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## Business and Education: A Partnership Worth Investment

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**BUSINESS AND EDUCATION:  
A PARTNERSHIP WORTH INVESTMENT**

Keith W. Harkins, B.S.

A Culminating Project Presented to the Faculty of the  
Graduate School of Lindenwood College in Partial  
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ABSTRACT

This thesis will focus on the potential benefits of a collaboration between business and education in an effort to prepare today's youth for entry into the workforce.

The number of large companies that are becoming involved with education is steadily increasing. Many business leaders have come to realize that business has the ability to provide human and material resources that would enable schools to significantly improve the education students receive.

Student internships may provide a method for both business and education to benefit from such partnerships.

The purpose of the present study is to investigate research regarding partnerships between business and education. An internship manual was created with the goal of providing specific guidelines for a Safety Intern at a Department of Energy Remediation Project. The manual was then evaluated by four professionals from various backgrounds employed at the Remediation Project. The evaluators read the manual and then completed a formal questionnaire and participated in a follow-up interview.

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Results of the study indicate a highly favorable response from members of the business world becoming involved with education in developing various internship programs. Well organized internship programs that provide clear and concise expectations enable both businesses and students to utilize the internship experience to its fullest potential.



COMMITTEE IN CHARGE OF CANDIDACY:

Associate Professor Daniel W. Kemper,  
Chairperson and Advisor

Adjunct Assistant Professor Joseph Ancona

Adjunct Assistant Professor Patrick Akers

## Table of Contents

List of Tables .....	iii
I. Introduction .....	1
History of educational and business oriented partnerships.....	1
Growing expectations for the future workforce.....	4
Legislative Proposals .....	6
Statement of Purpose .....	11
II. Literature Review .....	13
III. Methods and Evaluation .....	36
Materials .....	36
Subjects .....	39
Instrument .....	40
Procedure .....	41
IV. Results .....	43
V. Discussion .....	48
Summary .....	48
Limitations .....	54
Suggestions for Future Research .....	55
Appendix A .....	56
Appendix B .....	67
Appendix C .....	70
Works Cited .....	71
Vita Auctores .....	74

## List of Tables

Table 1	The SCANS Know-How .....	7
Table 2	The Principles That Guide Goals 2000 .....	8
Table 3	Examples of Methods Businesses Can Use To Assist Educational Reform .....	19
Table 4	Six Questions for Considering the Benefits of an Apprenticeship Program.....	22
Table 5	To Pay or Not to Pay? .....	24
Table 6	What Companies Are Doing .....	33

CHAPTER I  
INTRODUCTION

History of educational and business oriented partnerships

The business world has always recognized the essential elements necessary to create and maintain a successful company. Competent and educated management teamed with proficiently trained employees are an integral part to any company's success. To acquire such personnel, businesses must be selective in their search for promising new employees.

However, many businesses currently searching for graduates entering the workforce are becoming disenchanted with the level of training students have received in preparation for their entrance into a work environment. In an effort to promote job training and work ethic, along with an emphasis on a thorough education, some businesses have become involved in educational and business oriented partnerships. "Business and educational partnerships position the educational institution to better meet the full spectrum of needs in the workplace. These needs can range from remediation of basic skills to executive

management development, technical skills and interpersonal skills" (Crist 40).

In the past, some partnerships between business and education were formed when businesses became involved with local school systems through financial contributions. Money was utilized in purchasing computers and equipment to promote a higher level of learning in their community. However, a true partnership requires time and energy as well as financing. For the partnership to work, businesses must be dedicated to working with educators in an effort to develop programs which will enable schools to provide students with the knowledge necessary to become successful upon entering the workforce. To say that a business is forming a partnership with an educational institution, without a common goal, will prohibit development of an effective program. Thorough planning of a business-education partnership is essential. In organizing a business-education partnership both sides must be fully aware of how the other works. Businesses usually set goals and procedures to produce the desired results in a short amount of time, using only the amount of resources necessary to achieve the desired result. Education and educators are used to setting goals for a long term result, taking into consideration that they do not have complete control of their



students outside of an educational environment. A quality partnership will allow for business executives to realize the time and energy it takes to properly educate students, and educators will benefit from business' strong management and financial knowledge. "Employees of tomorrow will need to know customers and understand software, machines, protocols, and telecom equipment. But they will still need schools to teach them... the capacity for grace under pressure, abstract thinking, cogent speech, and problem solving" (Riley 40-41).

Successful types of partnerships between business and education which have been used in the past, and are currently increasing in number, are student internship programs or summer employment programs. Student internship programs can occur in a multitude of job occupations including business, education, medicine, and vocational training. A typical business internship is described as "a nontraditional college credit course in which an upper-level undergraduate (or graduate) student typically spends six to eight weeks working on site with a company to learn firsthand more about his chosen career field" ("Business Internships...." 12). Students also receive feedback from a faculty member who is familiar with the company's practices, and supervises the student's efforts throughout the

program. "When firms and students are well matched and when the projects or positions into which the students are placed are truly consequential, the results can benefit both sides" (13).

Summer employment programs have also been beneficial to many young adults approaching entry into the workforce. Summer employment programs can be sponsored by the government, local businesses, or through an educational setting. Some government programs focus on providing summer employment to young adults living in an urban environment who may not have the advantage of participating in a school sponsored internship program. Some summer employment programs offer these young adults the opportunity to experience different work environments and develop stronger work ethics. Other summer employment programs allow the participants to earn minimum wages teaching them the additional responsibility of handling money. These programs allow many young adults to experience the accountability and criteria necessary to maintain a full time job as well as giving these young adults the advantages of job training.

#### Growing expectations for the future workforce

As a globally competitive workforce, our society is among the first to use advanced methods and

technology to accomplish tasks more accurately and efficiently. Due to the fact that these methods are present in all occupational fields, employees must be educated and trained to use higher levels of technology if they are to remain useful in their career fields. A recent survey conducted by the Business-Higher Education Forum found that by the year 2000, "computer literacy requirements for blue-collar workers would be universal-and that America would have trouble meeting even that basic prerequisite. Another study shows that by 1995, 14 million Americans will be unprepared for the available jobs" (Soter 11).

For today's employees to prepare a higher quality of work, they must be prepared and trained to use the technology available to them. This results in a problem which has not been faced before; worker 'unemployability' rather than worker unemployment. According to Avishai, technological breakthroughs

since 1987 have come so fast as to seem almost magical: distributed data processing, interactive telecommunications, computer integrated manufacturing and control systems, shared-database marketing alliances, supplier and customer networking, real-time under entry and control systems, robotization, customization, aggregation, globalization. Increasingly the mindless work of our civil society is accomplished by mindless things-machines and software. In short there is hardly a job left in our society that does not require a talent for integration. (44)



Education is the solution to preparing and training future generations to use these advances in technology.

### Legislative Proposals

The federal government has been conducting extensive research regarding the feasibility and importance of integrating education with the business world. Based upon the results of the Secretary's Commission on Achieving Necessary Skills (SCANS), published in 1992 by the United States Department of Labor, a plan has been developed to reach the goal of preparing the workforce for the new century. The Secretary's Commission was made up of thirty-one eminent representatives of business, labor, education, and government. The challenge put before the Commission was to develop a language common to both business and education that would allow the two worlds to understand each others needs. The result of this challenge has been labeled the "SCANS Know-How"- what students must know how to do to succeed in the future workforce (Packer 52).

The workplace know-how taught, assessed and certified by the schools must match the requirements that show up in the employers' job descriptions. When students believe that certification of know-how will mean a step up the career ladder, they will become the motivated learners that teachers and employers want. (52)

The SCANS Know-How is illustrated in Table 1.

Table 1

The SCANS Know-How

---

**A Three-part Foundation**

**Basic skills:** reading, writing, arithmetic/mathematics, listening, speaking.

**Thinking skills:** creative thinking, decision making, problem solving, seeing things in the mind's eye, knowing how to learn, reasoning.

**Personal qualities:** responsibility, sociability, self-esteem, self-management, integrity/honesty.

**Five Competencies**

- Planning resources (budgeting, scheduling and allocating staff and space).
- Using information (finding and evaluating data, communicating in oral and written form, using computers).
- Interpersonal skills (working in teams that may be multicultural, negotiating and teaching).
- Understanding systems (applying total quality management and statistical process control).
- Applying technology (using, selecting and maintaining equipment).

**Examples of SCANS at School and Work**

Learning planning and scheduling in mathematics;  
Scheduling a work shift at a restaurant.

Using information by analyzing data in a geography class; Collecting and analyzing data on customer preferences.

Learning interpersonal skills by reading about cultural diversity in English; Working on a multicultural team.

Understanding systems by studying social change in history; Evaluating error rates in food shipments.

Applying technology by using test instruments in science; Using test instrument to maintain equipment.

---

SOURCE: Packer, Arnold. "Earning and Learning: Major Links to better Living." HR Magazine April 1993.

The federal government has expanded on the finding of the Secretary's Commission in 1992 and has made improving our educational system a priority as the new century approaches. On March 31, 1994 the bill Goals 2000: Educate America Act was signed into law by President Clinton. The objective of Goals 2000 is to provide resources to states and communities encouraging educational reform aimed at helping students reach challenging academic and occupational skill standards. The principles which guide Goals 2000 are identified in Table 2.

Table 2

The Principles That Guide Goals 2000

---

**ALL CHILDREN CAN LEARN.** For too long, we have accepted the false notion that some children cannot learn. Goals 2000 sweeps away the tyranny of low expectations.

**ALL CHILDREN CAN LEARN TO HIGH STANDARDS.** When children are asked to reach higher and learn more, they do. By insisting on high standards, Goals 2000 will help children learn more than ever before.

**HIGH STANDARDS ARE THE KEY TO SCHOOL REFORM.** Children will be challenged to master tougher courses, and everyone in the school, family, and community will be asked to support children in that effort.

**SCHOOLS CANNOT BE IMPROVED BY QUICK-AND-EASY SOLUTIONS.** We must rethink and improve teacher training, family involvement, curriculum, assessments, textbooks, technologies, governance, and all the other elements of education. High standards are the center of education reform, but all the elements of education must be aligned and work together to help students reach high standards.

**SCHOOLS MUST BE HELD ACCOUNTABLE FOR RESULTS.** In return, Goals 2000 cuts red tape and allows schools greater



flexibility in developing solutions that make sense for them.

**SCHOOLS CANNOT DO THE JOB ALONE.** Everyone in the community must pitch in and become involved in supporting better education- the business and labor communities, older Americans, civic groups, local leaders, and all citizens.

---

SOURCE: United States, Department of Education. Goals 2000: Educate America Act. (1994).

The Goals 2000 Act formalizes in law eight national education goals. The Goals are: By the year 2000...1. School readiness- children will begin school ready to learn; 2. Improved student achievement- students will be competent in the basic academic subjects; 3. Adult literacy and lifelong learning- every American adult will be literate and possess skills necessary to compete in the workforce; 4. Teacher education and professional development- all educators will have the opportunity to acquire the skills necessary to prepare the future workforce; 5. Increased graduation rate- the high school graduation rate will increase to 90 percent; 6. Best in Math and Science- United States students will be first in the world in math and science. 7. Safe, disciplined, and drug-free schools; and 8. Parental involvement- Every school will encourage parental involvement in education.

According to the United States Department of Education,

Together, these school improvement efforts supported by Goals 2000 can help create a new ethic of learning in this country, and play a critical role in helping children reach challenging goals and standards. These efforts can help create better education and training opportunities geared to the needs of states and local communities to best support children's success in school, in the workplace, and as responsible citizens in our nation's democracy. (5)

Along with Goals 2000, the current administration has developed the "School-to-Work Opportunities Act" which supports state and local efforts to build a school-to-work transition system that will help youth acquire the knowledge, skills, abilities, and information they need to make a smooth transition from school to career-oriented work and training. Riley reports that,

The Clinton administration, with strong business support, is working hard to promote new school-to-work legislation to help propel the majority of high school graduates into the workplace. We can no longer use high schools to sort young people into one track that leads to college and another that leads nowhere in particular. We know that the majority of high school graduates, around 75%, either will not attend or will not complete four years of college. This is our future workforce. Business should be fully involved and engaged in the process of implementing school-to-work programs at the local level. (40)

### Summary

Past experience indicates that students meet the expectations that are set for them. Educators, employers, and government agencies agree that expectations must be raised in order for the future generation to be prepared for the workforce which they will enter. Effective partnerships between business and education can help improve student learning and provide job-readiness skills enabling students to effectively entering the workforce.

Business has the ability to provide material and human resources that would ensure the opportunity for schools to significantly improve the education which students receive. Student internships and career oriented practicum experiences are one of the methods which would provide benefits for both the student as well as the sponsoring business. Together business and education is a partnership worth investment.

### Statement of Purpose

The need for a competitive, highly skilled workforce in the United States has made education a key issue for government and business alike. Integration of education and business is a possibility in all areas of business as well as reaching all ages and educational levels of students. From training classes



to internship programs, the involvement of business in helping to ensure a more competent workforce is a necessity. Both the federal Department of Labor and the Department of Education have developed programs aimed at integrating business and education. Employers and educators are becoming aware of the increased potential for students to become more productive workers and citizens with the benefits of realistic training and experiences prior to entering the workforce.

This study will investigate research regarding partnerships between business and education and focus on the creation of an internship manual. Hopefully, the manual will be designed to serve as a guide for a student intern at a college level in the field of environmental remediation for a construction and engineering company and will include goals, objectives, expected performance requirements (including time and accuracy), training and development, and methods of evaluation.

## Chapter II

### LITERATURE REVIEW

The business community has come to realize how vital quality education is to the future of the nation's economy and is becoming directly involved with preparing the future workforce. Rigden states,

Business is an ally of public education for several reasons. In its own interest, it strives to increase the number of graduates qualified for entry-level work in high-tech manufacturing plants, service-oriented workplaces, and corporate offices. It also seeks to enable students to extend their education at colleges and universities in preparation for professional careers. (1)

One method in which business can become directly involved with the experience and knowledge that students receive is through developing a working partnership between business and education. Cetron notes the history of businesses and education in his book Schools of the Future: How American Business and Education Can Cooperate to Save Our Schools,

Business partnerships with schools have existed from at least as far back as the 1860s when, for example, the New York City Chamber of Commerce had representatives on the school board of the Merchant Marine Technical School, public school in the New York City system... While business



cooperation with schools is not new, partnerships between businesses and schools will be a pervasive part of the daily operations in most school districts by the 21st (twenty-first) century. Many schools will depend on businesses for a large part of their funding, staff, and equipment. In addition, many schools will use the workplace to train students in specific job skills, whether students intend to go to college or take on full-time jobs after they graduate. (85)

Cetron's predictions seem accurate when analyzing the rate of growth in such partnerships. "It is estimated that between 1983 and 1990 the number of business/education partnerships in the United States rose from 42,000 to over 140,000" (Dick 1). One possibility explaining this rate of growth may be attributed to some of the 1992 findings of the Department of Education cited by Szabo including,

more than two-thirds of fourth, eighth, and 12th- (twelveth) graders were not 'proficient' readers. And only 16 (sixteen) percent of fourth-graders, 8 (eight) percent of eighth- graders, and 9 (nine) percent of 12th-(twelfth) graders were able to solve and explain answers to problems that required understanding and applying mathematical principles and operations. (30)

These findings provide solid reasons for business to become involved in the restructuring of the current educational system. Peltzman acknowledges,

Businesses bear a direct and substantial

cost of the decline in the performance of public schools. They bear a cost in terms of the reduced productivity that accompanies a less well-educated workforce, and they bear a cost in many cases of having to provide remedial education in-house. (48)

This problem is compounded due to the fact that businesses' are currently demanding a higher level of education and understanding of technology than in the past. Therefore, many businesses have decided to take a more active role in assisting education in reorganizing curriculum in an effort to accurately prepare students for entry into the workforce.

Creating successful partnerships between business and education is an ongoing process. Dick states,

In the early stages of the national partnerships in education movement the focus was largely on relationship building. Partnerships were thought successful if both partners were benefitting from the relationship. Schools benefitted through increased resources such as donated equipment, guest speakers, and tours of local businesses. Businesses benefitted through an increased positive public visibility and in some cases even got financial incentives through government programs designed to encourage businesses to participate in vocational training of youth. As the partnership movement matures and responds to the changes in the national reform agenda the focus is increasingly moving toward more direct involvement of businesses and community agencies in a broad-based systemic change of schooling structures. (1-2)

One of the significant results of a combined

effort between business, education and the community has been developed through the United States Department of Labor. In 1992 the Secretary's Commission for Achieving Necessary Skills (SCANS) developed a guideline for establishing necessary skills employees should possess in order to experience success in their employment "... being able to select goal-relevant activities, ranking them, and preparing and following schedules,' or ' work[ing] well with, understand[ing], and employ[ing] technology...." (Soter 13). These basic skills and competencies create a common language between business and education. "SCANS has provided a blueprint for working toward mutually beneficial business-education partnerships" (Packer 51).

Acknowledging that most business/ educational partnerships can benefit both students and employers, businesses must decide what type of involvement best suits the position of their company. According to Rigden, when a company wants to create a program with an educational institution three basic steps should be followed,

1. Choose an education-support program that is consonant with education needs and corporate priorities.
2. Develop the program by applying business methods of analysis, strategic planning, and management.
3. Establish a system by which to evaluate outcomes, identifying the conditions under



which the program is successful, and report on what is being learned through supporting this effort. (10)

There are a multitude of ways that businesses can become involved in working with schools and universities. The four major types of involvement between business and education include "grants, program support, partnerships, and coalitions" (Rigden 4).

Grants are monetary contributions which are made to educational institutions to finance special projects. Rigden states that companies engaged in grantmaking usually follow three steps,

1. Select appropriate projects to fund through proposal evaluation.
2. Dispense funds to support selected projects.
3. Review evaluations and reports to see how well the project succeeded in meeting its goals. (4)

Businesses can also make contributions to educational institutions by supporting a variety of programs developed to encourage students knowledge and experience. "In addition to financial contributions, companies often donate equipment and materials to such programs, encourage executives to serve as volunteer board members, or solicit employees to act as mentors" (4). Program support encourages involvement of people and resources as well as monetary contributions.

Plans to develop partnerships between businesses

and schools require a more detailed relationship in order to achieve success. Rigden believes that most partnerships can be characterized as belonging to one of three primary configurations: adopt-a-school model, project-driven model, and reform model;

**Adopt-a-School.** Adopt-a-School model partnerships are usually created between a single company and a single school to provide resources and volunteers to support school activities. Especially within the context of increased government cutbacks in education spending, the adopt-a-school partnership offers schools much-needed resources and important additional adult interaction for students. It is often through an adopt-a-school relationships that school and business people develop the sense of trust and confidence in each other that lays the foundation for other types of partnerships.

**The Project-Driven Partnership.** Project-driven partnerships are formed to address specific academic or social problems. Often developed through close interaction between school and company employees, they may import successful programs created and test elsewhere, or they may oversee academic programs run by universities for schools. Project driven partnerships are excellent vehicles for enhancing course work and extending learning opportunities for all students involved in the project. They can influence changes in attitudes and practices in the classroom, school, and school system, and they can significantly improve teaching and learning.

**The Reform-Model Partnership.** Often developing out of relationships established through other types of partnerships, the reform-model partnerships focuses on whole-school system change: helping teachers find ways to change the learning and teaching environment in the schools. (5)

Coalitions have recently been developed in order

to support educational reform. Rigden defines coalitions as,

These coalitions, which include community organizations as well as companies, leverage the influence of those outside the education system through consolidated efforts to change existing education policies and practices. Corporate grants support coalition efforts, but more importantly, corporate members of coalitions act as advocates at each political level for reform of educational regulations and for policy changes to support flexibility and to encourage school-based creativity. (6)

Table 3 provides examples of grants, program support, partnerships, and coalitions that allow businesses to become involved in reorganizing education.

Table 3

Examples of Methods Businesses Can Use  
To Assist Educational Reform

---

**To increase student learning,** companies can:

- Provide funds to experiment with flexible staffing and schedules.
- Link gifts of lab equipment, books, computer technology, and software to teacher training.
- Use coaching techniques to mentor students.
- Work with mentors and role models to encourage students in risk-taking exercises that develop self-confidence.
- Develop workshops for parents.
- Help connect students to appropriate community agencies.

**To extend the capacity of teachers,** companies can:

- Bring in experts to expand teachers' skills.
- Provide teacher internships that extend both academic and workplace skills.
- Develop training programs for teachers and volunteers



in a variety of teaching techniques, in supporting classroom instruction through mentoring and tutoring practices.

- Fund site visits to exemplary schools.
- Run team-building workshops in the schools.
- Help schools establish, use, and maintain computer networks for teachers.

**To create school systems that encourage innovation,** companies can:

- Help school districts hire qualified directors for the restructuring process.
- Bring in experts to expand managerial skills.
- Bring in consultants to provide expertise to teachers and staff.
- Help schools appeal for and achieve community support for reforms.
- Provide grants for research on effective strategies for restructuring schools and school systems.

**To develop effective assessment tools,** companies can:

- Help schools generate, manage, and use assessment information.
- Encourage districts to identify and develop measurable goals.
- Help teachers create performance-based assessment strategies.
- Provide grants for research on effective assessment strategies.
- Work with administrators to institute an interactive evaluation process.
- Bring in statistical consultants to work with schools and districts to identify measurable outcomes and ensure the reliability and validity of assessment data.

---

SOURCE: Rigden, D.W. "Business and the Schools: A Guide to Effective Programs" 2nd edition: Council for Aid to Education (Feb.1992).

When businesses use their resources to assist educational progress, the results can be substantial.

Another method of partnership between business and education is an internship or apprenticeship program.

Internship programs are highly versatile. These

programs can be held in a majority of business fields, and students from all academic fields can participate in appropriate programs. Most internship/ apprenticeship programs are available for students preparing to enter the workforce who have completed a substantial amount of academic criteria.

When a business is considering becoming involved with education through an internship/ apprenticeship the company should first determine if the organization could benefit from an internship/ apprenticeship program. The National Alliance of Business (NAB), a nonprofit organization in Washington, DC has published a guidebook which will assist companies in determining if an internship/ apprenticeship program would be beneficial. Table 4 outlines questions that the National Alliance of Business suggests that companies should consider when contemplating beginning an internship program.



Table 4

Six Questions for Considering the Benefits  
of an Apprenticeship Program

- 
1. Do you hire workers with less than a four-year college degree?
  2. Do you have problems recruiting qualified workers?
  3. Do they lack basic skills?
  4. Is your turnover rate high?
  5. Do many of your employees seem to be stuck in entry-level jobs?
  6. Have you acquired new technology that requires more skills?
- 

SOURCE: "Getting an Apprenticeship Program Rolling." Training Jan. 1993: 12-14.

The National Alliance of Business believes that if the answer to most of these questions is yes, than the investment may be beneficial to both the business and eligible students. In the article, Getting An Apprenticeship Program Rolling, The National Alliance of Business also provides a nine-point system to assist businesses in creating internship/ apprenticeship programs,

1. Define your employment needs. What jobs are you having trouble filling? How many openings do you have each year? What level of education or training is needed to fill these positions?
2. Prepare a general business plan. In one or two pages, describe the concept of your youth apprenticeship program. Include the occupations you would consider, the roles of the business-education partners and individuals who would be involved in the program, how the program would work, and so on.
3. Involve the internal stakeholders. In other words, get support for the program from the people it will affect. Stake-

holders may include top executives, trainers, human resources personnel, front-line supervisors, internal customers and the employees who will be working with the apprentice. 4. Organize the partnership. Employers usually have to take the initiative to organize a formal partnership with high schools, community colleges or technical schools. 5. Find someone to take the lead for the long haul. Someone within the company must have the responsibility and authority to keep the program moving. It may also be necessary to find an outside agency or individual to act as intermediary among all parties. 6. Play to both partners' strengths. For a program to work, employers and educators must build a relationship of trust and respect. Typically, neither understands the other's way of doing business, and neither knows what the student/apprentice is learning in the other environment. Spending some time in each other's environments will broaden both partners' understanding. 7. Determine what resources are needed and available. Work up a budget, and include requirements for staff and training time, meeting space, equipment and specialized expertise. 8. Establish written, measurable goals for the program. For example, if you expect the program to provide jobs for students when they graduate from high school, specify that outcome. 9. Get started. Enthusiasm for a new initiative dies over time, so get moving even if all the details are not hashed out. (13-14)

Companies that are organizing internship programs for the first time may be concerned with the legal implications of such programs. Examples of valid questions include, "Do you have to pay the students? Cover them under workers' compensation and unemployment benefits plans? Worry about charges of discrimination, harassment or wrongful discharge?" (Kaplan 9).

Kaplan believes,

The short answer is that hiring interns doesn't present any burdensome legal requirements. For the most part, the same laws and standards apply as when hiring full-time employees. In fact, some of the rules are even less onerous with interns, such as those regarding unemployment compensation and terminating the relationship. (9)

The issue of compensation in regards to internship programs varies from employers. Table 5 outlines situations where monetary compensation is not required for interns,

Table 5

To Pay or Not to Pay?

---

The following points generally hold true when student interns do not have to be paid the minimum wage:

- The work performed by the intern is directly related to his or her educational coursework.
- The intern will receive course credits for his or her work or is required to complete the work in order to graduate.
- The intern must prepare a report of his or her work experience and submit it to a faculty supervisor.
- You have a letter or other written documentation from the intern's school confirming that the internship has been approved as educationally relevant.
- Learning objectives are clearly identified.
- The intern spends no more than fifty (50) percent of his or her time performing work that's also done by your employees.
- Your company will teach the intern a skill, a process, how to use equipment or about the business.
- The intern is supervised by one of your staff members.



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- Learning objectives are clearly identified.
- The intern spends no more than fifty (50) percent of his or her time performing work that's also done by your employees.
- Your company will teach the intern a skill, a process, how to use equipment or about the business.
- The intern is supervised by one of your staff members.

- You have not guaranteed a job to the intern upon completion of the internship or graduation.

---

SOURCE: Kaplan, Rochelle K. "Hiring Student Interns" Small Business Reports 19 (1994) 9-13.

This issue of interns eligibility for worker's compensation are usually addressed by state workers' compensation laws. In the past some worker's compensation boards have found that interns conduct enough work for the company that it is possible to consider the interns as employees for this purpose. Although it may not be required, it may be wise to cover interns under the company's worker's compensation policy. The company's "premiums should not increase by much because the interns will have little effect on your payroll and experience rating, two of the factors on which premiums are based" (11-12).

In most cases students are not eligible for unemployment compensation following an internship program. "Most state laws exempt students who work as part of an education-related program" (12) from unemployment compensation.

The questions regarding equal opportunity for interns is that all students who meet the eligibility requirements for participation in an internship program should be considered. "You should treat intern candidates the same as all other applicants and base

your hiring on their qualifications, rather than on gender, race, color, age, national origin, religion or disability" (12). Once interns are selected, training regarding sexual, racial or ethnic harassment should be provided. "Take time to advise new interns of your guidelines regarding appropriate workplace behavior, your company's harassment policy and its complaint procedures" (13).

Exposure to all of the legal issues involved in working for a company is an integral part of the knowledge that an intern will gain from this experience.

Formal research on the effects of internships on its participants has been conducted although "empirical support for the benefits of internships is not extensive. Much research consists of interns' retrospective reactions to their work assignments..." (Taylor 393).

A substantial research project conducted by M. Susan Taylor at the University of Maryland examines three hypotheses regarding the effects of college internships on its participants. These hypotheses include " (a) greater crystallization of vocational self-concept and work values, (b) less reality shock, and (c) better employment opportunities" (Taylor 393).



Participants in internship programs have the opportunity to experience different job tasks.

According to Taylor,

By performing job tasks relevant to the chosen vocational field, interns are expected to identify personally valued, work-related outcomes (e.g., co-workers pay, autonomy, and responsibility) and the vocational abilities and interests needed to attain satisfaction from the work arena. As a result, interns are likely to be more satisfied with their first jobs and more likely to remain in them than are students without such experience. (393)

Internships provide students with a candid view of a job's everyday requirements, both positive and negative. Taylor cites both Hall and Kramer in research regarding reality shock, "Interns also are expected to have an easier transition from school to work because they experience less reality shock on starting permanent jobs than do other students" (Taylor 393). Taylor states that further research on reality shock indicates,

High levels of reality shock occur when individuals find that many of the work standards and procedures learned in school directly conflict with those required on the job. Consequently, they lose confidence in their preparation for work and experience high levels of anxiety that lowers their job performance, job satisfaction, and probability of remaining on the job. (393)

When analyzing the impact an internship may have on reducing reality shock Taylor cites research conducted by Kramer on student nurses,

internships may reduce the level of reality shock on the first job because participants experience these conflicts between work requirements and academic preparation while still in school and, thus, still exposed to both school and work cultures. Therefore, interns are more likely to resolve the conflict before starting their permanent jobs and feel less threatened at that time. (394)

The third area of investigation in Taylor's research project looks at the potential benefit of employment opportunities following an internship experience. Taylor indicates,

Internships are thought to result in greater employment opportunities for two reasons. First, interns are expected to have greater access to informal job sources, that is, those that do not use an established third party to make contact between applicants and employees... and, thus, are predicted to use these sources much more heavily than do other students who typically rely on more formal ones, such as the school placement office or newspaper ads. Informal sources have been found to generate higher quality (e.g., salary and type of position) and more satisfying job opportunities than the formal ones used extensively by students... Second, employers are expected to evaluate the job qualifications of interns more positively and thus, are more likely to hire interns than other students. (394)



Taylor also finds,

As a result of differences in job source utilization and perceived qualifications of the two groups, interns are expected to receive more job offers, accept higher salaried positions, and to be more satisfied with the accepted offer than are students without such experience. (394)

The first study that was conducted compared interns from five different academic programs with matched non-interns at pre-internship, post-internship, college graduation, and post-employment measurement periods. Taylor's research findings included,

partial support for the crystallization hypothesis and strong support for better employment opportunities. Furthermore, when the level of autonomy experienced in the internship was considered as a potential moderating variable, support was found for all three hypotheses.

The second study was conducted in an effort to further analyze the validity of higher employment opportunities for participants in internship programs. Employment recruiters were asked to measure applicants' qualifications and their probability of hire. The results "also supported the employment opportunity hypothesis" (Taylor 393).

There are many titles used in identifying different work-related experience; internship programs, apprenticeship programs, School-to-Work. Most of the

research that has been analyzed for this project has found positive results for both students and businesses that have participated in such programs.

Seeking employment while enrolled in school may not benefit students who work solely for monetary purposes. In a study comparing student to nonstudent employees conducted by Gannon, Gannon and Kaufman,

In terms of attitudinal orientation, students were more negative than nonstudent employees. Also, the supervisory ratings of student employees were significantly lower than those of nonstudent employees. The students were also characterized by significantly lower tenure than the nonstudent employees. (131)

This study suggests that "while the students generally seem to benefit considerably from their work experiences, education might inhibit effectiveness on the job" (Gannon 132).

These findings may suggest that in order for work experience to truly be beneficial to the student, it should be relevant to the student's academic field of study.

Although formal research on the topic of internship programs is minimal, the reviews in published articles and the reactions of the students and businesses that have participated in organized programs are very positive. One example of this

positive feeling is cited by Susan Bovet and comes from the president of a public relations firm in New York City,

Our intern program has produced real stars... It's vital ingredient in the makeup of the total organization. Many (interns) get hooked on PR and stay on as employees... Our firm's interns have superior academic records. Their intellectual level surpasses the midlevel in the job market...Our intern program is a serious farm system for the firm. (27)

The article Business Internship: Win-Win Opportunities for Students and Companies provides examples of internship opportunities. One of the students, Daniel Biering, completed an internship with an international accounting firm, Price Waterhouse. During this program Biering served as an intern tax associate in International Assignment Services. Upon completion of the internship experience Biering stated,

It provided invaluable workplace experience in that I was exposed to a team environment that was dedicated to client satisfaction. I also learned a great deal about the American tax system, especially its international aspects... I feel that I have increased my value to any firm that employs me. (15)

Many students feel that internships provide a definite advantage upon entry into the workforce. "It's getting to the point where students without the internship experience are at a distinct disadvantage.



Employers look to see which job candidates have had internships, where they worked and what they did" (Redeker 20). Students that were interviewed regarding the benefits of an internship overwhelmingly stated that "hands-on experience is the most important benefit of an internship" (20). One student noted that the internship provided much more than technical skills, "Being around so many good communicators... helped show me how to think strategically by using the entire communications process, instead of bits and pieces" (20). Another benefit to participating in an internship program includes networking. Internships bring students and employers together providing opportunities to establish contacts in professional fields. An intern with Nissan North America recalls that while assisting in organizing a special event,

I made contacts with television and radio stations for the event and I was able to build up my own network for future job searches...I made auto industry and media contacts which helped me communicate on a professional level during my interview. (20)

The number of large corporations that have become involved in educational partnerships continues to increase. Many of these corporations contribute funds as well as working with educators to improve the education students receive. Table 6 provides examples of some of the large United States companies which

participate in partnership programs. The table lists the company's headquarters, telephone number, annual contributions to education, and the program highlights.

Table 6

## Examples of What Companies Are Doing

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•**Aetna Life & Casualty**                      \$ 1 million - \$4,999,999  
Hartford, CT (203) 273-1932

SCHOOL REFORM. The Hartford public school system identified ten goals for its schools, including more rigid graduation requirements, greater parental involvement, and local management. Aetna employees are lending their efforts to help achieve the goals.

•**American Express**                              \$5 million or more  
New York City, NY (212) 640-4992

STUDENT MOTIVATION. American Express's Academy of Travel and Tourism reaches over 6,000 students in 350 schools. The two-year program, begun in 1986, combines academic courses and a paid summer internship at a tourism-related company. Ninety-five percent of the graduates pursue higher education.

•**Apple Computer**                                \$5 million or more  
Cupertino, CA (408) 996-1010

TECHNOLOGY EDUCATION. Apple's grants encourage educators to integrate technology into their curriculums. This year 29 recipients shared \$1.6 million. In New York City, the J.H.S. 47 School for the Deaf is developing a computerized American Sign Language dictionary featuring inner-city deaf students as actors.

•**Bank of Boston**                                \$500,000 - \$999,999  
Boston, MA (617) 434-2171

SCHOOL PARTNERSHIPS. Since the mid-1970s, Hyde Park High School and the Bank of Boston have been partners: The bank's work-study program complements the students academic year; in summer they're hired full time. This past year, 100 students worked at the bank.



- **Campbell Soup** \$500,000 - \$999,999  
Camden, NJ (609) 342-6435

BUSINESS EDUCATION. Campbell recently expanded its summer program for Camden kids by adding a Young Entrepreneurs program. With help from the Latin American Economic Association, kids ages 10 to 14 prepare a business plan, open bank accounts, and, at a local fair, market the goods they've made.

- **Chrysler** \$5 million or more  
Highland Park, MI (313) 956-0607

CAREER PREPARATION. The World of Work program currently operates in 58 schools; employees spend an hour a week tutoring students to help them better understand the relationship between the workplace and what they are learning in the classroom.

- **Federal National Mortgage Association**  
Washington, D.C. (202) 752-7850 \$500,000 - \$999,999

STUDENT MOTIVATION. Members of the Futures 500 Club at Woodson High School in Washington receive \$500 in scholarship credits from Fannie Mae for each semester they earn all A's and B's. Of the club's 246 graduates, 213 are in college. In May the first class graduated from college; two of those ten now work for Fannie Mae.

- **General Electric** \$5 million or more  
Fairfield, CT (203) 373-3216

SCHOOL PARTNERSHIPS. Eleven high schools benefit from GE's \$20 million College Bound program. At Western High in Louisville, Kentucky, the percentage of college bound students increased from 25% in 1988 to 59% in 1993.

- **Tenneco** \$1 million - \$4,999,999  
Houston, TX (713) 757-3930

SCHOOL PARTNERSHIPS. Tenneco's partnership with Jefferson Davis High School involves parents and the University of Houston. In 1989, when Tenneco told students that it would pay \$4,000 toward college, only 37% were passing the Texas Assessment of Academics. This year 86% passed.



In analyzing both the formal and informal research in regards to the effectiveness of internship programs it seems clear that both business and education can benefit from these programs. The current trend is an increase in business/ educational partnerships. These partnerships are helping small and large businesses develop leadership, teamwork and interpersonal skills necessary in remaining a globally competitive workforce.

The following internship manual is necessary in facilitating an internship program with a construction and engineering company and a college student who has completed three years of academics. The manual will provide specific guidelines, requirements and responsibilities that the selected intern will be expected to comply with, as well as defining the contributions that the intern will make to the job site. The manual will include eligibility requirements, training requirements, goals, objectives, and performance reviews. This manual will provide clear and concise requirements enabling both the sponsor and the student to utilize the internship experience to its fullest potential.

Organized partnerships between business and education can provide true benefits for everyone involved.

CHAPTER III  
METHODS AND EVALUATION

**Materials**

The function of the proposed internship manual (Appendix A) is to provide both the business, the Weldon Spring Remedial Action Project in St. Charles, Missouri and the selected intern with a guide for a semester long internship program. The proposed manual is designed specifically to guide an intern in the Environmental/ Safety and Health field.

The manual begins with a brief description of the Weldon Spring Remedial Action Project and highlights the goals of the project. The second section of the manual covers the eligibility requirements that the student must meet to be considered a qualified applicant for the internship program. The eligibility section included the necessary grade point average and relevant course work that the student must have completed to apply for the program. The intern chosen to participate in the internship program will receive a semester's worth of college credits (12 credit hours) upon successful completion of the internship program.

The application for the internship program is

entitled Exhibit 1 and located at the end of the internship manual. The application requires general information about the student, a short explanation of the reasons that the student wants to be involved in the internship program, a college transcript, and two letters of recommendation for the student.

The goals outlined in the manual are general activities in which the intern is expected to participate. These goals include the number of hours per week that the intern is expected to report to the job site; attendance at training courses and meetings; completion of writing assignments; and participation in a performance evaluation.

The objectives outlined in the manual are specific tasks that the intern is required to complete by the end of the internship program. These objectives include submitting proper paperwork; attending several training seminars and classes; attending a weekly department meeting; keeping a daily journal; writing an informational Safety/ Environmental article; providing Safety training; and writing a culminating paper regarding his/her experiences throughout the internship program.

The manual also describes the training requirements that the intern is responsible for attending. The first two courses, "General Employee



Training" and "General Employee Radiological Training" are requirements of the project for all employees on the job site. The intern is also responsible for attending additional "Safety Health and Radiation Protection" and "40 Hour OSHA Training" given to employees in the Environmental, Safety and Health fields.

Finally, the manual covers the performance review indicating the methods by which the intern is evaluated. A performance review is conducted half-way through the internship program and during the final week of the internship program. The performance review format is entitled "Exhibit 3- Intern Evaluation Form" and is located at the end of the manual. The performance review is conducted by the Safety Manager and by a faculty advisor.

The benefits of the proposed manual are to provide an effective guide for both the business and the student to ensure a productive partnership throughout the internship program. The manual is designed in an effort to promote partnerships between business and education. The goal of these partnerships is to provide students with meaningful job experiences along with their formal education in an effort to prepare them for entry into the current workforce.

### Subjects

The evaluators of the proposed Weldon Spring Remedial Action Project Internship manual consisted of four employees from the project. These employees represented several different areas of management at the Weldon Spring site. The first evaluator is the Project Director whose responsibility is to oversee all of the activities conducted at the site. This evaluator is employed by Morrison Knudsen Corporation, obtained a Bachelors Degree in Civil Engineering, and had twenty-five years of experience in the construction/ environmental field.

The second evaluator is the Deputy Director at the Weldon Spring site. The Deputy Director's function is to report directly to the Project Director. The Deputy Director was responsible for activities in the areas of Environmental, Safety and Health. The Managers in each of these departments report directly to the Deputy Director. This evaluator was employed by Morrison Knudsen Corporation, obtained both a Bachelors and a Masters Degree in Chemistry, a Masters Degree in Philosophy and a Ph.D. in Geological Science. This evaluator had twenty-two years of experience in the construction/ environmental field.

The third evaluator was the Safety Manager at the Weldon Spring site. The Safety Manager's function is to report to the Deputy Director and administer the Safety staff which consisted of four Safety Supervisors. This evaluator was employed by Morrison Knudsen Corporation, obtained a Bachelors Degree in Business Administration, and had worked for several large construction organizations over the past sixteen years.

The fourth evaluator was the supervisor of the Human Resources Department at the Weldon Spring site. This evaluator's primary responsibilities include organizing the hiring process, job transfers and relocation and facilitating personnel. This evaluator was currently completing her Bachelors Degree in Business Administration and has been employed by Morrison Knudsen for five years.

### Instrument

The instrument used to evaluate the proposed manual was a self-administered questionnaire. The questionnaire was two pages in length. The questionnaire consisted of specific questions regarding the effectiveness of the proposed internship manual. The first half of the questionnaire was used to solicit the evaluators opinions regarding the manual's goals,



objectives, training, performance reviews, intern supervision and ease of use.

The second half of the questionnaire requested the evaluators to answer yes or no questions pertaining to the benefits of an internship program, the application process, and the level of fairness regarding the subject of eligibility.

The final section of the questionnaire requested that the evaluators provide any suggestions for improvement or comments regarding the proposed internship manual.

### Procedure

Each of the evaluators received a cover letter explaining the purpose of the creation of the proposed manual, a copy of the proposed Weldon Spring Remedial Action Project Safety Internship Manual, and a Weldon Spring Remedial Action Project Safety Intern Manual Questionnaire in the mail.

The evaluators were requested to read the proposed internship manual and complete and return the questionnaire as soon as possible. When the responses were received and recorded a follow-up interview was conducted with each evaluator regarding his/her comments and suggestions for improvement of the proposed manual.

The manual took approximately fifteen minutes to read thoroughly and the questionnaire should have taken each evaluator approximately fifteen to twenty minutes to complete.

During the follow-up interview the researcher discussed with each of the evaluators his/ her comments and suggestions in an effort to draw conclusions regarding the strengths and weaknesses of the proposed manual.

## CHAPTER IV

### RESULTS

The results regarding the effectiveness of the proposed internship manual were compiled by reviewing the responses to the self-administered questionnaire (Appendix B), and by conducting a follow-up interview with each of the evaluators. Four evaluators participated in the evaluation of the proposed internship manual. Evaluator #1 was the Project Director at the Weldon Spring Remedial Action Project (WSSRAP), Evaluator #2 was the Deputy Director, Evaluator #3 was the Safety Manager, and Evaluator #4 was the Supervisor of the Human Resources Department.

The first half of the questionnaire requested that the evaluators express their professional opinions in regards to the effectiveness of the manual's goals, objectives, training, performance reviews, intern supervision and ease of use. In order to express these opinions, the evaluators were asked to use a scale from one (1) to five (5) to answer each question and to provide at least three (3) reasons for each selection.



The first question was related to the manual's ease of use without formal training. Three evaluators selected "Agree Strongly" that the manual can be used without formal training or instructions, and one evaluator selected "Agree Somewhat."

The second question was regarding the manual's goals. Two evaluators selected "Agree Strongly" that the manual provided goals for student learning, and two evaluators selected "Agree Somewhat." Evaluator #2 selected "Agree Somewhat" and indicated that the manual was "very clear on training requirements ... need to add goal of gaining experience of a real world job ... might list some of the normal duties of a WSSRAP Safety Supervisor." Evaluator #3 also selected "Agree Somewhat" and stated "Evaluation is more work related not necessarily what was learned ... Learning will be on going, but intern will have to retain during work day."

The third question involved the use of objectives in the manual. Three evaluators selected "Agree Strongly" that the manual provided objectives for student learning, and one evaluator selected "Neither Agree nor Disagree." Evaluator #1 selected "Neither Agree nor Disagree" in response to the questionnaire's evaluation of the manual's objectives for student learning stating "Objectives are clearly listed as one

through eight, but these seem to be more instructions than objectives."

The fourth question pertained to the amount of training required in the manual. All four evaluators selected "Agree Strongly" that the manual provided the appropriate amount of training for the intern. Evaluator #2 commented "Training requirements well presented and meet WSSRAP requirements ... Training follows regulatory needs ... Good overview of what each training covers."

The fifth question involved the issue of performance reviews. Two evaluators selected "Agree Strongly" that the manual monitors progress through periodic performance reviews, and two evaluators selected "Agree Somewhat." Evaluator #3 selected "Agree Somewhat" and also discussed in the interview that he felt it would "take close monitoring by Safety Manager to do one evaluation through semester ... Good monitoring by tutors (Safety Supervisors) will add to Manager evaluation."

The sixth question was related to the amount of supervision addressed in the manual. All four evaluators selected "Agree Strongly" that the manual allows for adequate supervision from site personnel.

The final question in the first half was in regards to the overall use of the proposed manual.

Three evaluators selected "Agree Strongly" that overall, the manual was easy to use and one evaluator selected "Agree Somewhat." Evaluator #2 selected "Agree Somewhat" including the comments "Well organized ... fairly specific ... Good listing of requirements/process."

The second half of the questionnaire requested that the evaluators answer yes or no questions pertaining to the benefits of an internship program, the application process, and the level of fairness regarding the subject of eligibility. After a majority of these questions, the evaluator was asked to provide feedback regarding their selection.

When asked if they had ever participated in an internship program, two of the evaluators responded that they had participated in an internship program, and the other two evaluators had not participated in such a program.

The next question involved the benefit of an internship program specifically at the Weldon Spring Remedial Action Project. All four evaluators answered "Yes" that the site would benefit from an internship program. Evaluator #3 commented "Future positions become available, and interns are familiar with the project and Safety staff familiar with applicant. Hard work is necessary and applicant will know it if hired."



The following question was in regards to the thoroughness of the application process for the internship program. All four evaluators answered "Yes" that the application process was complete and thorough. Evaluator #4 commented that "Would include a requirement for original transcripts and references."

The next question pertained to whether the eligibility requirements for the internship program were fair and unbiased. All four evaluators answered "Yes" that the program was fair and unbiased.

The final section of the questionnaire requested the evaluators provide comments or to indicate any changes that should be made to improve the effectiveness of the proposed internship manual. Evaluator #1 and #4 commented that it would be beneficial to include a specific name, telephone number, and contact person on the application. Evaluator #3 commented that to improve the manual it would be wise to "include a disclaimer not guaranteeing future employment ... possible explaining more detail of low level contamination awareness. All four evaluators ended with positive comments including "Great job! ... Good program! Good Job!"

Chapter V  
DISCUSSION

Summary

The main purpose of the proposed Safety Internship manual was to provide the student, the business, and the educational advisor with a detailed outline of goals, expectations, requirements, and responsibilities that would be encountered during the internship experience.

The first question that was asked to each of the evaluators in the follow-up interview was based upon whether or not the proposed manual effectively outlined the goals, expectations, requirements, and responsibilities for the student, as well as for each of the evaluators, in their given job description. All four of the evaluators acknowledged that overall the proposed manual would establish a guideline that could be used to initiate a Safety Internship program at the Weldon Spring Remedial Action Project.

The second question that was discussed in each interview, as well as in the questionnaire, was the evaluators opinion as to the benefits of utilizing such an internship program at the Weldon Spring Remedial

Action Project. All four participants acknowledged that it would be highly beneficial for the student, the business, and the community if there were college internships utilized at the project site. The Project Director indicated that he would be pleased to see interns in many of the occupational/ educational fields represented at the site.

In discussing the results obtained from the formal questionnaire, the first half of the questionnaire requested that the evaluators express their professional opinions in regards to the effectiveness of the manual's goals, objectives, training, performance reviews, intern supervision and ease of use. In order to express these opinions, the evaluators were asked to use a scale from one (1) to five (5) to answer each question and to provide at least three (3) reasons for each selection.

The first question was related to the manual's ease of use without formal training. Three evaluators selected "Agree Strongly" that the manual can be used without formal training or instructions, and one evaluator selected "Agree Somewhat." The evaluator whom selected "Agree Somewhat" commented that the manual should formally indicate the site address, telephone number, and specific person to contact. This information was incorporated into the revised manual





and is also stated on the manual's cover, as well as on the Internship Program Application (Exhibit 1).

The second question was regarding the manual's goals. Two evaluators selected "Agree Strongly" that the manual provided goals for student learning, and two evaluators selected "Agree Somewhat." Evaluator #2 selected "Agree Somewhat" and indicated that the manual was "very clear on training requirements ... need to add goal of gaining experience of a real world job ... might list some of the normal duties of a WSSRAP Safety Supervisor." Evaluator #3 also selected "Agree Somewhat" and stated "Evaluation is more work related not necessarily what was learned...Learning will be on going, but intern will have to retain during work day." The benefit of gaining experience in a "real-world" job is the main focus of an internship experience and was added to the list of goals in the revised manual.

The third question involved the use of objectives in the manual. Three evaluators selected "Agree Strongly" that the manual provided objectives for student learning, and one evaluator selected "Neither Agree nor Disagree." Evaluator #1 selected "Neither Agree nor Disagree" in response to the questionnaire's evaluation of the manual's objectives for student learning stating "Objectives are clearly listed as one through eight, but these seem to be more instructions

than objectives." For the purpose of this manual these will remain as objectives as they are measurable.

The fourth question pertained to the amount of training required in the manual. All four evaluators selected "Agree Strongly" that the manual provided the appropriate amount of training for the intern. Evaluator #2 commented "Training requirements well presented and meets WSSRAP requirements ... Training follows regulatory needs ... Good overview of what each training covers."

The fifth question involved the issue of performance reviews. Two evaluators selected "Agree Strongly" that the manual monitors progress through periodic performance reviews, and two evaluators selected "Agree Somewhat." Evaluator #3 selected "Agree Somewhat" and also discussed in the interview that he felt it would "take close monitoring by Safety Manager to do one evaluation through semester ... Good monitoring by tutors (Safety Supervisors) will add to Manager evaluation." As the Manager of the Safety Department, Evaluator #3 acknowledged in the interview that with as many job obligations as are encumbered in this position, it would be necessary to rely on feedback from the entire Safety staff in order to evaluate the intern's performance. In the revised manual under the subtitle "Performance Review" it does

acknowledge the Safety Manager, with input from the Safety Supervisors will participate in the intern's evaluation.

The sixth question was related to the amount of supervision addressed in the manual. All four evaluators selected "Agree Strongly" that the manual allows for adequate supervision from site personnel.

The final question in the first half was in regards to the overall use of the proposed manual. Three evaluators selected "Agree Strongly" that overall, the manual was easy to use and one evaluator selected "Agree Somewhat." Evaluator #2 selected "Agree Somewhat" including the comments "Well organized ... fairly specific ... Good listing of requirements/process." Due to the fact that the evaluator did not indicate any specific area that required improvement, no revisions were made in this area of the manual.

The second half of the questionnaire requested that the evaluators answer yes or no questions pertaining to the benefits of an internship program, the application process, and the level of fairness regarding the subject of eligibility. Most of the evaluators were in agreement in regards to the thoroughness of the manual, acknowledging that they agreed that the manual was thorough, and that the



eligibility for the internship program was fair and unbiased.

The final section of the questionnaire requested the evaluators provide comments or to indicate any changes that should be made to improve the effectiveness of the proposed internship manual. Evaluator #1 and #4 commented that it would be beneficial to include a specific name, telephone number, and contact person on the application. In the revised manual this information appears on the manual's cover sheet as well as on the Intern Application (Exhibit 1).

Evaluator #3 commented that to improve the manual it would be wise to "include a disclaimer not guaranteeing future employment ... possible explaining more detail of low level contamination awareness." As a precaution an acknowledgement statement was added to the bottom of the Intern Information Sheet (Exhibit 2) in the revised manual. The intern will be required to sign this acknowledgement and return the document to the Human Resources Department as indicated in the manual.

The subject of "low level contamination awareness" is addressed in the initial training course that the intern is required to attend.

Overall, the comments and feedback from the evaluators both in the interview and through the formal questionnaire were positive and helpful. It was encouraging to learn that professionals in several different areas believe that internship programs would be beneficial to the student, business and the community. For these reasons, it can be assumed that internships that provide clear and concise requirements will enable both the business sponsor and the student to utilize the internship experience to its fullest potential. Therefore, organized partnerships between business and education can provide true benefits for everyone involved.

#### Limitations

One of the limitations that was encountered in completing this study included a lack of documented formal research in the area of internship experiences. Most of the formal research regarding internship experiences found that internship experiences can be positive work experiences for students, however, more extensive research could provide a stronger foundation for organizing an internship program.

Another limitation that was noted in conducting this study was the shortage of published resources available to businesses that may be interested in

creating and organizing an internship program.

#### Suggestions for Future Research

If given an opportunity to replicate this study it would be beneficial to interview more students that had participated in internship programs. These students may be able to address ways to improve internship programs, as well as acknowledging specific areas of strength and weakness in the internship experience.

It would also be advisable to include a college faculty advisor, who has experience with internship programs, as an evaluator for the proposed internship manual.



## APPENDIX A

# WELDON SPRING SITE REMEDIAL ACTION PROJECT SAFETY INTERNSHIP MANUAL

Weldon Spring Site Remedial Action Project  
7295 Highway 94S  
St. Charles, Missouri 63304  
(314) 441-8086

Contact Person: Cathie Duquette-  
Human Resources X 2832

## OVERVIEW

This manual is designed to guide a college intern in the Safety Environmental/ Remediation field at the Weldon Spring Remedial Action Project, St. Charles, MO. throughout one college semester, approximately 15 weeks.

The Weldon Spring Remedial Action Project is funded by the Department of Energy and the Department of Army. The Project's goal is to clean up the Uranium Feed Materials Plant, which consists of approximately 40 manufacturing buildings and warehouses plus a contaminated quarry that is south of the main site.

The purpose of providing this internship experience is to encourage students in the field of Safety and Health in their pursuit in this career area.

## ELIGIBILITY

To be eligible to participate in the internship program the student must have a 3.0 cumulative grade point average and completed at least two semesters of course work in their **major** area including:

- \*Introduction to Safety
- \*Introduction to Hazardous Materials
- \*OSHA Regulations
- \*Fire Protection

**APPLICATION**

To apply for consideration for this internship program at WSSRAP please contact the Human Resources Department at the site or use the application at the end of this manual listed as Exhibit 1.

\*\*\*Selected interns will be required to have a physical examination and pass a drug screening test.

**GOALS**

- The selected intern will work 40 hours per week throughout the college semester in order to gain insight and working knowledge related to their specific area of study.
- The intern will attend all relevant training courses as outlined in the manual.
- The intern will observe the daily job requirements of various Safety Supervisors throughout the semester.
- The intern will attend appropriate meetings and seminars.
- The intern will complete required writing assignments as outlined in the manual.
- The intern will participate in a performance evaluation with the Safety Manager and the Faculty Advisor.
- The intern will gain knowledge and experience that will help to prepare them for entry into the workforce upon completion of their formal education.



**OBJECTIVES**

1. During the first week of the internship, the student will submit all necessary paperwork to the Human Resources Department including a physical examination report, the New Hire Information Sheet (Exhibit 2), and certification of eligibility from the college/university.
2. During the first two weeks of the internship, the student will complete GET, GERT, SHARP, and OSHA training as outlined in the training requirements.
3. The intern will attend a weekly department meeting.
4. The intern will write an account of their daily activities in a journal which will be reviewed by the Safety Manager and the Faculty Advisor.
5. The intern will assist the Safety Supervisors in providing a safe work environment.
6. The intern will write an informational article related to an environmental/ safety issue to be published in the site newsletter.
7. The intern will provide approved safety training to site personnel during the weekly safety training.
8. The intern will write a 5-10 page culminating paper regarding the experiences of the internship program which will be reviewed by the Safety Manager and the Faculty Advisor.

## TRAINING REQUIREMENTS

The intern will be responsible for attending all initial training courses categorized by the site as "General Employee Training," "General Employee Radiological Training," "Safety, Health, and Radiation Protection Training," and "40 Hour OSHA Training".

"General Employee Training" is a four hour class which provides basic knowledge necessary for complying with site regulations including:

- General description of plant and facilities.
- Job-related policies, procedures, and instructions.
- Radiological Health and Safety Program.
- Facility emergency plans.
- Industrial Safety/ Hygiene Program.
- Hazardous Communications Program.
- Fire Protection Program.
- Security Program.
- Quality Assurance Program.
- Hearing conservation training.
- Confined Spaces Entry Awareness training

"General Employee Radiological Training" is also a four hour class which provides basic site training including:

- Standardized core course training material.
  - a. Sources of radiation.
  - b. Non-ionizing and ionizing radiations.
  - c. Risk in perspective.
  - d. As low as reasonably achievable concept.
  - e. Radiological controls.
  - f. Monitoring/dosimetry.
  - g. Emergency procedures.
  - h. Employee responsibility.

"Safety Health and Radiation Protection" is an eight hour class which is required for any worker whose job assignment involves entering the Controlled Area at the

WSSRAP. This training includes:

- Review of sources of radiation.
- Radiological posting.
- Demonstration of correct usage of Personal Protective Equipment.
- Inspection, Storage and Disposal requirements for Personal Protective Equipment.
- Task- Specific Safety Assessment.
- Health and Safety Plan.
- Safe Work Plan.
- Hazard Communication Program.

"40 Hour OSHA Training" is a week long course which introduces the worker to site specific Safety and Health requirements according to the Occupational Safety and Health Administration 29 CFR 1910.120. This training includes an overview of:

- Personal Protective Equipment
- Respiratory Protection Program
- Confined Space Entry
- Lockout- Tagout
- Excavations
- Emergency Response Plan
- Fire Protection and Control
- Notifications
- Fall Protection

#### **PERFORMANCE REVIEW**

The Safety Manager, the Assistant Safety Supervisor, the Faculty Advisor and the intern will meet approximately half-way through the internship and at the culmination of the internship program to conduct a performance review. The student will be evaluated based upon his/her efforts in achieving both the goals and objectives outlined in the manual. For job performance review format see Exhibit 3. After the intern has



submitted the culminating report to the Safety Manager, it is to be forwarded to the Faculty Advisor who will issue the student a grade.

Exhibit 1

APPLICATION FOR WSSRAP ENVIRONMENTAL/ SAFETY  
AND HEALTH INTERNSHIP PROGRAM

Name: \_\_\_\_\_

Address: \_\_\_\_\_

College/ University: \_\_\_\_\_

Major field of study: \_\_\_\_\_

Expected Graduation Date: \_\_\_\_\_

Cumulative Grade Point Average: \_\_\_\_\_

Relevant Courses of Study Completed:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please explain why you would like to participate in this internship program.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please submit completed application, college transcript and two letters of recommendation (one from a college professor/ advisor) to Cathie Duquette- Human Resources Department, WSSRAP, 7295 Highway 94S, St. Charles, MO 63304 (314) 441-8086 x 2832.

## Exhibit 2

## INTERN INFORMATION SHEET

Social Security No: \_\_\_\_\_

Name Last \_\_\_\_\_ First \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Starting Date: \_\_\_\_\_ Ending Date: \_\_\_\_\_

College/ University: \_\_\_\_\_

Address: \_\_\_\_\_

Major: \_\_\_\_\_

Faculty Advisor: \_\_\_\_\_

Site Supervisor: \_\_\_\_\_

Emergency Contact: \_\_\_\_\_

I agree in accepting this internship that I am aware that upon completion of the program, my work at the Weldon Spring Remedial Action Project will be terminated and that I am **not** guaranteed any further employment opportunities as a result of the internship program.

\_\_\_\_\_  
Signature Date



**Exhibit 3**  
**Intern Evaluation Form**

Name \_\_\_\_\_ Faculty Advisor \_\_\_\_\_  
Date \_\_\_\_\_

Please circle the appropriate number corresponding to the level of performance that the student has achieved.

Scale:

- 1 = **Outstanding**- Performance is exceptional; significantly beyond what is normally expected.  
2 = **Excellent**- Performance consistently exceeds expectations and requirements.  
3 = **Effective**- Performance consistently meets expectations and requirements.  
4 = **Marginal**- Performance seldom meets expectations and requirements.

---

Maintains a record of consistent attendance.	1	2	3	4
Accepts constructive suggestions.	1	2	3	4
Works effectively with Safety staff.	1	2	3	4
Deals professionally with site personnel.	1	2	3	4
Accepts Safety Managers and Supervisors decisions.	1	2	3	4
Is willing to share and exchange ideas, skills, techniques.	1	2	3	4
Communicates effectively with site personnel.	1	2	3	4
Makes effective use of appropriate resources and equipment on site.	1	2	3	4
Completes written requirements in a professional and timely manner.	1	2	3	4
Utilizes knowledge from training seminars in identifying possible safety hazards.	1	2	3	4
Reports all findings to the Safety staff in a timely manner.	1	2	3	4

Considering the primary responsibilities mentioned above, indicate the intern's overall level of performance.

1    2    3    4

Comments/ Suggestions

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\_\_\_\_\_  
Safety Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Faculty Advisor

\_\_\_\_\_  
Date

APPENDIX B

WSSRAP SAFETY INTERN MANUAL  
QUESTIONNAIRE

Please circle the appropriate number based upon the following scale.

Scale:

1 = Agree Strongly

2 = Agree Somewhat

3 = Neither Agree nor Disagree

4 = Disagree Somewhat

5 = Disagree Strongly

THIS MANUAL.....

Can be used without formal training  
or instructions.

1 2 3 4 5

Please give at least three reasons for your selection:

- A. \_\_\_\_\_
- B. \_\_\_\_\_
- C. \_\_\_\_\_

Provides goals for student learning.

1 2 3 4 5

Please give at least three reasons for your selection:

- A. \_\_\_\_\_
- B. \_\_\_\_\_
- C. \_\_\_\_\_

Provides objectives for student  
learning.

1 2 3 4 5

Please give at least three reasons for your selection:

- A. \_\_\_\_\_
- B. \_\_\_\_\_
- C. \_\_\_\_\_



Provides appropriate amount of training for intern. 1 2 3 4 5

Please give at least three reasons for your selection:

A. \_\_\_\_\_  
 B. \_\_\_\_\_  
 C. \_\_\_\_\_

Monitors progress through periodic performance reviews. 1 2 3 4 5

Please give at least three reasons for your selection:

A. \_\_\_\_\_  
 B. \_\_\_\_\_  
 C. \_\_\_\_\_

Allows for adequate supervision from site personnel. 1 2 3 4 5

Please give at least three reasons for your selection:

A. \_\_\_\_\_  
 B. \_\_\_\_\_  
 C. \_\_\_\_\_

Overall, is easy to use. 1 2 3 4 5

Please give at least three reasons for your selection:

A. \_\_\_\_\_  
 B. \_\_\_\_\_  
 C. \_\_\_\_\_

Have you ever participated in an internship program?  Yes  No

Will WSSRAP benefit from an internship program?  Yes  No

Why, Why not?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Is the application process thorough?  Yes  No

Why, Why not?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Is eligibility for the internship program fair and unbiased?       Yes       No

Why, Why not?

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What changes would you make to improve the effectiveness of the internship manual?

- A. 

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- B. 

---
- C. 

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- D. 

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Comments:

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Appendix C

COVER LETTER

May 28, 1996

1105 Seine Drive  
Lake St. Louis, Missouri 63367

Dear

As per our conversation, enclosed herewith is the proposed Weldon Spring Remedial Action Project Internship Manual and a Questionnaire regarding the proposed manual. Please read the manual and complete the questionnaire by June 17, 1996 and return both to me in the enclosed self-addressed, stamped envelope.

The focus of this study is the importance of building partnerships between business and education. The proposed manual is designed to serve as a guide for both the participating company and the student intern.

When completing the questionnaire, any suggestions and comments you can offer will be greatly appreciated. If you should have any questions, please do not hesitate to contact me at 625-1462.

I am extremely grateful for your participation in this study. Thanking you in advance and anxiously awaiting your reply.

Respectfully,

Keith Harkins



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