إجاباتكم على فقرات الإستبيان ستستخدم لأغراض البحث العلمي فقط، كما أود أن أطمأنك إلى أن إجاباتكم ستعامل بسرية تامة ولن يكون هناك طريق لمعرفة من قام بالإجابة على الإستبان بأي وسيلة كانت.

إذا كان هناك أي سؤال أوإستفسار فإنه يسعدني الإجابة عليه عن طريق البريد الإلكتروني أو أرقام الهواتف المدونة في أسفل الصفحه.

ختاماً لك مني جزيل الشكر ووافر التقدير

أخوكم/

عبدالعزيز بن إسماعيل عبدالعزيز
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فاكس داخل المملكه- المدينه المنوره 40 /84016780

APPENDIX D

DESCRIPTIVE STATTISTICS OF

INDEPENDENT AND DEPENDENT VARIABLES

Items	N	M	SD
I. Training Plan	**38**	**3.5921**	**1.19603**
1. The Cooperative education program goals and objectives have been explained to us by the SII cooperative education coordinator	38	3.82	1.136
2. The Cooperative education students who work in our business have a training plan to which we have agreed.	38	3.71	1.206
3. We develop the training plan jointly with SII	38	3.47	1.466
4. The SII alone develops the training plan for cooperative education students	38	2.66	1.279
5. We alone develop the training plan for co-o students	38	2.76	1.403
II. SII Cooperative education Coordinators Role	**38**	**3.79**	**.644**
6. The SII Cooperative education coordinator visits students on the basis of a pre-set schedule	38	3.76	1.218
7. The number of SII cooperative education coordinator visits are about right	38	3.89	1.060
8. The SII Cooperative education coordinator visits are effective and efficient	38	3.89	1.034
9. The SII Cooperative education coordinator visits cooperative education students on all shifts	38	3.11	1.311
10. The SII Cooperative education coordinator helps to solve problems that arise with the cooperative education students	38	4.18	.834
11. The SII Cooperative education coordinator has access to and use of cooperative education student records at the training place	38	4.13	.991
12. The SII Cooperative education coordinator uses information obtained from the student records to adjust to problems that arise relative to the program	38	3.55	1.083
13. The SII Cooperative education coordinator is well trained to supervise the cooperative education program	38	3.82	.865
III. Overall Contact with SII	**38**	**3.49**	**.924**
14. We have good and effective communication with the SII before a cooperative education student is placed	38	3.87	1.095
15. We have good and effective communication with the SII during the cooperative education program.	38	4.08	.912

16. We have effective communication with the SII after a student's cooperative education experience to discuss student employability	38	3.18	1.291
17. We communicate with the SII to discuss program improvements	38	2.82	1.312
IV. Cooperative education Student Evaluation	**38**	**3.21**	**.617**
18. Cooperative education students are evaluated before job placement	**38**	**2.21**	**1.189**
19. Cooperative education students are evaluated by the cooperative education coordinator only	**38**	**2.37**	**1.172**
20. Cooperative education students are evaluated by the job instructor only	**38**	**2.53**	**1.202**
21. Cooperative education students are evaluated jointly by the cooperative education coordinator and the job instructor	**38**	**3.92**	**1.421**
22. Cooperative education students are evaluated effectively	**38**	**4.05**	**.899**
23. Cooperative education students are evaluated after the cooperative education program	**38**	**4.18**	**.926**
V. Student Characteristics	**38**	**3.46**	**.532**
24. Cooperative education students can solve unanticipated problems that arise on the job	38	3.11	.894
25. Cooperative education students in general are hard	38	3.42	.976
26. Cooperative education students are willing to accept responsibility	38	3.53	.862
27. Cooperative education students have a good work attitude	38	3.84	.754
28. Cooperative education students are able to work as a part of a team	38	3.92	.749
29. Cooperative education student productivity meets our job standards	38	2.92	1.050
30. Cooperative education students are able to deal with the new technologies/innovations	38	3.39	1.001
31. Cooperative education students can work under minimum supervision	38	3.74	.860
32. Cooperative education students learn new things easily	38	3.89	.727
33. Cooperative education students are willing to take instructions from others	38	3.82	.801
34. Cooperative education students come to work on time	38	3.68	.962
35. Cooperative education student finish their work within the time limit of performing the job	38	3.76	.751
36. Students are well prepared by the SIIs in technical skills	38	3.47	.893

37. I think SIIs should teach all of these skills (26-36) to their students	38	4.16	.789
38. I think it is the responsibility of employers to teach cooperative education students all the skills identified in questions 26-36	38	3.00	1.230
39. The work of cooperative education student meets our expectations for offering quality products to our customers	38	2.87	.991
40. We receive no complains from our customers about work cooperative education students performed	38	3.29	1.011
41. Cooperative education students help us offer better service to our customers	38	3.00	1.065
42. Cooperative education students help us deliver better products to our costumers	38	2.95	1.064
VI. Benefits of Cooperative Education To Employers and country economy	**38**	**3.62**	**.488**
Our participation in the cooperative education program…			
43. Gives us access to new workers	37	4.11	.774
44. Reduces the recruitment cost of hiring new workers	37	3.70	.939
45. Reduces training time for new workers	37	3.78	.886
46. Reduces the cost of training	37	3.41	.956
47. Allows our organization to screen students for permanent employment	38	4.21	.577
48. Provides us the extra help to complete one-time projects	38	3.21	1.277
49. Brings new knowledge into the organization	38	3.18	1.010
50. We depend on the cooperative education program to select future employees	38	3.61	.974
51. We employ cooperative education students after they graduate	38	3.55	.795
52. Students who have participated in the cooperative education program and are hired full-time in our organization tend to progress faster than non cooperative education employees	37	2.95	.664
53. Students who have participated in cooperative education and are hired full-time in our organization tend to receive higher starting salaries than non cooperative education employees	37	3.30	.909
54. Students who have participated in cooperative education and are hired full-time in our organization tend to remain in our employment for a longer time period than non cooperative education employees.	37	3.14	.887

55. We believe that the cooperative education program is beneficial to us	38	3.89	.953
56. We believe that the cooperative education program should continue	38	4.13	.777
57. We believe that the cooperative educationerative education program of the Secondary Industrial Institutes is effective	38	4.11	.764
58. The cooperative education program is adding trained Saudi workers to the labor force.	38	4.13	.906

APPENDIX E

INSTRUMENT EVALUATION

AND PANEL OF EXPERITS

Questionnaire Evaluation

1. How clear are the questionnaire statements?

   a) - Very clear b)- Somewhat clear c)- Not clear

2. If you choose (b) or (c), would you please tell me in which part of the questionnaire? (Please write page number and question number)

   ……

   ……

3. How difficult is the questionnaire language?

   a) Very difficult b) Somewhat difficult c) Not difficult

4. If you choose (a) or (b), would you please tell me in which part of the questionnaire? (Please write page number and question number)

   ……

   ……

5. How related are the questionnaire statements to the purpose and goals of the study?

   a) Very related b) Somewhat related c) Not related

6. If you choose (b) or (c), would you please tell me in which part of the questionnaire? (Please write page number and question number)

   ……

   ……

7. Is there any repetition in the questionnaire?

   a) Yes b) No

8. If you chose (a) would you please tell me in which part (s). (Please write page number and question number)

……

……

9. Is there is any question or statement should be deleted from the questionnaire?

a) Yes b) No

10. If you choose (a) would you please tell me in which part of the questionnaire? (Please write page number and question number)

……

……

11. What do you think about the questionnaire length?

a) Very long b) Somewhat long c) Not long

12. Would you please evaluate the external appearance of the questionnaire (size, typing, font, etc?

……

……

13. Would you please provide me with any suggestions and comments about the questionnaire and the study in general?

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Panel of Experts

1- Dr. Nasser Al-owd, Imam Mohamed Ibn Saud University, Riyadh, SA
2- Dr. Yousef Ma'alooly, Saudi Factory for Electrical Transformers, Chairman, Jeddah
3- Saleh Akhtar, Chairman Of Student Affairs, College of Technology, Medina, SA
4- Dr. Saleh Al-Andas, Training and Development Department, GOTEVOT, Riyadh, SA
5- Dr. Young Roy, US Air Forces, Dayton, Ohio, USA.

Panel of Translation

1- Dr. Taher Hafiz, Manchester University, Saudi Embassy, London, UK.
2- Dr. Hasan Sharqawi, College of Technology, Medina, SA