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Perceived impact of internship and practical training programs on professional and personal
growth: Implications to agricultural and extension education

by

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A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Agricultural Education (Agricultural Extension Education)

Major Professor: Bert Lynn Jones

Iowa State University

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ABSTRACT

The main purpose of this study was to determine and analyze former students' perceptions regarding impact of internship programs at Iowa State University. The secondary purpose was to identify existing practical training programs in Nizhni Novgorod Oblast, Russia. The third purpose was to identify the implications of determined perceptions and propose the opportunity to apply a new model of internship programming based on both American and Russian experiences.

This study examined the perceptions of agriculture graduates enrolled in internship and practical training programs of agriculture and agribusiness. Those who are proponents of these paradigms differ drastically in their views of internship impact on students' professional and personal growth, and the companies needed to maintain a productive agriculture in rural America and Russia.

A descriptive mail survey was used to gather the participants' perceptions, using the SPSS® statistical package. Descriptive research also involved testing hypotheses to answer questions concerning differences of impact of current internship and practical training programs in the U.S.A. and Russia.

The findings revealed that interns in the U.S.A. held views similar to interns in Russia. They largely agreed that experiential learning program participants had an interest in working with agriculture before internship participation, and their preferences working in crop/livestock production was beneficial to them in their first professional position.

Demographic characteristics of the respondents indicated that differences and similarities were observed in the way respondents perceived the impact of internship/practical training programs on a student and a company. Also, they agreed that the

internships and practical training programs impacted the professional and personal growth as well as professional and personal skills development of the participants. Respondents supported statements about the impact of internship/practical training programs on a company and no significant difference between the two groups was found.

Based on results of the study, it was concluded that students perceive lower needs for their participation in internships than they perceive companies have need for interns in the U.S.A. Russian students perceive higher needs for their participation in practical training programs than they perceive companies have for interns.

Recommendations for further research on curriculum improvement of internship and practical training programs were made. The investigator of this research was very sympathetic to create a new universal educational model for Russian and American universities in agricultural education by preparing students for productive lives following graduation from college. Also this model may be useful for providing all students with college and career opportunities that far exceed anything offered by any university system in the U.S.A. and Russia.

CHAPTER I. INTRODUCTION

This dissertation is proposed as a resource for much sought-after information regarding the internship application and impact of internships on students and companies in the United States. Also, this study is about practical training programs and missed opportunities in Russian educational reforms that promote designing a new model of practical training in Russia. As such, it emphasizes and explores the research findings that relate to the current internship marketplace. This work provides data, references, tools, and recommendations to all opportunities for designing a model of the internship process with involvement of students and professional agribusinesses in both Russia and the United States.

Nowadays local and regional universities, employers, and students are increasingly recognizing the value of internships (Mamun, 1998; Arnold and Cannon, 1998; Hirst, 1996; Horowitz, 1996; Holdaway et al., 1994; Darling-Hammond et al., 1990; Herring et al., 1990; Bower, 1989). For students this is a unique learning experience (Posey, Carlisle, Smellie, 1988) and it provides a valuable employee for the participating company (Crumbley & Sumners, 1998; Iyengar & Others, 1994). For universities internships are the opportunities to develop their curriculum and increase the enrollment of students who pay their tuition (Hymon-Parker, 1999; Kemp, 1997; Eyler, 1993; Benton, 1990).

Many students on the undergraduate level are becoming involved in internship programs for different reasons, such as their desire to get work experience while obtaining academic credits (Oldman and Hameden, 2000; Student's Guide, 1999; Swan, 1997; Susan 1993; Groves and Fadley, 1982).

Why do people do an internship? Why is it so valuable? Internships are an excellent way to enter the job market during undergraduate years. Internships are short-term work experiences, typically full-time during the summer or part-time during the academic year (Niebauer, 1978). Internship positions may lead to a full-time position following graduation. From any viewpoint, internships are a great opportunity for building students' work experience (Gary, 1999; Trach and Harney, 1998; Luzzo, 1995; Inkster, 1994; Patrick, 1979; Fosdick, 1979; Hiller, 1978), for improving resumes (*Student Handbook*, 1997-98; UCI Internship Office, 1998; Veenendall and Freeman, 1983), for gaining professional contacts and for earning real money (Veenendall and Freeman, 1983; Dickey, 1979). Through internship programs participants gain invaluable insights on learning to work with people and applying knowledge to work situations along the bridge from theory to practice (Raskin, 1994; Ronnestad and Skovholt, 1993; Farrell, 1992; Deal and Beaver, 1989; Veenendall, and Freeman, 1983; Hagen, 1981; Portnoff, 1981).

In spite of a growing competitive market, more students aspire to obtain internship positions. Therefore, Oehlert et al. (1998) states that, given the increased competitiveness for internship positions and the volatility of the marketplace, more attention on the internship is warranted.

Basically, an internship enables students to answer questions about a work experience program as an integral part of their course of study. Belar et al. (1989) confirms this idea, indicating that the internship is the culmination of training in professional psychology, the capstone event on a long path to earning a degree. Gaining practical experience in their chosen field enables students to examine their interests and abilities in these areas as well as

to test career possibilities (Fountain, 1997; Griffin and Kilgore, 1995; Jolly, 1993; Stevenson, 1990; Chance, 1990; Butler and Smith, 1989).

But just exactly what is the value of an internship? Unfortunately, there are no data available to answer this question because there are not enough qualitative or quantitative studies that investigate the value of an internship for students, universities and companies.

In this study, it is first suggested that there is a need for more understanding of the concept of internship importance in skill development for students and, second, there must be more active engagement with analyzing the impact of internship programs in our research work. In addition, this particular research will try to discover more about these issues and to understand the reasons, opportunities and worth of doing internships that might have great benefit to Russian educational reforms. This holds major significance since the researcher is both a native Russian citizen and a professional in a Russian Agricultural Academy.

In today's Russia, the universities, like other institutions of higher learning, find themselves in a difficult situation that has been caused by the transition to a market economy (Kusimov and Selivanov, 1996; Sobkin and Pisarskii, 1996; Rowen, Wolf and Zlotnick, 1994; *Higher Education in Russia*, 1993). There is much in its future that will depend on the use of new information technologies in the economic and social spheres and education (Hughey and Hughey, 1999).

In the past, any Soviet higher educational institution formed a component of the united national economic complex, and it functioned in accordance with organizational rules. Those rules were close to the principles governing the operation of an ordinary state enterprise, which itself formed a component of the planned economy (Akimkin and Vashentsev, 1998; Goncharova, 1998).

In January 1998, parliamentary hearings of the Committee of the State Duma for Education and Science were held at Moscow State University, devoted to a discussion of the conception of the next stage in the reforming of Russian education (*Parliamentary Hearings*, 1998). The participants expressed their concerns about economic and organizational changes of the past few years. These changes have been reflected in relations between enterprises and institutions of higher learning, as well as between students and companies. For example, in the labor market for graduates of Higher Educational Institutions there are no guaranteed jobs as there were during the 70-year period of stagnation. In many cases, preference is given to specialists who have work experience and time on the job (Goncharova, 1998; Davydov, 1997; Akimin and Vashentsev, 1998).

Another of the problems relating to changes in the labor market has been the emerging threat of unemployment for young specialists who have graduated from institutions of higher learning (Goncharova, 1998). It is obvious that today's colleges and universities in Russia have to prepare graduates for new conditions of a competitive labor market. To do this they need to improve their curriculum of practical training and offer new internship programs in order to help graduates get hired by companies (*Parliamentary Hearings*, 1998). For this reason, the objective analysis in the present study focuses on the situation in Nizhni Novgorod with respect to practical training and future job placement.

Statement of the Problem

The statement of the problem reflects three issues associated with the employment market in the United States as well as in Russia.

- *Matching students with jobs.* The main problem existing in practice is that companies cannot provide their new employees with quality work placement opportunities that will best serve the interests of both the employer and the employee (Sherman, 1998; Lindquist, 1992, 1993). The most important issue is to guarantee that the jobs being offered to the graduates are appropriate for their disciplines in college and experience levels out of class (Case et al., 1997; Henemann et al., 1992; Stern, Hopkins, McMillon, and Cagampang, 1992). A good graduate-employer match is important to ensure that the chosen person is capable of carrying out the responsibilities of the job and competent to fit comfortably into the employer's work environment. Internships have great potential for providing the congruence needed to alleviate much of this pressure for both the student and the business enterprise.

- *Research that documents the learning outcomes derived from cooperative education.* Many researchers (Hughey, 1999; Heflin and Thau, 1999; Eyler, 1995; Bernstein, 1997; Newman et al. 1988; Norcross, Stevenson, and Nash, 1986; Nelson, 1984) indicate that employers tend to hire experienced personnel only. One of the best ways around these obstacles is to offer internships. Today's companies seek experienced professionals, even for their entry-level positions. Internship programs can provide this unique experience.

- *Missed opportunities and lack of new professional programs for Russian education in transition.* The principle functional task of higher education in Russia is to train highly qualified scientific and science-teaching cadres (Gerasimova, 1998). It is essential to perfect the available technology for training scientific cadres via improved and modernized experiential learning opportunities that may take the form of internships, practicums,

cooperative education and so on. Therefore, Russian universities need models, examples to enhance existing curriculum and develop a new model for practical programs.

We are living at the beginning of 21st century in a diverse global environment. There are many differences in this changing world. Differences among adult learners are primarily due to differences in their life experiences and will usually lead them to make different applications of new knowledge and skills to their own situations. Obviously, these differences have a global context because educators worldwide have similar concerns, one of which is the lack of appropriate educational programs for society. The educators' social destiny is to serve this society. The instructional problem in Russian education stems from a reluctance to take into consideration an educator's primary role as a teacher, that is to facilitate, but not to direct, learning activities (Bespal'ko, 1996). As a result, if learners at the end of the course have not learned what was taught, it is probably because inappropriate teaching methods did not allow them to make practical application of new knowledge to problems in their daily lives. In this situation an internship program might provide a very challenging opportunity to solve this problem. It is assumed that internship programs in Russia could be beneficial for better teaching performance as well as a great opportunity for experience application in the real world.

Purpose and Objectives of Study

The purpose of this study was a) to determine major benefits of internship programs and make an analysis of their impact on students and companies in U.S.A. colleges, b) to identify existing practical training programs in Russia and c) to propose a new model for internship programming based on both American and Russian observations.

Objectives of the study in general

To determine if internship programs help students develop careers and occupy good positions. This core question of assumed impact is not well analyzed by researchers, so there is inadequate data to confirm the impact of internships on graduates' careers. To make an analysis of impact, the data set that was taken into consideration included surveys of graduates from Iowa State University who had internships.

In order to achieve the purpose of this study particular objectives were set up. The following objectives led the efforts in achieving the purpose and major objectives.

Objective #1. Determination of value of internships as perceived by participants

Through this objective we are to recognize the rationale and background of participation in internship programs for all agricultural students who participated in such a unique experiential learning process.

Because more international students are expected to enroll and because Iowa State University is committed to internationalism and to affirmative action, a study to determine different needs and concerns of international students on internship programming is necessary. Based on characteristics of participants identified through this objective, the study also sought to discover what many things they need to know in the "real world"-- things that probably have not been addressed sufficiently in academic classes and the real situation--can help them to perform better in the future. Educators have the opportunity to receive feedback from interns and find out the efficiency of their teaching efforts. Instructors should be able to recognize what students transfer from the classroom directly to the field. Baird (1999) has added that supervisors or program directors in companies need no longer rely on trial and

error to discover successful ways to enhance the learning experience of potential employees, that is, if internship programs are appropriately planned and carried out toward such enhancement.

Objective #2. Preparing students for their entire lives

The second objective was to identify the issue and understand the impact of the experiential learning process on students that takes place in internship programs in order to recognize how educators can prepare the younger generation for life in a competitive world. We can start with identifying students' experiences and providing them with the theoretical knowledge. And then, we have to teach them to help themselves in finding answers to practical questions. Toward that end, the connection between theory and practice provides direction for better preparation for real independent life. Young people should be taught how to use theory and apply new ideas in a business environment. Also, they have to be provided with methods to discover and explore the world. Baird (1999) mentioned that "...formal academic classes emphasize knowledge of facts. In the internship, the focus is not on what you know, but what you do...but usefulness of information depends on what you do with what you know..." (p.32).

Objective #3. Identifying the internship program's impact on a company

The target of internships is for students to link what they have learned in the classroom with what is reality in the workplace. Therefore, we want to examine the degree to which the workplace gives students the chance to experience firsthand what they have been studying in readings and classes. The Inputs, Throughputs and Outcomes learning process

model was used in order to provide the information for the analysis of students' perceptions of how companies benefit from interns' participation.

Traditionally, companies deal with the job market as a resource of new labor. But for many companies internship programs are the easiest way to obtain new employees with less risk. Also, in American newspaper advertising we can see more announcements about job offers than in the past. But the reality is that, in the new economic and political environment, companies prefer to hire well-educated and experienced youngsters. Similarly, there is a big demand in the employment market in Russia, because of the growing economy where there are more job opportunities than before the transition to a free market economy (approximately 1992-93).

Objective #4. Investigating differences in students' perceptions

Researches such as Deutsh and Won (1963); and Patterson and Sedlacek (1988) have investigated students' cultural and national backgrounds and they found differences among ethnic groups in attitudes, perceptions and expectations.

No doubt the different cultural background of American and Russian students contribute to their attitudes and perceptions in the higher education system and experiential learning in the United States and in Russia.

The focus of this objective was to compare the perceptions of graduates who participated in internship and practical training programs at Iowa State University and Nizhni Novgorod State Agricultural Academy.

Objective #5. Identifying the situation in the experiential learning process

Nowadays the situation in the education system is different in various countries. In Russia, for instance, universities and colleges offer a variety of programs to provide students with knowledge, experience and skills. In the United States many people go to college to get a degree for good career and job opportunities. This objective will determine strengths and weaknesses of internship/practical training programs existing in Russia and the US. Today there is an increased demand to change the curriculum and offer more experiential learning programs such as school-to-work, cooperative education, internship programs and so forth that work well in both American and Russian education. From all indications the internship impact on students and companies reflects the obvious situation in the educational market. The investigator formulated null hypotheses in order to compare the perceived impact in the USA and Russia.

Objective #6. Enhancing the curriculum

It is the researcher's opinion that there are not enough courses based on practical activities being offered for students in universities. Therefore, this objective guides us to identify the lack of practical training efforts for students, especially in Russia.

It is also the thesis of this research that students do not have enough practical experience to transition their theoretical knowledge into practice, especially in the free market economy of the Russian Federation. In the US, internship programs are offered for undergraduates for several months during the four-year period of study. The researcher believes that every theoretical course should be targeted to real application opportunities and

taught with practical implications. Through this objective the investigator proposed the recommendations for further improvement of internship and practical training programs.

Need for the Study

A growing number of educators are coming to the belief that internship experiences are excellent “engagement” vehicles for career preparation. At the same time, companies declare that internships are among their best recruiting tools. If those are indeed facts versus “folklore,” efforts between the educational and business communities need to be stepped up to enhance the capacity for internship impact (Jones, 1999).

Internships form a process of education through which schools and industry offer meaningful, career-related work experience for students while providing employers with an excellent source of highly qualified, flexible personnel. This mutual advantage makes an internship program highly rewarding for both employers and students (Hackman et al., 1999; Hodgson, 1999; Razzano, 1999; Swift, 1999; Hymon-Parker, 1998). But, we still have unanswered questions: How much do students value internships? What benefits do employers derive from interns?

Preparing students for their future roles in the world of work has become increasingly important for educators generally. As a result of changes taking place in the world, the challenge is to prepare students to enter and be competitive in a world-class workplace (Feller, 1996).

The workplace changes have implications for the work of Russian school counselors with students who will be making decisions about education after undergraduate school or upon entering the job market. All sectors of the Russian economy have been impacted by

technological advancements and innovations. As a result, it is important to develop skills that will help students be successful in dealing with modern technologies (Gerasimova, 1998; Kusimov and Selivanov, 1996; Iakshibaev, 1995; *Higher Education in Russia*, 1993).

After many changes in political and economic arenas in the 1990s, Russian educators needed to reform the educational system. Specifically, the academic areas recognized by the universities' faculty as needing improvement include instructional methods for teaching agricultural education and extension, special topics and evaluation in agricultural education and extension, professional and curriculum development in agricultural education, administration and supervision of agricultural education and extension programs and research in agricultural education.

Moreover, the most valuable part of training programs in preparing specialists in Russia would seem to be a practical curriculum to provide students with opportunities on a continuing basis to accomplish their ideas from theoretical courses into practice. The improvement of practical courses to enhance students' abilities to perform in the real world is highly desired.

Rationale for defining the research questions

Before starting new program development or improving a current curriculum design, needs assessments should be conducted that answer the questions: Do we need to have new practical programs? How should we identify and preserve valuable previous programs? Do our customers need more co-operative and school-to-work programs, field experience and internship programs? If some of the current programs are “good”, they should be saved; if some are “bad,” they should be excluded or improved. But what conclusions can be drawn

that recognize positive or negative programs for students, for colleges and for companies?

This is the major issue. Brain (1999) indicates his opinion that interns, indeed, even supervisors or program directors, should no longer rely on trial and error to discover successful ways to enhance the learning experience.

This analysis of internship impact is the first research within American and Russian agriculturally related colleges to test not only career advancement, but also the wide effects of internship programs on many factors of undergraduate education such as academic learning, skill development and personal development. In addition, it will be very important to examine the theoretical assumptions (Dudley, 1999; Kemp, 1997) of the proposed integrated curriculum model of internships behind the existing Russian practical training model to integrate core curriculum (Eyler, 1993) and enhance students' abilities for academic learning, skill development, etc. (Benton, 1990).

Specific need for the study

The researcher's interest concerns the impact of internships on students, agribusiness entities and, possibly, educational institutions that do business in Russia. This research will explore the input, throughput, outcomes and impact of internships on all three of these entities.

Research Questions

1. What is the internship/practical training program at the undergraduate level in the United States and in Russia, and what is the value of it? The value will be measured by two elements or aspects of principal benefit and include:

(1) benefit to a student; why do students need internships?

- a) to achieve their career objectives?
- b) to identify the skills needed to enter a chosen field?
- c) to gain practical work experience in their field of interest?
- d) to rise from the status of interns to full-time employees within the organization where they have interned?

(2) benefit to a company; why do employers need interns?

- e) to provide better means for enhancing the organization's recruitment activities?
- f) to permit better utilization of full-time personnel by providing staff support without distracting the attention of other qualified employees from their specialized areas?
- g) to provide a source of inexpensive qualified temporary employees?

2. What is the impact of internship/practical training programs in the U.S.A. and in Russia, and how do current internship/practical programs prepare students for their first "real world employment"? The following specific questions will be addressed:

(1) How do internships and practical training programs impact students' professional and personal growth?

- a) Do students change professionally as a result of their internship/practical training involvement?
- b) Do internships and practical training programs change students' aspirations and confirm their career goals?
- c) Do graduates apply things gained from internships or practical training in their regular work?

- d) Do students generally mature as a result of internship and practical training programs?
- e) Do students' personal aspirations change in some ways as a result of internships and practical training programs?
- f) Do students' interest in agricultural business activities generally change positively after internship/practical training programs?

(2) How do internships and practical training programs impact students' professional and personal skills development?

- a) How much do students believe that internship/practical training programs contribute to their development of the following professional skills: communication, interpersonal team skills, critical thinking, decision making, problem solving, skills in working with people, computer skills?
- b) How much do students believe that the following personal characteristics are positively influenced by internship/practical training programs: conscientiousness, ethics, respect for people different from themselves, learning how to learn, skills managing themselves, social skills, initiative taking?

(3) How do internships and practical training programs impact a company?

- a) Do companies benefit from internships' participation in internships and practical training programs?
- b) Do company employees generally react positively to interns?
- c) Do company employees experience personal impact from interns?

Implications and Educational Significance

The above questions receive only lip service. There are numerous “testimonials” about the impacts of internships, but to this point not much in the way of fact-based, researched data to form scientific extrapolations on the efficiency of internships is found in the literature.

This study is important because it offers suggestions to students, educators and companies in designing a model of the internship process with the involvement of students, agricultural colleges and professional agribusinesses to promote educational reforms in the United States and in Russia.

Learning what occurs in internship programs and what makes the processes (program design and delivery), components, and experiences work well in the United States should enhance interns’ leadership skills development process in Russia.

The basic assumptions of this study are as follows:

1) Application of results. Who will benefit from our findings and how?

A student:

- for further graduates examples about future job opportunities without making a long-term commitment;
- students before enrollment to business practices through industry-based assignments;

A company:

- cost-effective temporary employees, available for a long period;
- lower recruitment costs;
- enthusiastic and excited employees;

- a method of evaluating an internship student's performance and potential before consideration for a permanent position;
- access to the University's resources and technologies;
- trainees for a long enough duration to receive a return on the training investment.

The recommendations will be developed with direct application to agricultural education and extension education in order to provide further assistance for instructors and extension agents in designing appropriate internship and practical training programs in Russia as well as in the US. This study seeks to determine if there are impacts of internship programs, which promote the process of career development, increase wages and help students secure good professional positions.

Operational Definitions

Description of the College of Agriculture, Iowa State University

The College of Agriculture is one of the nine colleges (Business, Design, Education, Engineering, Family and Consumer Sciences, Graduate, Liberal Arts and Sciences, and Veterinary Medicine) of Iowa State University with teaching, research, and outreach programs that serve people in the state, the nation, and the world.

The College is committed to its primary role in:

- preparing undergraduate and graduate students for careers or further education;
- basic and applied research programs contributing to the advancement of science and progress toward social, economic, and environmental goals;

- outreach programs to increase knowledge and understanding; disseminate information on new technology; and help in decision making in agriculture, rural communities, and society.

Description of Nizhni Novgorod State Agricultural Academy

The Nizhni Novgorod State Agricultural Academy is a unit of the Federal Higher Education System within the Russian Ministry of Agriculture. The academy is approved and recognized by the Ministry of Education of Russian Federation as an institution of higher education. Admission to the academy requires completion of secondary school graduation by "Attestat" (equivalent to senior high school in the United States). Graduates of the academy are eligible to pursue their studies at graduate level or seek employment in Russia. Graduate program of the academy equivalent to M.S. and Ph.D. in the United States. The Academy in Nizhni Novgorod offers undergraduate and graduate programs specializing in Agricultural Engineering, Animal and Poultry Science, Veterinary Medicine, Agricultural Economics and Finance, Agronomy. As rural research center the academy is committed to its goals that are: to support and develop basic research to provide sustainable continuing education programs and related activities for leaders and professionals in support of the transformation to a free market economy and democratic governance in the Nizhni Novgorod oblast.

Definition of internship/practical training programs

Balutis and Honan (1984) stated that definitions and conceptions of internship vary. In part, these differences may depend upon the base from which the definition is developed. In a paper presented to a group of political scientists attending a conference on teaching political science in small colleges, Professor Sydney Wise (1973, p.10) of Franklin and Marshal College provides a typical summary of the essential ingredients as seen by the academic community:

- 1) The internship is a real work situation as distinguished from speculation or simulation;
- 2) It provides an opportunity for the student to participate on the same basis as other workers; and
- 3) It presents the student with the opportunity for the systematic and continuous examination of the experience in relation to generalization of the academic subject matter.

It is vital to clarify the definition of an “internship”. There are different kinds of programs for students to prepare them for the workplace. The differences in these programs, contexts and definitions depend on the level of the school. On the high school level in the United States there are experiential learning programs such as the School-to-Work program based on a variety of strategies for improving young people’s school-to-work transition, including Tech-Prep, cooperative education, and youth academies (Siverberg, 1996).

The researcher believes that learning is a process of gaining experience, or “experiential learning,” outside of the classroom. Scannell and Simpson (1996) and Sexton

(1997) simply stated that experiential education provides the opportunity and the environment for students to experience first-hand, outside the classroom, activities and functions that relate directly to the application of knowledge.

Numerous other terms and expressions have also been used to describe specialized types of experiential education. These include internships, service-learning internships, cooperative education, educational practicum, field experience, field study, preceptor-ships, clinical experiences, student teaching, work-learning, and work-study. According to Migliore (1989, p.26), experiential education exists at the undergraduate level and includes:

- all forms of active learning
- internships
- community and public service and learning
- cooperative education
- field studies
- intercultural programs
- leadership development
- practicum experiences
- experiential learning in the classroom
- outdoor education

The National Society for Experiential Education reflects their learning goals in internship programs through the following definitions:

- Academic learning -- the individual can apply knowledge learned in classroom to the workplace;
- Career development -- the individual gains knowledge of the qualifications and duties of a position and can explore their interest in a field;
- Skill development -- the individual gains an understanding of the skills and knowledge required in the workplace;

- Personal development -- the individual gains decision-making skills, critical thinking skills, increased confidence and self-esteem.

There is no clear consensus about what certain terms, such as internship, practicum, and field placement, mean. Also, different authors interpret "internship" differently. In psychology (Baird, 1999), for example, the term "internship" is used to describe the yearlong placement for doctorate-level students. Many undergraduate programs, however, also refer to their field experiences as internships. Still others use terms such as practicum, externship, or fieldwork (Hevern, 1994).

According to Oldman & Hamadeh (1999) "...the word "internship" is tricky. An "internship" to one organization is a "volunteer position" to another, whereas a third might call it a "fellowship", another might say "apprenticeship", and still another might say "externship". The lines of distinction blur into a "You say tomato. I say too-maw-tow" situation. The word "internship", while common, is just not universally used..."

The types and duration of internships can be as flexible as necessary to accommodate the mutual needs of both the student and the employer. While there is no hard and fast arrangement, internships generally involve one or more of the three following options:

Summer Internships - Students are available to work 40 hours a week, for instance, from mid-May through mid-August.

Continuing Part-time Internships - For enrolled students, the internship can be part-time for 10 to 15 hours per week during the academic year, for one or more quarters.

Volunteer Internships - Universities and agencies actively promote volunteer opportunities for students with organizations that are non-profit/public service in nature (UCI Internship Office, 1998).

This study will utilize the following definition of an internship program: two to four month learning process with the emphasis on gaining work experience based on the approach of active learning – i.e., learning by doing in the real business environment. Thus, an internship is seen less as a “vehicle” for students to improve their education and more as a means of gaining a competitive edge in the marketplace for new jobs.

Conclusion

Internships have become an important means of entering into the professional job market. Experiences are generally full-time during the summer or part-time during the regular academic year. Internship programs provide a great opportunity for building students' work records improving their resumes, gaining professional contacts, and earning real money. Experiences gained, quite often, lead to professional positions following graduation. These are the basic assumptions of this study that will be an emphasis in the research.

In addition, it is assumed that internship programs could be designed for application in the Russian education system. This assumed opportunity indicates that the internship as an example of experiential learning can make a difference as an effective program that works well for improvement and development of existing traditional practical training programs in the Former Soviet Union.

This study will determine the benefits derived from internships by those who offer or receive them. This information is important because new internship programs could be among the key educational elements to help Russian people in their transition to a free market economy.

CHAPTER II. LITERATURE REVIEW

The purpose of this study was to determine major benefits of internship programs and make an analysis of impact on university students and companies in the U.S.A., identify existing practical training programs in Russia, and propose a new model for internship programming based on both American and Russian observations.

This chapter reviews the literature and the relevant research related to this study. Reviewing journal articles, books, reports, dissertations, and an ERIC literature search completed the literature search. The review is organized as follows:

- A. Overview of literature producing the definitions of internship programs
- B. A review of literature on the internship's impact on students, universities and companies
- C. A review of agricultural education programs in Russia
- D. Summary

Overview of Literature Producing the Definitions of Internship Programs and Their

Near Relations

Mixing theory with practice has been one of the cornerstones of American agricultural education for nearly 150 years (Little, 1982, p. 2). Academic programs in agriculture have offered strong hands-on components since the end of the nineteenth century. More recently, more faculty members have jumped on the bandwagon, convinced that relevant work experience plus a strong generalist background provides the winning combination to ensure job success. Green (1997) mentioned that programs that integrate

academic and real-world experience are called by variety of names: cooperative education, field experience, service learning, fieldwork, practicums, externships, and apprenticeships. What is called an internship in one setting may be referred to as field experience or cooperative education in another. It quickly becomes evident that each of these terms is defined and applied differently depending on the school and its faculty (p.10).

Many undergraduate programs in the health professions, education, social work, communications, and business already routinely require students to have supervised experience in related work settings. Depending on the discipline, these experiences may be called co-op, internship, school-to-work, externship, practicum, field experience, or student teaching (Heinemann, Defalco, and Smelkinson, 1992).

Co-operative educational program

Cooperative education is a structured method of instruction whereby students alternate or coordinate their high school or postsecondary studies with a job in a field related to their academic or occupational objectives. Students and participating businesses develop written training and evaluation plans to guide instructions, and students receive course credit for both their classroom and work experiences. Credit hours and intensity of placements often vary with the course of study (National School-to-Work Office, 1996, p.13).

Co-op has also been defined as "a unique opportunity of educational enrichment designed to enhance self-realization by integrating classroom study with planned and supervised experience in educational, vocational or cultural learning situations outside of the formal classroom environment" (Woolridge, 1987, p.28).

According to Green (1997), the term “co-op” derived from a relationship of cooperation between school and employer, and can refer to an institutional mandatory program or to a departmental elective program. In the majority of co-op programs, students work full-time for pay in business or industry for one or more semesters, alternating with full-time classroom study. Other types of co-op programs run parallel to regular academic schedules and carry academic credit (p.17).

Internship

Green (1997) defined the term "internship" to refer to any temporary work experience, in a for-profit or nonprofit setting, with the dual purpose of learning while working. As with co-op programs, internships can be integrated with the student's regular school schedule or take place during a semester away from school or during the summer break. They can involve academic credit or remuneration. Some internships have an academic component and faculty sponsor. Internship models may vary from school to school and even among departments on a campus. Terminology also may vary: *Internship* may be used interchangeably with *field experience* or *co-op* to describe programs that look similar or strikingly different. Because of the confusion of program models and terms, students may run into difficulty sorting out the different programs offered by each school (pp. 10-11).

School-to-work

Imel (1999, p.43) defined the school-to-work program as a systematic effort to prepare young people for high-skill, high-wage careers and provide them with the academic instruction and foundation skills needed to pursue postsecondary education and lifelong

learning. The author believes that there are three main components in a school-to-work (STW) system: school-based learning, work-based learning, and connecting activities. Because of STW's emphasis on careers, many have erroneously assumed that STW is just about "getting jobs for kids" and have criticized STW because it fosters business involvement in education. However, national evaluation of STW has shown that college-bound and non-college-bound participants are about equally involved in the experiences promoted by the School-to-Work Act initiated in 1994.

Brown (1999, p. 9) believes that the school-to-work program begins as early as preschool. At the elementary school level, the developmental process of career education begins with career awareness designed to broaden student knowledge about careers and connect academic learning to the workplace. Developing basic, academic, and employability skills represents another major component of a student's STW education that, when linked with career awareness, provides a strong foundation for a successful STW system.

Swanson and Fouad (1999, pp.37-38) consider the school-to-work program as a method of applying theories of person-environment fit to the transition from school to work. They describe potential contributions of theories of person-evolvement that fit to understanding of the transition from school to work. Contrary to that opinion, Lent and Worthington (1999, pp. 12-14) indicate that career development theories do not typically highlight their relevance to the school-to-work transition process. Krumboltz and Worthington (1999, p.6) suggest that in school-to-work transition, learning is essential not only for students to develop basic employability skills but also for development of work habits, beliefs, interests, and values of teachers.

Luft (1997) describes his opinion about school-to work as a summer externship in business and industry that provides teachers with first-hand experience of what today's work world is all about. He notes that teachers indicated the program would help them to prepare their students for the world of work (pp.325-327).

Externship

Green (1997) described externships as short-term placements in various worksites for purposes of observation and information gathering. Alumni are often willing to provide students who share an interest in their careers with opportunities to conduct information interviews and observe daily activities in their places of employment. For many students, these exploratory programs lead to full-blown internships or co-ops at a later date (p.13).

Bidwell (1997) developed an implementation guide for teacher worksite externships. He indicated that conducting effective teacher worksite externship programs for teachers allows teachers to observe practices in order to glean information about academic applications (p.145). Bennet (1999, p.40) and Bennet, Milicevic and Dolan (1998) also described externship as a worksite experience. He developed a guide that describes the benefits of and implementation procedures for educator externships. Benefits for teachers, business mentors, and students are described. It is concluded that students whose teachers have had an externship have an opportunity to understand how what they learn in the classroom connects to real-life applications, to participate in an active learning environment, and to identify the skills and competencies required to be successful citizens, family members, and workers. Donald (1998, pp.18-20) defined the "externship" as a one-day activity in which a student "shadows" a professional for a day. Later Donald (1999, pp.56-

60) defined the externship as an internship hybrid, an away-from-campus one-day experience, which faculty build into the required assignments of many upper-division courses.

Practicum

Cottle (1973, pp.6-8) conducted a study in describing a “practicum” for the beginning counseling experience. He mentioned that practicum for beginning counseling is the culmination and the synthesis of all the preparation a neophyte counselor has achieved. He made a comparison with internship indicating that internship is the highest level of practicum. Here, under the minimum of supervision required for effective learning, the counselor-in-training carries on an increasing array of agency counseling functions with an ever-increasing assumption of responsibility. In many cases, the nature of the supervision and fewer hours per week are the only differences between the internship and a counselor’s first full-time position. Redford, Griebling and Daniel (1999) developed and conducted a training program on academic success counseling. Their description of goals, activities, and outcomes of this program offers a practicum program overview. Practicum trainees counseled students in a learning center effort to improve retention and graduation rates at the University of Houston.

Hardison (1999) describes the practicum as a teacher education program that integrates second language teaching methods, practical issues, and the development of collegiality in a cooperative professor-student approach. Discussions the graduate students hold develop into the sharing of ideas when they become teaching colleagues in weekly

meetings where collegiality is an important part of their experience in professional development.

Webre (2000) proposed reading practicums as a useful medium for sustaining teaching experiences and level of performance. She indicated that in 21st-century classrooms teacher educators must employ models that take into account standards and accountability and employ assessment techniques that assure both the teacher educator and the potential teacher that the performance required and exhibited in field experiences is related to the real world classroom and is at an acceptable level of performance.

Field experience

The term "field experience" usually refers to unpaid work in the human services or nonprofit sector, running parallel to the student's regular class schedule. Students in these programs select sites for work that makes a contribution to meeting the needs of the community. A credit-bearing class or written report is often part of this type of experiential program. Evaluations from site supervisors plus academic work usually determine grades. Listings of local service-learning and field-experience opportunities may be available at a college's career services office. On some campuses, local volunteer, field experience, and service-learning opportunities are promoted at volunteer fairs where representatives from various community organizations recruit students to participate in activities within their agencies (Green, 1997, p.12).

Student teaching

Student teaching has long been considered the capstone of the teacher education program, and early field experiences have recently become a vital part of preparing teachers. Most teacher educators believe that field experience should be integrated into the preparation of future teachers (Slick, 1995). Gloria Slick also indicated that teacher education should focus on the development of the person within the teacher. This requires primary attention to the feelings, attitudes, and beliefs of teachers, including all the attitudes, opinions, and beliefs the teachers hold to be true regarding their own personal existence: i.e., their self-concept (p.12).

Sandra Weiser (1995) stated that student teaching is the most universal component of the teacher preparation experience. Central to that component is the direct involvement of the practical professional educator—the classroom teacher (p.20). Indeed, researchers in the area of teacher education have cited the cooperating teacher as having the greatest and longest lasting influence on not only the student teaching experience but also the aspiring teacher's growth and development long after the student teaching experience has ended (Balch & Balch, 1988; Funk, Long, Keithley, & Hoffman, 1982).

All these common experiential programs for academically oriented work experience - - internships, co-op, school-to-work, field experience, practicums, externships, etc.—are defined in chapter one. In fact, some internships according to Green (1997) are indistinguishable from part-time or summer jobs. No matter what people call them, these programs can theoretically fill the gap between theory and practice and provide the hands-on experience students need to compete effectively for full-time positions.

From theory to practice

Formal academic classes emphasize knowledge of facts. The focus of most academic exams is on what students know, and the “what” that they must know has been explicitly taught in the class. By the time students are in college, most of them know this system pretty well. If students pay attention in class, study hard, and memorize the material, they are likely to pass the exam (Baird, 1999). Baird contrasted this situation with the internship world. In the internship, the focus is not on what students know but on what they do. Being able to identify the founders of every major therapy technique, or describing in detail five theories of personality, are all fine if students are in a class, but they may be of limited use during their internship (p.11). Usefulness of information depends on what interns do with what they know and how they relate their knowledge to situations they encounter. Ronnestad and Skovholts (1993, pp. 20-22) refer to the challenge of applying the student’s knowledge in a practical way as the “theory-practice gulf”. If students experience this gulf when they begin their internship, they are not alone. Raskin (1994, p.18) reported that experts in the study of field education in social work agree there is still a “lack of fit” between classroom courses and field instruction.

The other difference between internships and classroom study is that it is never clear beforehand just what students will have to know. One of the truest statements about life applies well to internships: "Life gives the test first, then the lesson" (Baird, 1999, p.12).

Similar observations have been made by Kaslow and Rice (1987, p.15) in their discussion of the developmental phases interns experience during their placements. If students expect the internship to be just like class but taking place in the community, they surely will be surprised, almost certainly will be confused, and may not do very well. On the

other hand, if interns appreciate that the experience is related to, yet markedly different from, academic coursework, they are more likely to benefit from and succeed at their internship.

Frantzich (1977, p.49) indicated that students and their academic advisors alike often pay too little attention to the academic possibilities of an internship experience. Students often seek out internship possibilities to get away from what they perceive to be the sterile learning atmosphere of the academic setting. Academics often send out ill-prepared interns with little guidance assuming that through some magic form of osmosis they will learn something important. But learning is work. It requires effort, guidance and skills. The internship setting provides the opportunity but does not guarantee that anything worthwhile will be learned. The intern who returns to the campus with nothing more than a random set of observations has not taken full advantage of the opportunity available.

For most of those who are involved in internship programs, internships are academically justified by the hackneyed phrase that they “help bridge the gap between theory and reality.” So, many students equate “theory” with “irrelevancy” (p.49).

Internship as a form of experiential learning

Experiential education has been embraced by agricultural institutions for many years. The constructs of experiential education programs are both formal and informal, intermeshed with college curricula in agriculture. Several work-related experiential learning programs, such as work experience, fieldwork practicum, or cooperative education, have been offered for reinforcing students' technical skills. However, internships with specific professional agencies tend to be the most common and effective form of experiential learning among college curricula in agriculture (Harrison and Kennedy, 1996; Moser and Flowerday,

1983). Inkster and Ross, in their book, *The Internship as Partnership: A Handbook for Campus-Based Coordinators and Advisors* (1995), note that internships provide students with a learning opportunity to "manipulate their classroom knowledge, to use it as a probe to explore a complex, challenging set of new experiences, and also to use those new experiences as a probe to explore and evaluate their classroom learning from a new, practical perspective" (p. 2).

How internships should be designed to maximize their utility to those who participate in it has been documented. An example could be found in the work of Harrison and Kennedy (1996). They proposed a framework for developing and implementing an agribusiness internship program that emphasizes the interrelationship between students, industry, and educational institutions. This framework includes the following components: identification of industry participants, development of company-specific internship plans, identification and selection of student interns, and program monitoring and evaluation. The authors also believed that academic institutions play a central role in the process of developing and implementing an internship program. Other authors such as Zimmerman (1996), Munson (1984), Fog (1980), and Cessna (1977) have included several requirements in their recommendations for developing a successful internship program.

Although several studies have reported that most participants were satisfied with the internship experience, there were some concerns encountered with the program. Herring, Gantzer, and Nolting (1990) identified some problems associated with established internship programs based on a survey of departments of agronomy. These include lack of direct faculty control over the experience, undefined course structure, and increased responsibility assumed by site supervisors. Feldman and Weitz (1990) also identified some of the personal

and organizational factors contributing to successful internship experiences perceived by student interns and their supervisors. These factors include the students' expectations about the internship, the socialization procedures used, the design of the work itself, the extent to which the internship fits into tentative career plans, and the attitudes and expectations of their supervisors.

A Review of Literature on the Internship's Impact on Students, Universities and Companies

Laycock, Hermon, and Laetz (1992) found many factors associated with successful internship experiences--talented students, employers who mentored students, jobs that enhanced learning, and faculty that helped students integrate classroom learning into their job experiences.

Balutis and Honan (1984, p.9) defined the relation among three players in an internship as “the internship triangle”. They stated that the internship experience, wherever it is found, is based upon a triangular relationship among students, universities, and host agencies. Each portion of this triangle is complementary to the others, and all must derive benefits from the relationships developed through the experience. They noted (p.9) that internships exist when students take part in off-campus work that is jointly supervised by academics and agency personnel in and which the students perform designated tasks for their host agencies over an extended period of time.

Impact on students

Assessing the benefits of internship participation through self-report or observational data was the focus of early research on internship (Hagerty, 1968; Morse, 1967; Wilson and Lyons, 1961). More recent research has relied on experimental designs comparing co-op to non-co-op programs and generally supported the hypothesized benefits (Fletcher, 1989; Marks and Wohlford, 1971; Weinstein, 1980). Wilson (1974) found that interned students appeared to make more informed career decisions, while Weinstein (1980) reported that non-intern students demonstrated greater certainty about career choices. These researchers also showed that students interned had greater autonomy and independence, social maturity, and interpersonal skills when compared with their non-intern peers (Trach and Harney, 1998).

They cite some testimonial evidences of internship impact on students occur:

“Before my semester I had little direction. The internship experience got me interested in becoming a lawyer and has led me to where I am now.”

Parliamentary intern, London

“I was exposed to the aspects of European media legislation. The variety of tasks gave me extensive experience, which can be directly applied to my senior thesis and my future career plans.”

Bonn intern for the Economic Ministry and Deutsche Welle

Laycock et al. (1992) found that students with internship experience possessed networks for finding future jobs and earned higher starting salaries than those students without co-op experience. They also reported that intern employees experienced realistic employment expectations and good job matches, resulting in increased job survival and work effectiveness, work motivation, and job satisfaction.

According to Heflin, et al. (1999), internships can be the most impressive item on a student's resume. Also, it shows real experience and the ability to accomplish more than digesting college classroom theories. In some instances, participating in an internship will put a particular person ahead of the competition and can be the deciding factor in securing paid employment later.

While internship programs vary by daily time commitment, compensation, and duration, all are grounded in the belief that concurrent and related work or field experience enriches the learning process because students apply concepts and skills taught in the classroom to the work situation, which in turn reinforces classroom learning (Stern, Hopkins, McMillion, and Cagampang, 1992). According to Heinemann et al. (1992, p.11), students who participate in an internship placement gain skills related to three types of learning objectives. The first involves academic objectives that connect theory to practice. Academic objectives develop and strengthen cognitive skills such as problem solving, decision making, critical thinking, and analysis. The second involves career-learning objectives that include determining realistic career options through career testing, developing job acquisition skills, strengthening career-planning skills, and understanding the world of work. The third and final learning objective involves personal growth such as self-confidence, self-understanding, communication skills, personal and ethical values, interpersonal social skills, and a sense of professionalism. All three learning objectives are interrelated and viewed as critically important to successful employment in a highly competitive and global workforce.

Aspects of self-esteem and career development of four community college students were compared and cooperative educational experience were defined using the Student Development Task and Lifestyle Inventory (Winston & Miller, 1987). No significant

differences were found across the four groups on seven of eight subtasks. However, there was a significant main effect defined by cooperative (co-op) work experience. Students who had participated in a co-op experience were better at establishing and clarifying a sense of purpose, career planning, and lifestyle planning than students who had no co-op experiences (Trach & Harney, 1998).

Several studies have been documented on the potential benefits of internships to the student. Vincent (1995) noted that a supervised work experience program contributed to the success rate new graduates had in finding their first job. Among other findings (Fenwick and Gartin, 1990; Cessna, 1977; and LaPrad, 1977), thirty-one to fifty-six percent of the interns indicated that they were employed or offered employment by their supervisors and nearly ninety percent found employment in the same general career area as their internships. Much of the literature indicated that a successful internship program would draw many recruiters and potential employers to campus, which would further enhance the employment opportunities of the graduating students (Harrison and Kennedy, 1996; Inkster and Ross, 1995; Vincent, 1995; and McCaffery, 1979). Some other benefits to the student included the practical knowledge gained, exposure to professionals, increased self-assurance and maturity, new methodology gained, contacts made for future employment, academic credit earned, increased interest in the major, personal weaknesses highlighted, and financial benefits (Seals and Armstrong, 1983; Henry, 1979; Cessna, 1977).

Green (1997) describes the value of internship programs as a benefit for both parties--students and companies. She mentioned that, for the most part, the internship is a win-win experience for both students and employer, laying the groundwork for successful career development (p.165). She also suggested not worrying about program titles. Real-world work

experience--whether it is labeled internship, field experience, volunteer opportunity, summer job, work-study, co-op, or practicum—is what it is all about. Paid or unpaid, credit or not-for-credit, full-time or part-time—related experience undoubtedly is the critical factor in launching a students' career. Internships are definitely worth an intern's time (p.166).

The bottom line is that work works. Student employment is in large degree beneficial to the student's academic persistence and attainment as well as to his or her future career success. (Brougham and Casella, 1995, p.55)

Impact on companies

Increasingly, a graduate's success may depend on practical work experience along with real-world insight and understanding. Lindquist (1992, 1993), reporting on findings from the *47th Annual Survey of Personnel Practices and Policies*, indicated that employers have demonstrated a significant shift in hiring practices. After graduation, half of the organizations surveyed hired their intern candidates as permanent full-time employees. Reasons cited included reduced recruitment expenses, opportunity to gain exposure to targeted groups, better hiring decisions, and higher retention rates. Taking into account this shift in hiring practices and the range of benefits provided by internship programs (Richardson and Prickett, 1991; Leachman, 1998), work experiences are one means of strengthening the link between postsecondary education and successful employment experiences.

Heflin, et al. (1999) indicated that, despite the competition, internships are a crucial element in educational training. Not only does a student receive practical knowledge about a current major or career interest, but companies also get a chance to improve their bottom line. Perhaps the term “synergy” best describes the mutual benefit that the sponsors and the

intern bring to one another. And as demands for better-rounded graduates increase, the need for internships will surely rise as well.

As workplaces become more competitive, companies will find it necessary to take an earlier and more direct role in the education and development of future employees (Harrison and Kennedy, 1996, p.19). By partnering with educational institutions, industry/business will ensure that their future employees are well prepared to function with the demanded competencies. While internship programs enhance the qualifications of graduates, they will be of value in attracting prospective students, thus increasing enrollment (p.19).

Green (1997, pp.15-17) explored the internship's payoff for employers. He recognized that companies definitely do not employ interns solely out of the goodness of their hearts. Interns are primarily a source of inexpensive or free labor in times of cutbacks and layoffs. Many organizations, particularly nonprofit, depend on interns to supply needed help in clerical, programmatic, and administrative areas. Internship programs also provide a pool for recruiting full-time employees. New hires are frequently drawn from the ranks of former interns whose work behavior and skills have already been put to the test.

Green (p.17) further concluded that internship programs tend to build firm bridges between academia and the surrounding community. Cross-fertilization of resources and ideas benefits schools, businesses, and participants.

Impact on universities

As for academic institutions, determining the return on investment for internship programs requires a complete understanding of their nature and some potential barriers to their implementation. A careful and thoughtful cost/benefit analysis is an effective strategy of

marketing the internship program to all three constituencies: the sites, the students, and the department members. It is a fact that an internship program is crucially dependent on the support of each of these constituencies (Inkster and Ross, 1995, p.32).

In many universities of the United States, students are provided with the opportunities to have internships. But educators are mostly concerned about definitions, and in many cases internships are called as service-learning internships, internships, cooperative education, educational practica, field experience, work learning and work-study. All learning is an experience, or “experiential.” But recently the expression “experiential education” has come to be used for a number of formalized learning activities outside the classroom. It is often said that internships are a formal and structured device for providing on-the-job-experience for pre-professional studies (Sexton, 1977, p.112).

On university level faculty are responsible for providing students with the learning process. Educators encourage the active learning process in order to increase the effectiveness of learning. Since different “people learn in different ways” (Stephen, 1998, p.17), active learning strategies may prove to be extremely helpful in strengthening their education in dealing with diversity. This means that the active learning process might be a universal learning environment for different people with different learning styles.

In order to encourage active learning, internships at the college level combine academic learning with work experience, and college plays a role as a provider of the theoretical basis. Most internship programs are designed by agencies, corporations, and industries to promote a link between educational theory and application (Case, Birkenholz and Cambell, 1997, p.44).

Gross (1981, p.2) indicated that universities are not deeply involved in designing internships. He described an internship as "... a practical institution in an organization that deals with the line of work you hope to enter. Its purpose is to fill the gap between the academic and the professional worlds."

Not much literature concerning internships focuses on the institutional and/or employer's benefits. However, most researchers believe that the value of internship programs in the college curricula, at least in part, lies in its contribution to meet the educational goals of individual students and the operational needs of participating agencies.

Harrison and Kennedy (1996, pp. 28-29) noted that internship programs could also provide an opportunity for the academic institution to receive feedback from industry/business as to the direction and success of their curricula. Partnership through internship programs allows a two-way flow of information between the two worlds (work and education) and contributes to the benefits of each other. Inkster and Ross (1995, p.17) believe that internships with clearly stated educational objectives will contribute to the student's intellectual and ethical growth and foster the linkage between the academic and the work worlds.

Balutis and Honan (1984) noted that internship programs may bridge the gap between the academic world and what agency heads like to call "the real world", a term which goes quite some distance towards explaining why it is frequently difficult to develop satisfactory working relationships between academics and practitioners. Practitioners look upon educational establishments as "think tanks", centered on basic research, largely theoretical and entirely irrelevant to the problems they face daily (p.10).

Summary

Successful internships may include three components, integrated in a triangular relationship: bright students, sympathetic field sponsors/companies serving as hosts, and an academic base/college. A carefully structured program provides benefits for each of the elements of the triangle. Students benefit by developing appropriate contacts that may subsequently develop into full-time positions and by having the opportunity to test “textbook theory” in the real world. The educational institution benefits as classroom discussions become more dynamic and students more alert. For the sponsoring agency, internships become a source of young talent, new ideas, and inexpensive labor. Thus, a successful internship program, if carefully planned and competently administered, has the potential of developing into a bridge between the academic world and the community at large (Balutis and Honan, 1984, p.27).

The quality and quantity of research on the impact of internship programs were not sufficient to provide evidence of the effectiveness of the program. Much research on internships has focused on the direct benefits (short-term gains) to the student, the institute, and the host agency, with few emphases on the transformation (long-term effects) of each partner.

A Review of Agricultural Practical Training Programs in Russia

The purpose of this sub-chapter is to review the evaluation of current agricultural education in Russia with particular focus on the educational needs of learners. Reviewing the literature on present-day Russian education is helpful to understand the following key components:

- a) Identifying the needs for improvement in agricultural practical training programs in Russia;
- b) Determining what skills and experiences of teachers need enhancement;
- c) Identifying appropriate challenges for the development of new internship model in Russia.

Also, this part of chapter 2 presents the trends and issues characteristic of sustainable practice in agriculture and education occurring in the field in Russia.

Reform of Russia's education system affects 33.6 million young people, From preschoolers to Ph.D. candidates. It also affects some 54 million adult learners and 5.7 million teachers. Those 93.3 million citizens represent roughly 63 percent of the population in the Russian Federation.
 (Heyneman, 1995, p.21)

With the numerous political and economic changes, farms are rapidly being privatized in Russia. However, there are no supportive educational programs to help these new private farmers become successful. To improve agricultural production it would probably be necessary to establish a client-centered educational service, such as the United States Cooperative Extension program, with a mission to provide research-based, unbiased information and education to help people make better decisions in their personal, community, and professional lives (Carroll, 1989; Bourgeois, 1990; Djire and Newman, 1995).

An examination of the curriculum (Kusimov and Selivanov, 1996; Sobkin and Pisarskii, 1996; Rowen, Wolf and Zlotnick, 1994; *Higher Education in Russia*, 1993) in some agrarian universities of Russia, specifically in the Central European region, revealed that instructional materials were written from an orthodox socialist point of view or outdated western theories. These materials are not useful in the understanding of today's high-

technology, satellite-supported marketplaces and the complicated economy. Specifically, the academic areas recognized by the Russian faculty (Kuba and Goecker, 1993) as needing improvement include instructional methods for teaching agricultural education and extension, evaluation in agricultural education and extension, professional and curriculum development in agricultural education, administration and supervision of agricultural education and extension programs, and research in agricultural education.

Theoretical framework

What is the future of agricultural education in Russia? Korkunov (1998, p.123) addressed this concern: “To answer this question we have to make an analysis of current programs and determine the need to change curriculum”. The need for change in agricultural education worldwide is well documented in the literature (Chaudion and Talbert, 1996; Moore and Allen, 1996) and often discussed in agricultural circles. Russians are thinking about reforms in many areas including the educational system. Researchers (Akimkin and Vashentsev, 1998, p. 34) in a report of “A study from the Russian Federation” suggested building upon the existing experience of vocational education in Russia to enhance cooperation among professional training and education establishments and enterprises.

Many valuable agricultural programs exist in Russia. But most Russian educators are very interested in introducing new concepts and approaches for relevant improvement of the national pedagogical system. Oglesby (1997, pp. 14-15) suggested that, “ If we continue to do the same old things, the same old ways, we will most assuredly get the same old results.” Recognizing that the 21st Century will be a time of change in agricultural education, Rist (1997, pp. 16-17) encouraged studying alternative teaching concepts and updating the

technology available to students. Schmidt (1998, p.24) maintained that, "Especially in those countries of transition, like Russia, we must be students of teaching. We need to make a concerted effort to continue learning how to be more effective teachers in a free market economy." According to Labyzhets (1996), discussions of problems facing Russian higher education during a transitional period addressed such issues as enrollment, employment in higher education, the need to increase efficiency, and application of information technology to teaching, learning, and research. It is argued that, although preserving some elements of traditional higher education is necessary, increased use of technology is desirable in all disciplines. Matveyev (1997) describes the process of introducing a new curriculum of information for technology in the Russian Federation for the higher education system. In addition, Matveyev shows how Russian state universities have integrated new technology issues in the overall plan for university development.

The idea of curriculum globalization in Russian schools is being proposed for development by some progressive educators who are involved in the reforms of the former USSR's educational system. They suggest looking at the history of Russian pedagogy. Nikol'skaia (1996), for example, surveys some of the more prominent views on education during the final years of tsarist Russia. She states that Russian pedagogical thinking was largely influenced by progressive educational theories popular in the United States and Europe at that time. This was a positive impact toward the improvement of Russian teaching styles.

Today in Russia, as in other parts of the world, many educators consider that agricultural education programs related to global issues teach preparation for challenging international interactions with students. Martin (1996, p.8) states, "It has become clear that

all school subject areas must incorporate global perspective elements into the curriculum if we are to have any chance of broadening students' perspectives." The outcomes of educational experience in international settings are highly dependent upon the extent to which the participant in the experience has been prepared for it (Tritz, 1997, p.44). In reality, there is no way to create a universal international curriculum in all countries. Martin (1996,p.23) indicates, "Internationalization of the curriculum opens new opportunity for education. This movement can revitalize the curriculum in agriculture and expand career opportunities for students."

Many problems exist in Russian education. Titus (1997) describes major issues that should be addressed. He explains that recent social and economic changes in Russia have impacted teachers adversely, due to underfunding of education, resulting in overcrowded classrooms, slow growth of teachers' salaries, a general teacher shortage, and a loss of prestige for the teaching profession.

Higher vocational education

The deep economic and social problems associated with the Russian Federation's move to a market economy have extended to Vocational Education (Smirnov, 1995).

We found that the Agricultural Education and Training (AET) system in Russia allows students who have fully completed the eleven-year general education program to compete through examinations for entry positions into education programs offered by agricultural academies, universities, and institutes. Also, students having clearly outstanding performance records in secondary-vocational level college programs may be offered positions in the agricultural institutes without completing competitive examinations. (Kuba, 1993, p.11)

According to Kuba (1993) the main administration of higher education institutions of the ministry of agriculture is responsible for coordinating the agricultural education programs in universities. In the Russian Federation, the higher vocational education programs of the institutes are expected to be organized in the following manner:

(1) Higher vocational education programs are expected to train and retrain highly qualified specialists and to satisfy individual educational needs by both deepening and increasing educational experiences. Higher vocational education courses are expected to build upon the secondary (complete) general education programs and the secondary vocational education programs.

(2) Persons with elementary or secondary vocational education in a particular skill are qualified to take short intensive courses related to the skill in higher vocational education institutions.

(3) Higher vocational education programs are to be provided by the higher vocational education institutions: universities, academies, and other academic organizations.

Russian higher education in agriculture and related subjects usually requires five institute years of study. Frequently, students are admitted to agricultural higher education programs after having passed competitive entrance examinations in up to three subjects. The undergraduate curriculum is rather directly focused in the first year and becomes even more specialized after the first two years. It is then that students are divided into groups according to specialty. For instance, agronomy is a specialization, which includes seed production, irrigated crop growing, feed production, plant biotechnology, beetroot production, flax growing, etc. Similarly, the agricultural mechanization specialization includes mechanization of crop production, mechanization of livestock production, repair of

agricultural machinery, testing of agricultural machinery, etc. Students become specialists but do not appear to have a large opportunity to view agriculture as an integrated system involving biological, physical, technical, economic, social, and cultural elements. Furthermore, students have very few elective courses. The Board of Teaching and Methodology and its working groups in the Ministry of Agriculture establish standard curricula for each specialization. Traditionally, the agricultural academic organizations have offered educational programs comparable in strength with training of agricultural production specialists and managers for large collective and state farms.

Four years ago many agricultural institutes began to offer a new higher vocational education program which is comparable to those available in many western countries. The new program has three distinct steps:

(1) Incomplete higher education. This two-year phase provides education for Students to gain an associate degree in one or more of the working professions such as tractor driver, mechanic, animal care worker, milkmaid, etc.

(2) Basic higher education. Students who successfully complete this two-year step are awarded the bachelor's degree.

(3) Complete higher education. Individuals who complete this one and one-half to two-year segment will receive the master's degree.

Private farmer training

Since 1990, almost all levels of vocational education in the Russian Federation have established many different forms of "farmers' schools". Not only have new programs been established, but also special courses and seminars have been introduced into the existing

curricula of many educational institutes. The first exploratory mission team found that the rapid introduction of private farmer training programs is the result of the corresponding increase in the number of private farmers. In order to systematize the organization and funding of private farmer training schools, courses, and seminars, including those that educate teachers for them, the Council of Ministers of the Russian Federation approved a state program of training for farmers. It is to be monitored by the Ministry of Agriculture and to be implemented in cooperation with the Ministry of Education, the Ministry of Labor, and the Ministry of Science and Technology Policies. During the last five years, a model private farmer educational certification plan was developed. It was expected that this would include a regular plan of vocational training, which should be paid for by private farmers. The involved ministries were expected to prepare curricula, teaching methods, and teaching materials, and to provide it to educational institutions having private farmer instructional programs (Kuba, 1993). This plan was completed and passed for implementation. As a result, a large number of new types of economic entity are emerging in various parts of the Russia agri-food business chain. It is important that the impact is not only on production costs, but also the impact of market demand forces on the formation of prices at various stages of production/processing should become better understood.

Transformation of Russian vocational education

The literature review contains the information about needs on reforming the regional system of vocational education in Russia. Many authors inform readers on how present problems and challenges have been addressed by the regional education management authorities. They indicate that a new educational system would be based on old strong

pedagogical traditions accumulated in Russian pedagogy. At the same time educational reforms will reflect political, economical and social changes.

Zajda (1999) examines effects of social and economic change on adult education and lifelong learning in post-communist Russia. He indicates that educational reforms in Russia began with discussions of the history of Russian adult education, educational policy changes in the 1990s, establishment of the first Open University and a network of adult-education centers, and the conflict between market-oriented objectives and goals of personal development and empowerment.

Bannatyne and Hall (1998) suggested that the first step in improvement of pedagogical technology and vocational education reform in Russian Federation is considering challenges and problems facing Russian educators in the transition from the Soviet system to a market economy. Also, they indicated the rise of private vocational schools since 1992 as a promising development (pp. 31-37).

Titus (1997) found that recent social and economic changes in Russia have impacted teachers adversely, due to under funding of education, resulting in overcrowded classrooms, slow growth of teachers' salaries, a general teacher shortage, and a loss of prestige for the teaching profession. As a positive condition in educational reforms he identified new legislation that has made general education compulsory and a right guaranteed by the constitution.

One of the valuable potentials of Russian education for the period of transition is a pedagogical professionalism of vocational teachers. Griffin and Bailey (1999) described interviews with the predominantly female staff of a Russian vocational teachers college, who revealed strong professional and personal commitment. Their sense of community and

collective action is being threatened by growing uncertainty in the emerging market economy (pp. 553-72).

Canning, Mook and Heleniak (1999) concluded that, after the breakup of the Soviet Union, reforms of Russia's educational system included rapid decentralization of responsibilities to regions, but without commensurate transfer of resources or clarification of government roles and responsibilities. Problems were greatly worsened by the lack of research on efficiency of current practical training programs in order to promote preparation of students for their career development in new free market economy conditions. Their findings reveal that the number of vocational teachers has been growing three times as fast as student enrollments, but both teachers and administrators face a set of adverse incentives and frequently lack essential resources in order to evaluate and improve experiential training programs. The educational system, especially vocational education, is poorly equipped to respond to rapidly changing market incentives. Policy recommendations focus on increasing school autonomy, school financing mechanisms, increasing class size, teacher pay and working conditions. But those recommendations do not reflect the necessity of internship and practical programs development because of the lack of statistical evidence.

Conclusion

Connors and Brousseau (1996) stated that agricultural education is alive in the former Soviet Union. However, even with the need for better agricultural production, there are problems in agricultural education throughout Russia.

Wolf (1993) concluded that vocational education institutions have had particular difficulty in adapting to the changing social and economic environment, and many are still

not oriented towards current labor market needs. Until recently, all vocational schools trained their students for specific jobs rather than teaching them a set of skills that could be utilized in a variety of internships across number of fields. Some have changed, but many are unsure what to do.

Webber (1996) discussed the necessity to continue reforming the Russian education system and to examine current proposals and efforts to reform the Russian higher education system, assessing their prospects for providing an answer to the needs of Russian universities in this era of teacher shortages. Filippov (1995) recommended building Russia's education system into a bulwark against corrupting foreign influences. He maintained that Russian culture and society are under siege from internal tensions and external influences.

In the author's opinion, people need greater changes for agricultural education in Russia. As this country proceeds to move toward free market economics, agriculture teachers will have to be prepared to educate their students in management principles that the teachers themselves have no experience or background for understanding. In cooperation between Russian and American educators, the additional skills and pedagogical experience might be transferred, for instance, by organizing exchange training programs, partnership projects and so forth. Russian agriculture teachers will increasingly look toward American agricultural education professionals to assist them in their introduction to the world agricultural economy. Moving forward together it will be easier for both educational systems to develop. They must quickly accelerate the change process to use resources more efficiently, extend the use of technology and the understanding of its tools. In author's opinion methods of how to proceed should be discovered and studied.

Wolansky and Bax (1994) indicated that the problems facing reforms of vocational-technical education in Russia are similar to those in the United States. Together educators in both countries can develop better quality curricula in experiential programs. Entrepreneurship and better internship/practical training transition can help solve some of those problems (pp.18-21).

Summary

The internship is a valuable experience in the preparation of future administrators, businessmen, and teachers. The literature overview indicates that there is enough experience of delivering internship programs accumulated in the U.S.A. with involvement of students, universities and companies. But the author believes that internship programs need to have deeper engagement of these three parties. Each of the three key players must perform his/her role thoughtfully and effectively in order to serve well the affected students, teachers, school community, and the profession itself.

Reforms are required to improve educational quality in the Russian Federation. A more competency-based and individualized approach to learning, wherein students are encouraged to abandon the rote learning of the past and to acquire useful and applicable knowledge in a more student-centered classroom environment, needs to be developed. New practical training programs, needs assessment tools, program evaluation as well as qualifications arrangements will be needed to reflect these developments (Layard, 1999).

Changes in the Russian labor market are inadequately reflected in educational programs. Neither the private farmer training programs nor the general higher vocational education system is well equipped to respond to market signals and to the changing

conditions in Russia today. Changing this situation would enable the Russian Ministry of Education to carry out its responsibility for improving practical training and creating internship programs (Wolf, 1993).

Basically the literature review shows sufficient vocational educational experience in Russia that might be a good environment for the development of new practical training programs using varieties of experiential learning programs from the American education system. The descriptions and suggestions in this study are intended to assist the intern, the principal mentor, and the supervising professor in creating optional and well-prepared citizens for tomorrow's real work world (Hackmann, Russel and Elliott, 1999).

CHAPTER III. METHODS AND PROCEDURES OF THE STUDY

The purpose of this study was to determine and assess major benefits of internship programs and make an analysis of perceived impact on students and companies in Iowa State University while identifying existing practical training programs in Nizhni Novgorod Oblast, Russia. Specific research objectives of this study were the following:

1. Determine and describe the characteristics of internship program participants and their participation background.
2. Identify perceptions of internship program completers regarding the impact on their professional and personal growth.
3. Identify perceptions of internship program participants about the impact on a company.
4. Determine whether significant differences exist between the perceived impacts of American and Russian graduates of agricultural colleges.
5. Determine strengths and weaknesses of selected practical training activities in Russia and existing internship programs in the United States.
6. Develop recommendations for further improvement of internship and practical training programs.

This chapter will detail the methods utilized to describe the research design, population, sampling procedures, methods of data collection, and analysis of data. Assumptions and limitations to the study will also be discussed.

Institution and Program Descriptions

Description of the College of Agriculture, Iowa State University

The College of Agriculture is one of the nine colleges of Iowa State University with teaching, research, and outreach programs that serve people in the state, the nation, and the world.

The College is committed to its primary role in:

- preparing undergraduate and graduate students for careers or further education;
- basic and applied research programs contributing to the advancement of science and progress toward social, economic, and environmental goals;
- outreach programs to increase knowledge and understanding; disseminate information on new technology; and help in decision making in agriculture, rural communities, and society.

Description of Nizhni Novgorod State Agricultural Academy

The Nizhni Novgorod State Agricultural Academy is a unit of the Federal Higher Education System within the Russian Ministry of Agriculture. The academy is approved and recognized by the Ministry of Education of Russian Federation as an institution of higher education. Admission to the academy requires completion of secondary school graduation by “Attestat” (equivalent to senior high school in the United States). Graduates of the academy are eligible to pursue their studies at graduate level or seek employment in Russia. Graduate

program of the academy equivalent to M.S. and Ph.D. in the United States. The Academy in Nizhni Novgorod offers undergraduate and graduate programs specializing in Agricultural Engineering, Animal and Poultry Science, Veterinary Medicine, Agricultural Economics and Finance, Agronomy. As rural research center the academy is committed to its goals that are: to support and develop basic research to provide sustainable continuing education programs and related activities for leaders and professionals in support of the transformation to a free market economy and democratic governance in the Nizhni Novgorod oblast.

Description of internship/practical training programs

This study utilized the following definition of an internship program: 2-4 month learning process with emphasis on gaining work experience based on an active learning approach – learning by doing in the real business environment. Practical training program is a required by the department practical learning activity with the lengths of 6-8 months minimum with emphasis on gaining professional experience outside the educational institution in an organization that deals with the line of work an intern hope to enter.

Design of the Study

This study used a descriptive survey design. This type of research is grounded in the need to "describe and interpret what is". Further, descriptive survey research attempts to "measure what exists without questioning why it exists" (Ary, Jacobs, and Razavieh, 1985, p.337). Also, this design simplifies data analysis for better understanding of statistical interpretation. The frequency of occurrence of two different populations during descriptive

analysis with two groups of interns was conducted in this study. Freeman and others (2000) indicated that results of their structured descriptive analysis increased the frequency of occurrence for both participants (pp. 55-66).

In this research, several study procedures were used, including statistical and observational analysis. Basically, this research is quantitative, but in order to introduce the data in an objective manner, some elements of qualitative research procedure were used with the population at Iowa State University. Among the many excellent texts that provide an introduction to qualitative analysis, the book by Ely, Vinz, Anzyl and Downing (1997), provides a sense of the overall task of the qualitative part of this research.

Qualitative research is research that attempts not only simply to understand the strengths and weaknesses of internships and practical training programs, but also to understand them through the eyes of the participants whose world it is. Consequently, qualitative research must occur in a natural setting (Wilson, 1998).

The study begins, not with hypotheses of existing differences between groups to be proved or disproved, but with a flexible plan to explore a phenomenon of experiential learning in different countries. Also, participants' opinions were used to draw conclusions and recommendations. There are many challenges in qualitative research, from designing the study to analyzing the data (Wilson, 1998, pp. 15-16).

Descriptive research also involves collecting data to test hypotheses or answer questions concerning differences of current internship and practical training programs in the U.S.A. and Russia. Comparing the results in this study allowed making an analysis of the effect of experiential learning process in different conditions. Gall, Borg, and Gall (1996) stated that, "the major advantage of the comparative method is that it allows us to study

cause-and-effect relationships under conditions where experimental manipulation is difficult or impossible" (p.383).

This research did not look at the comparative study of educational policies, issues, and problems covering developments in education of the U.S.A. and Russia. Some educators (Mialaret and others, 1985) define education as an applied art that attempts to use scientific approaches (pp.82-85). This study presents the American viewpoint, in which scholars consider key elements in the study of educational issues and concerns in preparing students for their career. Also, based on analysis of differences between interns' perceptions in the U.S.A. and Russia, a new model of internship/practical training program may be proposed.

Population

The population of this study was all agriculture students graduated in 1999 from Iowa State University and consisted of 404 graduates who completed at least one internship program. According to Thompson (2001) most students in Iowa State's College of Agriculture 17 departments must complete an internship before they graduate. Statistics show that about 75 percent of new professional staff hires in the agricultural industry have completed an internship (p. 1). The Alumni Foundation at Iowa State University provided the investigator with current addresses. At Nizhni Novgorod State Agricultural Academy the whole population included 120 participants. The office of dean, College of Agriculture, provided the Russian respondents' addresses. A preliminary survey was conducted in order to identify the population of the targeted groups that consisted of those who had interned or had been involved in practical training programs. Five hundred twenty four postcards were sent to find out the number of students who had completed internship/practical training

programs. Based on received information, a population of 229 was selected including 119 participants in the U.S.A. and 110 participants in Russia.

The cost-effectiveness and impact on the response rate of variations in mailing procedures involved in a mail survey of agricultural college graduates were not assessed in this study. Siera and Pettibone (1988), Senf (1987), and Williams (1986) indicated the efficient use of a preliminary or advance letter, postcard versus letter reminders as the first follow-up mailing, timing of the reminder (1 versus 2 weeks after the first mailing), use of a reminder versus no reminder prior to the mailing of the duplicate questionnaire, and timing of the mailing of duplicate questionnaires. Boser (1990) indicated that the preliminary letters are not cost-effective, while reminders and duplicate follow-up questionnaires are cost-effective (p. 12).

Methods of Data Collection

The survey was conducted through the use of questionnaires constructed by the investigator. Universities in Iowa had successfully completed various studies (Luze, 1997; Belcastro, 1995; Martinez and Woods, 1995) in the past through the use of questionnaires, and internship participants in the College of Agriculture were familiar with this approach.

Questions used for the study were taken from the literature review, comments by faculty and interns in the Department of Agricultural Education and Studies, and Agriculture Career Days. After examination of all comments received, based on the literature review and the researcher's experience, the investigator determined five broad categories, and questions were devised covering each category to form the instruments for the survey. The second and third sub-categories were added to include specific information from participants.

In order to collect the data from different universities in Iowa and Nizhni Novgorod, Russia, two questionnaires were developed. Generally these questionnaires consisted of the same types of questions formulated in English and in Russian. The design of this study was an attempt to minimize the influence of different languages and maximize the technical style of interaction through similarities of questions composition and features of computer programming. But for future research it is a need to assess the impact of varied test formats and task features on interaction and to explore how these events vary in different cultural settings (Pollard, 1999, p. 28).

The first draft of the two questionnaires was revised after receiving constructive criticism from the university professors, graduate students and faculty in Russia. Incorporated in to the revision were open-ended questions to allow more freedom of expression from the respondents.

The second draft consisted of five-scale questionnaires and was given to twenty undergraduate students in Iowa State University and sent to twenty undergraduates in Nizhni Novgorod State Agricultural Academy in Russia. All 40 students had participated in internship and practical training programs. They were asked for their opinions for further refining the revised draft of the two questionnaires.

The third draft was given to three professors in both universities for final review, and then it was printed and made ready for distribution.

In the qualitative part of this research, observation field notes were organized in paragraphs based on what made sense to the author in the context of activity observed (Wolcott, 1990, pp. 9-30). For this reason, the unit of analysis was the paragraph (Ely, Vinz, Anzyl and Downing, 1997, p. 36).

Analysis of Data – Procedures

Quantitative - statistical analysis

Questionnaires were coded for analysis purposes. Responses were entered into the Excel® spreadsheet program. Statistical analysis was conducted using the SPSS® statistical package. Data were analyzed using frequencies, percentages, means, standard deviations, and t-tests. Knowing what different kinds of traditional data analysis provide the same output, but with different timeframe was one of the reasons that the investigator decided to apply Excel and SPSS for this study. New technologies in research design and computer equipment can do the first step in the right research procedure. Brosnan (1995) described a developmental progression of computer capabilities. First, the basic three software programs (word processing, spreadsheets, and database programs) have been used by researchers for the past several years. It explains the needs of more advanced use of the computer is given, including: graphics or drawing, multi-tasking or performing more than one job at a time, and telecommunications and e-mail. Finally, technological applications in education are advantages, which include such topics as interactive video, hypertext and hypermedia, virtual reality, on-line multimedia libraries, and distance learning (pp. 212-213).

In this study the assumptions about populations mean were made (see p.59). In order to make analysis of independent population mean differences the researcher needed to use Independent-Samples t-Test techniques. This procedure tests the null hypothesis that the population mean of a variable is the same for two groups of cases. It also displays a confidence interval for the difference between the population means in the two groups (Norusis, 1997, p.248).

The students' responses concerning internship/practical training program impact on (a) professional growth, (b) professional skills, (c) personal growth, (d) personal skills, and (e) companies were analyzed by comparing two independent means. The Independent Samples t-Test, which allows for the comparison of means, was employed to determine specific mean differences. The design of the study included testing the statistical null hypotheses that two population means are equal at the 0.05 level of significance for the means (Norusis, 1997, p.248). The null hypotheses tested were as follows:

1. There was no significant difference between two groups of graduates at Iowa State University and graduates from Nizhni Novgorod State Agricultural Academy regarding the perceived impact of internships and practical training programs on students' a) professional growth and b) skills development.
2. There was no significant difference between two groups of graduates at Iowa State University and Nizhni Novgorod State Agricultural Academy regarding the perceived impact of internships and practical training programs on students' a) personal growth and b) skills development.
3. There will be no significant difference between two groups of graduates at Iowa State University and Nizhni Novgorod State Agricultural Academy regarding the perceived impact of internships and practical training programs on companies.

Qualitative - observational analysis

The study investigated respondents' perceptions and their opinions regarding internship/practical training programs. In order to create objective conclusions and develop useful recommendations the technique of qualitative observation was used. Marra and Carr-

Chellman (1999) indicated that a qualitative analysis of student essays showed positive student attitudes toward using the qualitative research technology in their classrooms (pp. 283-303).

Analysis began with the first field notes and was carried out recursively in cycles of data collection and analysis. Observation field notes and interview transcripts were examined initially to gain a sense of the general flow of activity within the population. Initially, codes were established for their relevance to the interactions between participants, the conditions under which they occurred, the strategies used by the participants, and the consequences of the interactions (Straus, 1990).

Limitations of the Study

- Responses were limited to the participants who completed internship/practical training between the years 1997 and 1999.
- Differing lengths of time since completing an internship could limit overall impacts on participants.
- Results of the study are limited to the studied population that consists of people who have already graduated.
- Current addresses were not available for about 10% of graduates from 1999, and therefore they were not included in the study.
- The population was limited to the College of Agriculture at Iowa State University and Nizhni Novgorod State Agricultural Academy, Russia.

Assumptions

Internship programs and practical training programs are important educational activities. Thus, the following assumptions were made in and during the period of this study:

1. The data collected were truthful responses of the respondents.
2. Significant factors affecting the problem were not overlooked.
3. Respondents possessed opinions concerning internship impact and value of practical training programs.

CHAPTER IV. FINDINGS

In this chapter, an analysis of the data and findings is presented. The main purpose of this study was to determine and analyze former students' perceptions regarding the impact of internship programs in the State of Iowa. The secondary purpose was to identify existing practical training programs in Nizhni Novgorod Oblast, Russia, and their impact on participants. The third purpose was to identify the implications of determined perceptions and propose the opportunity to apply a new model of internship programming based on both American and Russian experiences. The results address the specific objectives presented earlier in this study. Specific objectives included:

1. Determine and describe the characteristics of internship program participants and their participation background.
2. Identify perceptions of internship program completers regarding the impact on their professional and personal growth.
3. Identify perceptions of internship program participants about the impact on a company.
4. Determine whether significant differences exist between the perceived impacts of American and Russian graduates of agricultural colleges.
5. Determine strengths and weaknesses of selected practical training activities in Russia and existing internship programs in the U.S.A.
6. Develop recommendations for further improvement of internship and practical training programs.

This chapter presents the results obtained from the statistical analysis of the data collected from Iowa State University graduates and respondents graduated from Nizhni Novgorod State Agricultural Academy, Russia. All the frequencies are presented in Appendix D. The analysis of variables is based on comparisons between the American and Russian groups. The chapter also includes a section on some qualitative observations and comments made by the respondents. But the detailed qualitative data is included in Appendix E. The chapter is divided into the following sections: (a) Reliability tests; (b) Characteristics of the population, including demographic characteristics of respondents, reasons for their participation in internship/practical training programs, and background of participants in the U.S.A. and in Russia; (c) Impact of internship/practical training programs on professional and personal growth and skills development of students; (d) Perceptions of respondents regarding impact of internship/practical training programs on a company; (e) Comparisons regarding perception variables; (f) Synthesis of comments made by students who have interned.

Reliability Tests

The survey instrument was field-tested with 26 graduate and undergraduate students of the Department of Agricultural Education and Studies and with 15 Russian graduates at Nizhni Novgorod. Internal consistency was calculated for the survey instrument before sending it to recipients. The first part of the questionnaire included 19 items with scales of 4 or 5. The internal consistency of this scale was calculated as $\alpha = .63$. The second part scale, a cluster of sixteen items designed to measure the professional growth and skills of students who had completed internship and practical training programs, had an internal consistency of

$\alpha = .33$ which was rather low. Therefore, the questions were redesigned and improved for better understanding. The internal consistency for the third part scale $\alpha = .053$, which was very low. This scale has been completely redesigned to measure the perceived personal growth and skills of participants. The fourth scale, a cluster of 13 items, was designed to measure the perceptions of internship and training programs on a company. This scale had an internal consistency of $\alpha = .83$. The fifth part of the questionnaire was devoted to collecting the data about personal characteristics of the population. This part included questions that were improved after the examination for reliability. The low reliability ($\alpha = .47$) was due to the differences in the 11 items measuring aspects of characteristics of the population.

In order to examine the level of internal consistency and stability of the grouped items in the instrument, Cronbach's alpha procedure was used. The results of the reliability tests of the draft and final versions of the instrument are presented in Table 1. The items were divided into five parts for the analysis of reliability. The alpha coefficient for the parts ranged from .33 to .83. To increase the reliability of the instrument, items were checked for clarity, appropriate reading level, and format. Then the questionnaire was sent out to the population again and additional reliability tests were conducted.

Table 1 shows improvement of the instrument and increase in the reliability coefficient, which is the estimate of the proportion of variance.

What is acceptable reliability? Nunnally (1967) suggested that $\alpha = .50-.60$ would be high enough in the early stages of research. The coefficient $\alpha = .80$ is commonly used; $\alpha = .90$ might not be high enough where great precision is needed.

Table 1. Result of reliability tests for the instrument parts

Parts	No. items	Cronbach's alpha coefficient	
		Draft	Final
Participation in internship/practical training programs	19	.63	.70
Professional growth and skills	16	.33	.82
Personal growth and skills	10	.53	.80
Impact on company	13	.83	.67
Personal characteristics of the population	11	.47	.91

In this study the alpha coefficient of the population for parts of the questionnaire ranged from .67 to .91. These reliability coefficients suggest that from 67 to 91 percent of the observed score variance is true score variance, but the other 33 and 9% is error variance.

The conclusion is that the instrument used had acceptable reliability.

Characteristics of the Population

This section describes the demographic characteristics of the respondents. Three hundred thirty-one questionnaires were mailed, including 221 for ISU graduates and 110 for NNSAA graduates. One hundred-ninety usable questionnaires were received. Questionnaire respondents in both countries were asked to provide answers from a list of choices. The distribution of respondents by age, educational level, gender, length of time, and reasons for

performance in internship/practical training programs is presented in Appendix D.

Population in the U.S.A.

The target population was 119 agriculture students who graduated in 1999 from the College of Agriculture, Iowa State University. Questionnaire respondents were asked to provide answers to fill-in-the-blank questions or select the most appropriate answer from a list of choices. Selected demographic characteristics of internship participants are presented in Table 1, Appendix D.

The majority of students enrolling in internships was male (63.5%), had a bachelor's degree (81.1%), master's (17.6%), or Ph.D. (1.4%). Females accounted for 36.5% of the population.

The age distribution of respondents ranged from 22 to 48 years old. Sixty-two (83.8%) respondents indicated an age of 26 years or less; 6 (8.1%) respondents indicated an age between 27 and 30; 2 (2.7%) respondents indicated an age between 31 and 40; and 4 (5.4%) respondents indicated an age of 41 years or older.

Most of the students (81.1%) were enrolled in internships during the summer session. The length of internship experiences for the most students (64.8%) ranged from 7 to 16 weeks. The preponderance of students (91.9%) had an interest in working with agriculture before internship participation; the others (8.1%) were not interested in agricultural business at all.

Working in crop/livestock production was the first professional position of nearly 40.5% of the population. The same number of students (40.5%) indicated other agriculture related businesses. Almost thirty-percent (29.7%) of the interns had agribusiness

management positions. Extension work and consulting to community groups accounted for less than 10%.

Former interns were asked to provide information regarding their reasons for participation in internships, expectations from the internship experience, and the influence of their participation on career development. The majority of the respondents (82.4%) indicated that the main reason for their participation in an internship program was their own decision to gain practical experience. An advisor-recommended elective course was the reason for participation by 23% of the students; 20.3% mentioned the department course requirement as a reason for their participation; and 16.2% accounted for the other reasons.

As for students' expectations, the same number of them (52.7%) indicated that they expected from internship participation to obtain a link between classroom learning and workplace reality and a direction for better preparation for an independent life. Less than 46% of the respondents expected to receive academic credit from internship involvement.

Respondents had the opportunity to express their opinion about the influence of internship experience on current and future employment. Seventy-seven percent of the respondents indicated a positive influence of internships upon obtaining their current jobs, and nearly 53% of the respondents said "yes, my interning experience will help me get future job promotions."

Population in Russia

Another group of the target population was 110 graduates from Nizhni Novgorod State Agricultural Academy, Russia. One hundred ten questionnaires were mailed and sixty-five usable questionnaires were received. Questionnaire respondents in Russia also were

asked to provide answers to fill-in-the-blank questions or select the most appropriate answer from a list of choices.

In contrast to the U.S. population, the prevalence of students enrolling in practical training programs in Russia were female (63.1%), most of them had a bachelor's degree (96.9%) or a master's (3.1%) but none had a Ph.D. Males accounted for 36.9% of the population.

The age distribution of respondents ranged from 21 to 54 years old. Twenty-nine (44.6%) respondents indicated the age of 26 years or less; 9 (13.9%) respondents indicated an age between 27 and 30; 13 (12.1%) respondents indicated an age between 31 and 40; and 14 (21.4%) respondents indicated an age of 41 years or older.

Almost a half of the students (56.9%) were enrolled in practical training programs during the Spring/Summer semester, and 29.2% had interned during Summer and Fall semesters. The preponderance of students (73.8%) had an interest in working with agriculture before practical training program participation; the others (24.6%) were not interested in agricultural business at all.

Working in crop/livestock production was the first professional position of nearly 36.9% of the population. Almost twenty-eight percent (27.7%) of the interns had agribusiness management positions. Twenty percent of interns worked for Extension; consulting to community groups accounted for less than 16%; and 10.8% of respondents indicated other agriculture-related businesses.

As at ISU, former interns at NNSAA also were asked to provide the information regarding their reasoning for participation in practical training programs, expectations from the practical training experience and the influence of their participation on career

development. The majority of the respondents (50.8%) indicated that the main reason for their participation in practical training programs was the advisor-recommended elective course, a departmental course requirement (27.7%), their own decision in order to gain practical experience (15.4%), and 9.2% expressed other reasons.

In terms of students' expectations, 58% of respondents indicated that from practical training program participation they expected to obtain the link between classroom learning and work-place reality. Less than 34% of respondents expected to receive academic credit from practical training program involvement, and 20% of respondents expected to receive a direction for better preparation for the independent life.

Russian respondents had the opportunity to express their opinions about the influence of practical training program experience on current and future employment. Slightly more than 86% of the respondents indicated a positive influence of practical training programs upon obtaining their current jobs, and nearly 37% of the respondents said "yes, there is the influence of practical training programs upon future job promotions." But 63.1% of the respondents did not believe that practical training programs influence future job promotions positively.

Perceptions of an Internship Impact on Professional and Personal Growth

The second objective of this study was to identify the perceptions of internship completers regarding the impact on their professional and personal growth. In parts 2 and 3 of the questionnaire the respondents were asked to indicate their level of agreement or disagreement with statements reflecting aspects of the impact of internship experience.

Subparts 2.2 and 3.2 asked respondents to indicate their level of belief in how internship programs contributed to the development of professional and personal skills.

Four major factors were identified in parts 2 and 3: professional growth (questions 1,2,3,4), professional skills (questions 1,2,3,4,5,6,7,8), personal growth (questions 1,2,3), and personal skills (questions 1,2,3,4,5,6,7). In subparts 2.1 and 3.1 the following 5-point Likert-type scale was utilized: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, and 5=strongly agree. The professional and personal skills were rated on a five-point scale where 1 indicated "not at all", 2 indicated "very little", 3 indicated "somewhat" 4 indicated "much", and 5 indicated "very much".

Table 2 shows the means and standard deviations related to the perceived impact of internships and practical training programs on professional growth of students at Iowa State University (ISU) and Nizhni Novgorod State Agricultural Academy (NNSAA). Scores ranged from 1.84 to 4.23 at ISU and from 1.35 to 4.4 at NNSAA. Both American and Russian respondents perceived the least impact on professional growth. Figure 1 reflects that interns at ISU indicated a higher effect of internships than interns at NNSAA with a grand mean of 3.48 versus 3.34. All the internship participants disagreed with the statement that some problems in seeking and accepting an intern work assignment occurred.

Respondents believed that internship and practical training programs contribute to participants' professional skills development (Table 3). The level of their belief was higher in NNSAA (3.94) than in the ISU (3.70). The mean and standard deviations related to the perceived impact on professional skills development ranged from 2.93 to 4.26 at ISU and from 2.86 to 4.71 at NNSAA. Interns indicated their strong belief (4.26 at ISU; 4.71 at

Table 2. Means and standard deviations of perceived impact of internship programs on professional growth of participants in the Colleges of Agriculture at ISU and NNSAA

Impact	Means		S.D.	
	ISU	NNSAA	ISU	NNSAA
Students changed professionally as a result of their internship involvement	3.89	4.40	0.84	0.84
Internships changed students' career aspirations and confirmed their career goals	3.95	3.68	0.81	0.64
Students applied things gained from internships in their regular work	4.23	3.91	0.80	0.70
Some problems in seeking and accepting an intern work assignment occurred	1.84	1.35	0.97	0.76
Grand means	3.48	3.34	-	-

1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

NNSAA) that internships and practical training programs influence skills development in working with people. They also believed in impact on problem-solving skills development.

Figure 1 confirmed that impact on professional skills development is the second most valuable for students who participated in internships and practical training programs.

The mean scores and standard deviations of the perceived impact of internship and practical training programs on personal growth of students (Table 4) ranged from 3.67 to 3.97 in ISU and from 3.72 to 4.09 in NNSAA. Respondents perceived that personal growth is the most impacted by internship experience in the U.S. as well as in Russia. Figure 1 shows that Russian respondents indicated higher impact (3.95) than American ones (3.85).

As for personal skills development, internship and practical training program completers positively indicated that there is an impact of experiential learning programs on skills

development in self-management (3.99 in ISU; 4.01 in NNSAA). The mean scores and standard deviations related to the impact on personal skills (Table 5) ranged from 3.26 to 3.94 in ISU and from 3.14 to 4.37 in NNSAA. Russian respondents indicated that practical training programs impacted greatly (4.37) on the skills development of respect for people different from oneself. For American respondents the initiative-taking skills are much (3.99) influenced by internship programs. In comparison with other factors, the personal skills

Table 3. Means and standard deviations of perceived impact of internship programs on professional skills development of participants in the College of Agriculture at ISU and NNSAA

Impact	Means		S.D.	
	ISU	NNSAA	ISU	NNSAA
Communication	3.89	4.00	0.90	0.39
Interpersonal team skills	3.81	4.00	0.87	0.56
Critical thinking	3.70	3.80	0.93	0.59
Decision-making	3.78	4.33	0.85	0.74
Problem-solving	3.85	3.94	0.95	0.81
Skills in working with people	4.26	4.71	0.74	0.63
Computer skills	2.93	2.86	1.38	0.73
Skills in technical agriculture	3.38	3.89	1.26	0.62
Grand means	3.70	3.94	-	-

1=not at all, 2=very little, 3=somewhat, 4=much, 5=very much.

Table 4. Means and standard deviations of perceived impact of internship programs on personal growth of participants in the College of Agriculture at ISU and NNSAA

Impact	Means		S.D.	
	ISU	NNSAA	ISU	NNSAA
Students generally matured as a result of internship programs	3.97	4.03	0.64	0.47
Students' personal aspirations changed in some ways as a result of internships	3.92	3.72	0.77	0.55
Students' interest in agricultural business activities generally changed positively after internship programs	3.67	4.09	0.70	0.63
Grand means	3.85	3.95	-	-

1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

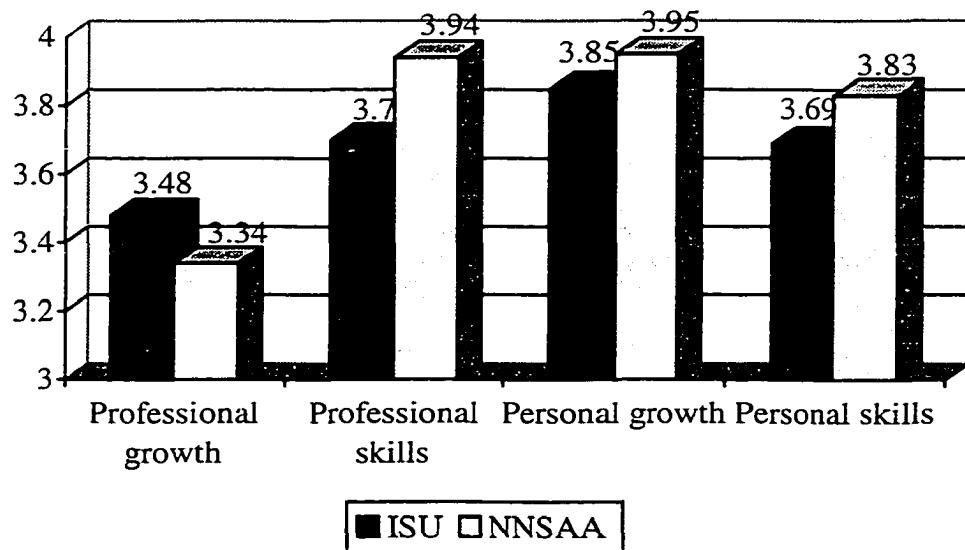


Figure 1. Perceived impact of internship/practical training programs on students

Table 5. Means and standard deviations of perceived impact of internship programs on personal skills development of participants in the College of Agriculture at ISU and NNSAA

Impact	Means		S.D.	
	ISU	NNSAA	ISU	NNSAA
Conscientiousness	3.49	3.99	0.97	0.45
Ethics	3.26	3.22	0.95	0.57
Respect to people different from oneself	3.70	4.37	0.93	0.68
Learning how to learn	3.62	3.14	1.06	0.56
Skills in managing yourself	3.99	4.01	0.93	0.71
Social skills	3.77	4.02	0.88	0.41
Initiative taking	3.99	4.05	0.85	0.69
Grand means	3.69	3.83	-	-

1=not at all, 2=very little, 3=somewhat, 4=much, 5=very much.

development is the third influenced by internship and practical training programs with the grand mean of 3.69 in the U.S. and 3.83 in Russia. The lowest-rated impact of internships and practical training programs in ISU was the impact on ethics (3.26). In Russia the skill of learning how to learn was the lowest ranked with a mean score of 3.14.

Perceptions of Impact on a Company

The third objective of this study was devoted to identifying perceptions of internship and practical training participants on companies. This section presents data regarding the

perceptions of former interns associated with benefits from interns' participation for company employees. The respondents were asked to indicate their level of agreement with the statements. This section also focuses on selected needs assessment characteristics that were analyzed in order to define the needs of companies and students in internship and practical programs. The statements and characteristics were rated on a five-point scale where 1 indicated "strongly disagree", 2 indicated "disagree", 3 indicated "neutral", 4 indicated

Table 6. Means and standard deviations of perceived impact of internship programs on a company of participants in the College of Agriculture at ISU and NNSAA

Impact	Means		S.D.	
	ISU	NNSAA	ISU	NNSAA
A company benefits from interns' participation	4.30	4.09	0.61	0.38
Company employees generally react positively to interns	4.00	3.22	0.64	0.70
Company employees experience personal impact from interns	3.82	3.63	0.65	0.78
Grand means	4.04	3.65	-	-

1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

"agree", and 5 indicated "strongly agree". The means and standard deviations concerning the perceived impact of internship and practical training programs are shown in Table 6. The perceptions of respondents ranged from 3.82 to 4.30 in ISU and from 3.22 to 4.09 in NNSAA. The statement "A company benefits from interns' participation in internship/practical training programs" received the highest-rated agreement, with a mean of

4.30 in ISU and 4.09 in NNSAA. The respondents in ISU indicated their lowest agreement (3.82) with the statement that company employees experience personal impact from interns. In Russia respondents were not sure about their agreement (3.22) that company employees generally react positively to interns.

Who benefits from the internship/practical training programs within a company? In order to answer this question, graduates in both universities were asked to rate suggested groups of people that were involved in internships. Their responses are reflected in Figure 2.

Participants in internship and practical training programs indicated that the group that benefits the most was interns, with a mean of 4.69 in ISU and 4.32 in NNSAA. The lowest-

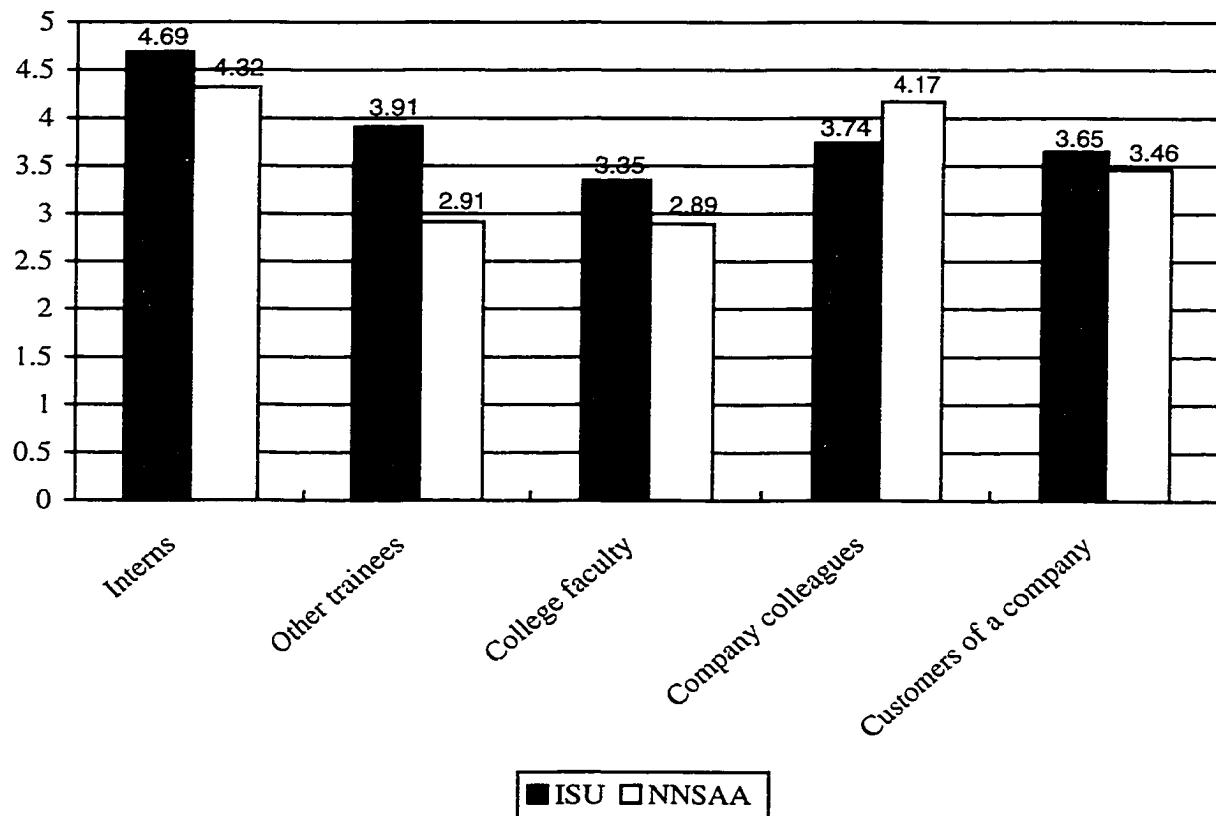


Figure 2. Groups of people who benefit from the internship programs

rated group (3.35 in ISU and 2.89 in NNSAA) was “college faculty”. The second-highest rated group of people involved in practical training programs for Russian graduates was “company colleagues” with a mean of 4.17, where as for American graduates it was “other trainees” with a mean score of 3.91. Regarding all benefited groups, the level of interns’ agreements from ISU was higher than the level of agreements from the participants in NNSAA.

In addition internship and practical training program participants identified the needs for companies and students to take part in experiential learning programs. The mean scores and standard deviations related to perceived needs of participation for students (Table 7)

Table 7. Means and standard deviations of ISU and NNSAA graduates regarding the needs of students in internship program participation in the Colleges of Agriculture

Impact	Means		S.D.	
	ISU	NNSAA	ISU	NNSAA
Students need internships in order to:				
a) Achieve career objectives	3.93	3.68	0.83	1.05
b) Identify the skills needed to enter a chosen field	3.93	3.77	0.73	0.70
c) Gain practical work experience in the field of interest	4.39	4.02	0.72	0.70
d) Improve from status of interns to full-time employment within the organization where interned	3.26	3.45	1.10	1.06
Grand means	3.88	3.73	-	-

1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

ranged from 3.26 to 4.39 in ISU and from 3.45 to 4.02 in NNSAA. Many of the factors identified as career development activities dealt with the overall internship and practical training programming. Gaining practical work experience in the field of interest was the highest need for participation in internship and practical training programs for both ISU (4.39) and NNSAA (4.02) interns.

The means and standard deviations related to companies' needs in internship participation are shown in Table 8. The scores ranged from 3.62 to 4.10 in ISU and from 3.39 to 3.69 in NNSAA. The highest-rated need (mean=4.10) for participation in internship

Table 8. Means and standard deviations of ISU and NNSAA graduates regarding the needs of companies in internship program participation in the Colleges of Agriculture

Impact	Means		S.D.	
	ISU	NNSAA	ISU	NNSAA
Companies need interns in order to:				
a) Provide means for enhancing organization's recruitment activities	4.10	3.39	0.73	0.91
b) Permit better utilization of full-time personnel by providing staff support	3.95	3.69	0.84	0.92
c) Reduce rate of renewal by attracting career-oriented candidates who already have experience with a company	4.05	3.59	0.76	0.88
d) Provide a source of inexpensive qualified temporary employees	3.62	3.37	1.20	1.04
Grand means	3.93	3.51	-	-

1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

programs for American companies was providing means for enhancing the organization's recruitment activities. In NNSAA the highest-rated need (3.69) for companies' participation was the need to permit better utilization of full-time personnel by providing staff support. American and Russian interns indicated that the lowest-rated need for companies' participation was providing a source of inexpensive qualified temporary employees (3.62 in ISU; 3.37 in NNSAA).

Figure 3 confirms the fact that former interns in the U.S. indicated that students (3.88) have lower needs for their participation in internships than companies (3.93). The grand means of Russian interns indicated that students (3.73) have higher needs for their participation in practical training programs than companies have (3.51).

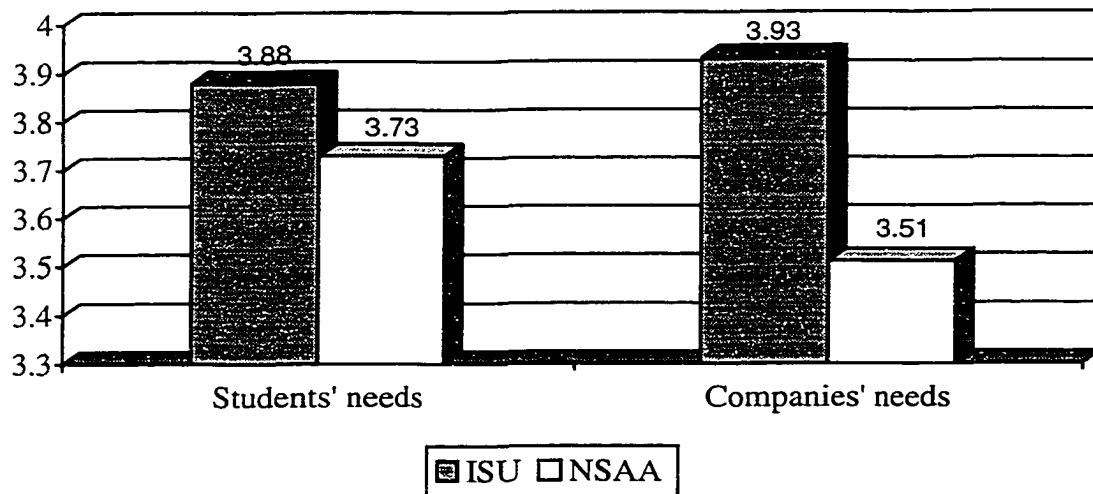


Figure 3. Perceived needs of students and companies in internship participation

Comparisons Regarding Perception Variables

Objective 5 of the study was to determine whether significant differences exist between the perceived impacts on American and Russian graduates. Within this objective was the need to compare selected categories of impact of internship and practical training programs on professional and personal growth as well as on professional and personal skills development. To determine whether significant differences exist between American and Russian interns' mean scores on impact, the test of significance for independent population group means was computed.

The data in Table 9 reveal that there are no significant differences between respondents from ISU and NNSAA in perceptions regarding the impact of internship/practical training programs on professional growth. Graduates in both countries also indicated their positive agreement that they changed professionally as a result of internship participation, changed their career aspirations, and confirmed their career goals as well as applied things gained from internships in regular work. But they disagreed with the assumption that problems in seeking and accepting work assignment result.

The null hypothesis that there is no difference between American and Russian internship participants on the impact of internships and practical training programs on professional skills development failed to reject. Students in Nizhni Novgorod indicated their higher agreement than in Iowa State regarding the impact on professional skills development, with a confidence interval beyond the 0.01 level. In particular that difference of means was determined concerning the impact on communication skills, interpersonal team skills, critical thinking skills, skills in working with people and skills in technical agriculture. ISU students rated the impact of experiential learning on computer skills development significantly higher

Table 9. Test of significance for graduates' perceptions from ISU and NNSAA concerning the impact of internship/practical training programs on professional growth

Impact	ISU	NNSAA	Mean Difference	F	Sig.
	<u>M</u> S.D. (N=74)	<u>M</u> S.D. (N=65)			
Changed professionally as a result of internship participation	<u>3.89</u> 0.84	<u>4.40</u> 0.84	0.51	1.96	0.16
Changed career aspirations and confirmed career goals	<u>3.95</u> 0.81	<u>3.68</u> 0.64	0.27	0.00	0.94
Applied things gained from internships in regular work	<u>4.23</u> 0.80	<u>3.91</u> 0.70	0.32	1.33	0.25
Experienced problems in seeking and accepting work assignment	<u>1.84</u> 0.97	<u>1.35</u> 0.76	0.48	0.70	0.40
Grand means	3.48	3.34	-	-	-

1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

with a mean score of 2.93 versus 2.86 for NNSAA. Significance between groups on impact on decision-making skills and problem-solving skills was not found. Both groups indicated that impact with means ranging from 3.78 to 4.71.

Shown in Table 12 are mean scores for the variables regarding the impact of internship/practical training programs on personal growth of participants. It is of particular interest that a difference of mean scores between groups exists with significance at the 0.05 level of confidence and beyond the 0.01 level of confidence. Interns in NNSAA indicated a higher range of agreement (4.03) with the statement that students are matured as a result of internship practical training programs than interns in ISU (3.97), $p<0.05$. The test of

significance (Table 12) for perceived impact on positive changes of interest in agricultural business activities after internship programs indicated a significant difference between groups at the level of confidence beyond 0.01.

Table 10. Test of significance for ISU and NNSAA graduates' perceptions concerning the impact of internship/practical training programs on professional skills development

Impact	ISU	NNSAA	Mean Difference	F	Sig.
	<u>M</u>	<u>M</u>			
	S.D. (N=74)	S.D. (N=65)			
Communication skills	<u>3.89</u> 0.90	<u>4.00</u> 0.95	-0.1081	46.15	0.000**
Interpersonal team skills	<u>3.81</u> 0.87	<u>4.00</u> 0.56	-0.1892	21.68	0.000**
Critical thinking skills	<u>3.70</u> 0.93	<u>3.80</u> 0.59	-9.7297	20.85	0.000**
Decision-making skills	<u>3.78</u> 0.84	<u>4.34</u> 0.74	-0.5547	0.95	0.330
Problem-solving skills	<u>3.85</u> 0.95	<u>3.94</u> 0.81	-8.7110	2.86	0.093
Skills in working with people	<u>4.25</u> 0.74	<u>4.71</u> 0.63	-0.4509	7.53	0.007**
Computer skills	<u>2.93</u> 1.38	<u>2.86</u> 0.73	7.089	30.79	0.000**
Skills in technical agriculture	<u>3.38</u> 1.26	<u>3.89</u> 0.62	-0.5139	54.803	0.000**
Grand means	4.23	4.51	-	-	-

** Significant beyond the 0.01 level of confidence

Table 11. Test of significance for ISU and NNSAA graduates' perceptions concerning the impact of internship/practical training programs on personal growth

Impact	ISU	NNSAA	Mean Difference	F	Sig.
	<u>M</u>	<u>M</u>	Mean Difference	F	Sig.
	S.D. (N=74)	S.D. (N=65)			
Generally matured	<u>3.97</u> 0.64	<u>4.03</u> 0.47	-5.7796	5.80	0.017*
Personal aspirations changed	<u>3.92</u> 0.77	<u>3.72</u> 0.55	0.1958	0.68	0.409
Interest in agribusiness changed positively	<u>3.68</u> 0.70	<u>4.09</u> 0.63	-0.4166	10.04	0.002**
Grand means	3.86	3.95	-	-	-

* Significant at the 0.05 level of confidence

** Significant beyond the 0.01 level of confidence

Graduates from ISU indicated their higher level of agreement (3.97 in ISU; 3.72 in NNSAA) with the statement that students' personal aspirations changed in some way as a result of internships. But no significance of difference was found.

Regardless of the impact of internship/practical training programs on personal skills development, respondents reported differently. Table 13 shows that there are no significant differences in the perceived impact of internships on skills of showing respect for people. Their agreement with the statement was "somewhat". The test of significance for other variances indicated significant differences, such as conscientiousness (3.48 in ISU; 3.99 in NNSAA, p<0.01); ethics (3.26 in ISU; 3.22 in NNSAA, p<0.01); learning how to learn (3.62 in ISU; 4.37 in NNSAA, p<0.01); managing yourself (3.99 in ISU; 3.14 in NNSAA, p<0.05);

Table 12. Test of significance for graduates' perceptions from ISU and NNSAA concerning the impact of internship/practical training programs on personal skills development

Impact	ISU	NNSAA	Mean Difference	F	Sig.
	<u>M</u> S.D. (N=74)	<u>M</u> S.D. (N=65)			
Conscientiousness	<u>3.48</u> 0.97	<u>3.99</u> 0.45	-0.4981	42.53	0.000**
Ethics	<u>3.26</u> 0.95	<u>3.22</u> 0.57	4.137	16.38	0.000**
Respect for people	<u>3.70</u> 0.93	<u>4.52</u> 0.75	-0.8204	2.98	0.086
Learning how to learn	<u>3.62</u> 1.06	<u>4.37</u> 0.68	-0.7476	13.28	0.000**
Managing yourself	<u>3.99</u> 0.93	<u>3.14</u> 0.56	0.8480	10.31	0.002*
Social skills	<u>3.77</u> 0.88	<u>4.02</u> 0.41	-0.2451	46.08	0.000**
Initiative taking	<u>3.99</u> 0.85	<u>4.05</u> 0.69	-5.9667	12.74	0.000**
Grand means	3.69	3.90	-	-	-

* Significant at the 0.05 level of confidence

** Significant beyond the 0.01 level of confidence

social skills (3.77 in ISU; 4.02 in NNSAA, p<0.01); and initiative taking (3.99 in ISU; 4.05 in NNSAA, p<0.01).

The test of significance for the impact of internships and practical training programs indicated that there was no difference between groups (p>0.05). Respondents indicated their

agreement (4.30 in ISU; 4.09 in NNSAA) that a company benefits from internship programs. Moreover, company employees experience personal impact from interns, shown by a mean score of 3.82 in ISU and 3.63 in NNSAA. ISU respondents indicated (4.00) that company employees generally react positively to interns; in NNSAA respondents were "neutral" with a mean of 3.22.

In table 13 the results of test of significance regarding the impact of internships and practical training programs indicated that there was no difference between means of two independent groups of respondents from ISU and NNSAA.

Table 13. Test of significance for graduates' perceptions from ISU and NNSAA concerning the impact of internship/practical training programs on companies

Impact	ISU	NNSAA	Mean Difference	F	Sig.
	<u>M</u>	<u>M</u>			
	S.D. (N=74)	S.D. (N=65)			
A company benefits from interns' participation	4.30 0.61	4.09 0.38	0.2050	35.39	0.000
Company employees generally react positively to interns	4.00 0.64	3.22 0.70	0.7846	2.60	0.109
Company employees experience personal impact from interns	3.82 0.65	3.63 0.78	0.1936	2.93	0.089
Grand means	4.04	3.65	-	-	-

1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Synthesis of Comments Made by Students Who Have Interned

Some respondents provided written comments. These comments added to the findings of this study in a qualitative manner. The following comments by respondents are divided into two sections: (1) General comments of graduates regarding strengths of selected internship and practical training activities; (2) General comments of graduates regarding weaknesses of internship and practical training programs. Twenty-six percent (N=74) of the American population and eighteen percent of the Russian population had comments that are included in Appendix E. Therefore, this section provides a synthesis of their written comments.

General comments of graduates regarding strengths of internship/practical training programs

A common thread expressed throughout the interns' comments was an appreciation for the experiential learning aspects of internship and practical training programs.

Respondents indicated that an internship should provide a student with a concrete learning experience as well as an expanded conceptual framework. Most of the former interns noted that internships are the opportunity to integrate theory and practice in order to formulate career plans and to enhance personal growth.

Many respondents indicated that nowadays companies and organizations are seeking college graduates who have had career-related experience while going to school, and students gain a valuable work experience through the internships/practical training programs. Several graduates expressed their opinion that companies receive a benefit from participating in internship programs. For example, internships can bring relief during heavy work periods,

can cover for temporary employees, and afford an employer the opportunity to screen for potential full-time employees. They also mentioned that workers with internship experience require less training and become productive sooner than other employees.

General comments of graduates regarding weaknesses of internship/practical training programs

Most of the negative impressions were related to the lack of appropriate coordination in internship arrangements between companies and college faculty. Respondents indicated that sometimes an internship program does not provide enough good time for consuming and applying gained experience to their exact positions. Several respondents who were doing special research projects during their experiential program indicated that interns can be dedicated, hardworking, serious, and honest about their studies, education and research without being willing to or able to “work for nothing”. In terms of recommendations for further research a couple of respondents recommended making sure that an integration of theory (readings) and practice (experience) is demonstrated in the final paper including descriptions and evaluation of their experience that can be used as a source of future reference for both students and faculty.

Summary

This chapter presented the findings of this study in the order of the stated objectives. Characteristics of internship/practical training program completers were presented concerning age, gender, degree, length of internship experience, attitudes toward current and

future employment, reasoning for participation, expectations, interest in working in agriculture and analyses by descriptive information.

Data were reported on the perceived impacts on professional and personal growth as well as on skills development. The perceived internship impact of experiential activities on companies was also reported. In addition, respondents indicated their perceptions regarding benefits as they related to students, employees and employers. Comparisons generated between American and Russian participants as well as their positive and negative comments were synthesized.

CHAPTER V. DISCUSSION

The purpose of this study was to determine and assess major benefits of internship programs and make an analysis of perceived impact on students and companies in Iowa as well as to identify existing practical training programs in Nizhni Novgorod Oblast, Russia, and their impact on participants. Further, this study sought to identify the implications of determined perceptions and propose the opportunity to develop for application a new model of internship programming based on both American and Russian experiences.

The specific research objectives of this study were the following: (1) determine and describe the characteristics of internship program participants and their participation background; (2) identify perceptions of internship program completers regarding the impact on professional and personal growth as well as on professional and personal skills; (3) identify perceptions of internship program participants about the impact on a company; (4) determine whether significant differences exist between the perceived impact of American and Russian graduates of Agricultural Colleges; (5) determine strengths and weaknesses of selected practical training activities in Russia and existing internship programs in the U.S.A.; (6) develop recommendations for further improvement of internship and practical training programs.

The whole population consisted of two groups: 119 persons who graduated in 1999 from the college of Agriculture, Iowa State University and 110 graduates from Nizhni Novgorod State Agricultural Academy, Russia. The Alumni Foundation at Iowa State University and the office of the dean of the College of Agriculture at Nizhni Novgorod State

Agricultural Academy provided data lists of 524 former interns from which the research population of 229 people was created based on pretest results.

The study employed a descriptive survey design, which, according to Slavin (1984), utilizes surveys and other self-reported data in order to describe particular phenomena as they exist rather than attempting to manipulate variables.

This chapter presents a discussion of the main findings of the study. The discussion is divided into the following sections based on the objectives of the study: (a) profile of the respondents; (b) the impact of internship/practical training programs on professional and personal growth; (c) the impact of internship/practical training programs on a company; (d) strengths and weaknesses of selected practical training activities in Russia and existing internship programs in the U.S.A.; (e) comparison of the perceived impact of American and Russian graduates of agricultural colleges.

Profile of the Respondents

One of the objectives of the study was to identify the demographic characteristics and background of the participants. Results of the data analysis indicated that a majority of the former interns in the study were in the middle age group. The age ranged from 21 years to 54 years old with the average age of 26 years. What is an optimal age for internship participation? Some schools encourage freshmen to take internships in order to decide whether or not they really want to enter a given profession. But most schools try to reserve interning as a cap to formal training. In fact, in some cases students must have completed certain prescribed courses before being eligible. Gross (1981) indicated that mature students who are ready to handle the responsibilities of work are markedly superior as interns

compared to students who require constant supervision. Generally, this maturity is demonstrated by good grades and a serious approach to work without any age limitation.

A majority of the graduates in this study who have interned in the U.S.A. were male (63.5%), but in Russia were female (63.1%). Most of the respondents had achieved a bachelor's degree, but some of them had a master's (17.6% in ISU and 3.2% in NNSAA). Only a few respondents in this study (1.4%) in ISU had attained a Ph.D. Furthermore, these findings confirmed that gender of participants is related to subject matter. In NNSAA the majority of students specialized in finance, most of whom were women. At ISU most of the students specialized in farm operations, where males represent the majority. According to Bultena et al. (1992) 89% of the farmers in Iowa are male.

The findings of this study indicated that most of the American students (81.1%) were enrolled in internships during the summer season, whereas more than a half (56.9%) of the Russian students participated in practical training programs during summer and spring semesters. The investigator's belief is that students take internships when they involve rather substantial time commitments; that is, internships are best taken during a semester when they have a fairly light load of classes. Woolridge (1987) and Zunker (1989) found that most schools that have internships offer them all year long, although some have availabilities only in the summer. Individual students usually take internships for only one or two semesters.

Results of this study regarding reasons for participation indicated that most of the students (82.4%) at ISU participated in internship programs because of their own decisions to gain practical experience. But in NNSAA 50.8% of the graduates indicated that the main reason for their participation in practical training programs was an advisor-recommended course. In terms of expectations, both American respondents (52.7%) and Russians (58%)

expected to obtain a link between classroom learning and workplace reality. Literature (Chickering, 1969; Peel, 1988) suggests that there are many potential benefits from internship experience. However, these potential benefits have not been clearly extended to persons who are involved in an experiential learning process. According to Gross (1981), the primary reason for participating in an internship is to learn more about the career area students wish to enter. Thus, the chosen field of interest is also a reason for participating in an internship. Results of this study confirmed that the major professional positions that interns took were related to crop, livestock and other agriculture-related businesses. However, Wilson (1974) indicated that in all probability students want to intern near their school, although some schools provide for students to intern at distant places on a full-time basis (pp.2-3).

This study recognized that respondents perceived positive benefits from internship and practical training programs upon obtaining their current jobs (77% in ISU; 86% in NNSAA). But as for the influence of internships on future employment, opinions were different. Fifty- three percent of ISU students indicated a positive effect but nearly sixty-three percent of respondents from NNSAA felt negative influence on future job opportunities. Some resources studied the effect of internship program participation on employment opportunities. Oldman and Hamaden (2000), for example, found positive correlation between internship participation and new hires (p. 471). Figure 4 reflects their findings.

This study did focus on relationships among variables associated with reasons for participation in internship/practical training programs. This issue as well as analysis of differences between students who interned and who did not intern will be proposed for future

research. In addition, the difference in impact on graduates' careers between interns and non-interns should be an important subject for future research.

Similar findings are illustrated in figure 5 (Hanigan Consulting Group, 1993).

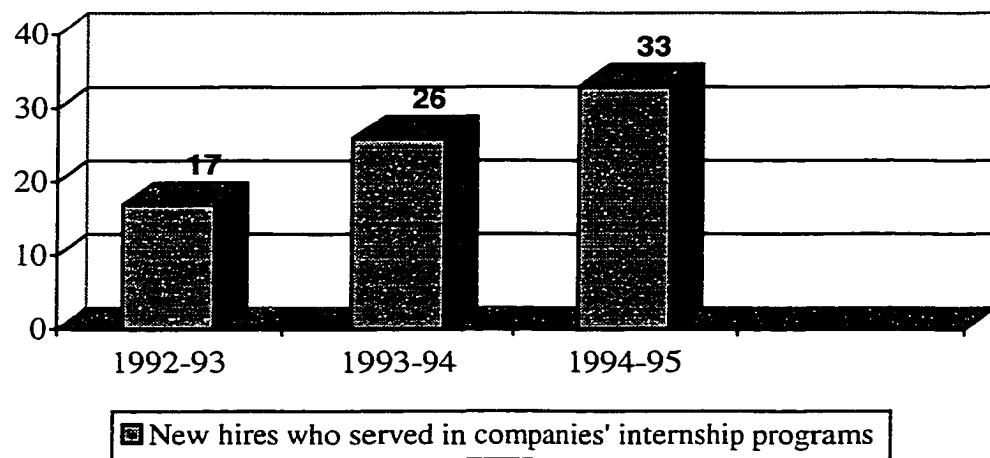


Figure 4. Correlations between new hires and internships (%)

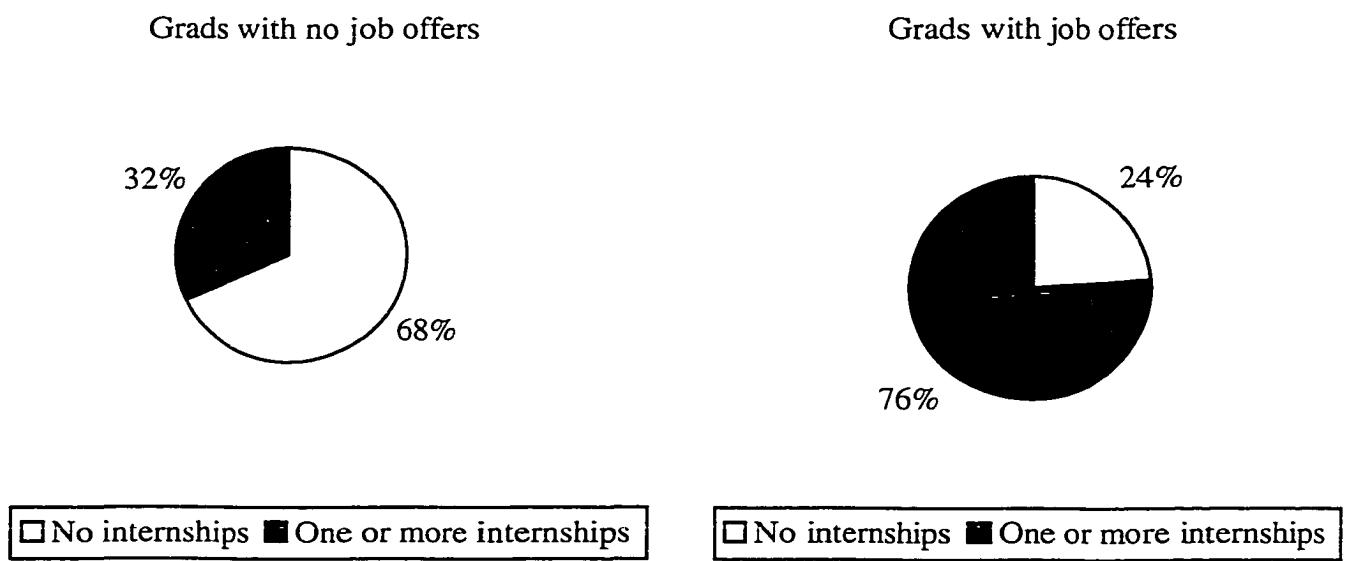


Figure 5. Engineering grads without and with job offers

Impact of Internship/Practical Training Programs on Professional and Personal Growth

The second objective of this study involved career-learning objectives that include determining realistic career options through career testing, developing job acquisition skills, strengthening career-planning skills, and understanding the world of work. Also, the second objective of this study involved personal growth such as self-confidence, self-understanding, communication skills, personal and ethical values, social interpersonal skills, and a sense of professionalism.

Professional growth

The objective of this section of study was to identify perceptions of internship program completers regarding the impact on professional and personal growth. The respondents seemed to agree with perception statements that called for changes of their professionalism. The highest-rated statement among American graduates was “Students applied things gained from internships in their regular work” (mean=4.23). Russian graduates indicated their highest agreement with the statement “Students changed professionally as a result of their internship involvement” (mean=4.40). It seemed that students had an opportunity to create a learning process in order to improve the quality of their experience and gain additional skills for professional growth. Stem, Hopkins, Memueon, & Cagampang (1992) also found that internship programs are grounded in the belief that concurrent and related work or field experience enriches the learning process because students apply concepts and skills taught in the classroom to the work situation, which in turn reinforces classroom learning (p.34). Russell and Reiser (1999) discussed an evaluation of a summer

internship program for Omaha, Nebraska, students that stressed scientific/technical work experience. Their results were similar to the results of this study and suggest that internship programs can provide a growth experience for students and can positively influence students' knowledge, skills, and readiness for the world of work.

Professional skills

A review of the data regarding the development of professional skills indicated that internship/practical training program participants value this experience because these programs are designed to help students develop professional skills that are congruent with the workplace's changing practices. Results indicated that an internship is a good environment to improve skills in working with people. Students rated development of this skill as the highest (4.26 in ISU and 4.71 in NNSAA). Then they agreed that internships develop communication skills, problem solving and interpersonal team skills.

The results of this study tended to support the findings of other researchers in regard to the student-identified growths in interpersonal skills, problem solving, decision making and communication. Riden (1993) indicated that internship participants had a much greater understanding of what it was like to be in the work force and how to plan strategically for career movement (p.18). Eyler (1993) found that internship opportunities for guided analysis and reflection enabled students to recognize curriculum relevance and develop empathy, interpersonal skills, understanding of organizations, and capacity for working with people (p.143). According to Heinemann et al. (1992), students who participate in an internship gain skills related to three types of identified learning objectives. The first involves academic

objectives that connect theory to practice. Academic objectives develop and strengthen cognitive skills such as problem solving, decision-making, critical thinking, and analysis.

Personal growth

Anecdotal examples of the personal benefits of experiential education for students support its effectiveness in both personal and economic domains. Some former internship students in this study reported that the experience allowed them to emerge from a position of total dependence and resignation to one of independence and hope. As a result of choosing a practical educational program and selecting a series of career-related employment experiences, they reported that students who participated in internships and practical training programs generally matured as a result of their participation. In Russia students showed a positive agreement with a mean of 4.03, while American students rated with a mean of 3.97. However, respondents from Nizhni Novgorod State Agricultural Academy agreed most strongly (4.09) with the statement that after internship programs students' interest in agricultural business activities generally changed positively.

In support of findings of this study, McCain (1986) reported increases in internship participants' self-control, self-confidence, and self-esteem.

Personal skills

Students in agricultural colleges in Russia and the United States can use various experiential learning programs to enhance their performance and effectiveness through professional development. The results of the study confirmed the positive impact of internships and practical training programs on personal lives of students. Respondents

indicated that there are four personal skills that are influenced by internship participation, including “initiative taking”, “social”, “skills in managing oneself”, and “respect to people different from oneself”. For American students, skills in managing oneself and initiative-taking skills were perceived as the most impacted by internships (3.99). Russians believed that respect to people different from oneself is the most subject to practical training program impact (4.37). In fact, professionalism shortages, new technologies, and job market demands are directing attention to the need for personal skills development of agricultural education students. However, respondents did not rate highly the skill of learning how to learn.

DiPasquale (1997) found that an experiential learning program raised the quality of students graduating from the school's electricity program, and, after attending the internships, students appeared more mature about learning.

It seems that all the learning objectives regarding professional and personal growth are interrelated and viewed as critically important to successful employment in a highly competitive and global workforce. So, in terms of recommendations, determining the correlation among objectives might be proposed for future research.

Impact of Internship/Practical Training Programs on a Company

This study also sought the perceptions of the respondents in understanding how internships and practical training programs impact employees and employers.

The results of the study indicated that respondents in the U.S.A. (4.30) and in Russia (4.09) definitely agreed that a company benefits from interns' participation. Regarding employees and impact on them, respondents in Iowa State University (4.00) concluded that employees generally react positively to interns. Russians (3.22) felt uncertain about positive

reaction of employees to interns' participation. All respondents almost agreed (3.82 in ISU; 3.63 in NNSAA) concerning personal impact of internship/practical training programs on employees. In general, we can state that the experiential learning process benefits all parties that are involved on-site. Learning by doing and learning by sharing seem to have deep impact, especially on students who may be considered as future employees. Indeed past research efforts have indicated (DiPasquale, 1997) that through the internship program, students observed firsthand how workers interact, how technology was used, and how real business and industry functioned. They returned to school with a better understanding of where their education fits into the real world (p. 21-23).

Increasingly, a graduate's success may depend on practical work experience along with real-world insight and understanding. Lindquist (1992, 1993), reporting on findings from the *47th Annual Survey of Personnel Practices and Policies* indicating that employers have demonstrated a significant shift in hiring practices. After graduation, half of the organizations surveyed hired their intern candidates as permanent full-time employees. Reasons cited included reduced recruitment expenses, opportunity to gain exposure to targeted groups, better hiring decisions, and higher retention rates. Taking into account this shift in hiring practices and the range of benefits provided by internship programs, work experiences are one means of strengthening the link between postsecondary education and successful employment experiences (Lindquist, 1992,1993).

Benefits

Darlin (1998) described a brief observation of internship values as benefits for participants. He noted that participation has increased student awareness and provided some

of the same benefits as other experiential learning programs. He found that student reactions and other data support internships as an effective learning tool.

In this study, benefits from internship/practical training programs for students were highly rated by questionnaire respondents in the U.S.A. (mean=4.69) as well as in Russia. Also, American respondents indicated that other trainees have benefits from internship (3.91). Russian students expressed their agreement that company colleagues benefit from practical training programs (4.17).

Cannon and Arnold (1998) found internships beneficial for students who are increasingly seeing it less as a vehicle for augmenting their education and more as a means of gaining a competitive edge in the marketplace for new jobs. But Hymon-Parker (1998) identified problems with internship programs, including ambivalent support from academic institutions and loose organizational structure. They recommended better site identification, more faculty involvement, and improved curriculum (pp.76-81).

It has been discovered in this study that the most beneficial party among others who were involved in internships was the group of interns. But the investigator believes that the third party, faculty, have a benefit from involvement in internships. Obviously, this should be a subject for future investigation. Laycock, Hermon, and Laetz (1992) found many factors associated with successful internship experiences--talented students, employers who mentored students, jobs that enhanced learning, and faculty that helped students integrate classroom learning into their job experiences.

Needs in internship participation

Given the positive outcomes associated with internship participation identified earlier, the general population's perceptions of this study were investigated regarding the specific needs of students in internships or practical training programs.

The study confirms the fact that former interns in the U.S.A. indicated that students (mean=3.88) have lower needs for their participation in internships than companies (mean=3.93). The grand means of Russian interns indicated that students (3.73) have higher needs for their participation in practical training programs than companies have (3.51). Both American and Russian respondents indicated that students need internship/practical training programs in order to gain work experience in the field of interest (mean in ISU was 4.39; mean in NNSAA was 4.02.) Respondents in ISU (4.10) agreed with the statement that companies need interns to provide means for enhancing an organization's recruitment activities. In NNSAA respondents expressed their neutral position regarding the needs of companies in practical training programs, with the mean ranging from 3.37 to 3.69.

Gross (1981) identified students' needs as an opportunity to apply theory learned in the class to an actual work situation. A company has one or several interns each semester, which gives it a choice to hire the best ones (p. 4). Every internship is an individual experience involving a student, an instructor, and a field supervisor, so there are mutual benefits to apply to all situations and to all people involved (p.1).

In terms of recommendations for future research, the investigator would like to suggest studying a correlation between an internship/practical training program's impact on students/employees/employers/faculty and their needs in program participation.

Comparison of the Perceived Impact of American and Russian Graduates

It is important to determine the effectiveness of the internship model as a service option for undergraduate students. Taking into account the under-representation of persons in the work force and their general exclusion from programs available to students, methods for increasing participation must be investigated. To this end, this study assessed students who participated in an internship work experience to identify the effect of that experience on the ability to establish and clarify a sense of purpose and develop mature interpersonal relationships as defined by Chickering (1969).

Comparisons were made with ISU students and NNSAA students to assess relative impact. No difference was found between groups of respondents regarding the impact of internships and practical training programs on professional growth. Graduates in both countries indicated that they changed professionally as a result of internship participation, changed their career aspirations and confirmed their career goals, and applied things gained from internships in regular work.

The difference was found between groups concerning the impact of internship/practical training programs on professional skills development. Students in Nizhni Novgorod indicated their higher agreement than in Iowa State regarding the impact on communication skills, interpersonal team skills, critical thinking skills, and skills in technical agriculture. The null hypothesis that there is no significant difference between American and Russian students in impact on decision-making skills and problem-solving skills failed to reject. Also, a significant difference between groups was found regarding impact on personal growth and personal skills development. Russian respondents indicated higher perceptions than Americans that interns generally matured as a result of internship/practical training

programs and that after participation their interest in agricultural business activities generally changed positively. Regardless of the impact of internship/practical training programs on personal skills development, respondents reported differently. Former Russian interns expressed their stronger belief than Americans that internship/practical training programs impacted personal skills including conscientiousness, learning how to learn, social skills and initiative taking. But former American interns thought that internships most likely impacted the development of ethics and managing oneself.

Strengths and Weaknesses of Selected Practical Training Activities in Russia and Existing Internship Programs in the U.S.A.

Valuable qualitative data was collected, based upon the comments made by respondents on the instrument. The investigator noted selected comments, and a review of strengths and weaknesses is presented in this section.

Reynolds (1997) conducted a qualitative study identifying strengths and weaknesses of internship programs in educational administration. The results revealed that all the administrators from large districts were dissatisfied with the internship, that 93 percent of administrators from medium-size districts were dissatisfied, and that 87 percent of administrators from smaller districts were dissatisfied. The rationale given by all three groups was that the internship should entail fewer paper-oriented tasks and more contact with parents, students, and teachers in the areas of supervision, staff development, and curriculum development.

Findings of that qualitative studies suggest three key points about the strengths of internships and practical training programs: (1) the internship can be translated into empirical

results; (2) a significant confluence can occur among the program administrator, interns, and those individuals who supervise students in the workplace; and (3) the internship experience can reflect on the entire program of study and highlight its strengths and weaknesses.

With increasing concern for accountability in education, faculty and administrators are seeking improved means to evaluate their programs. The brief analysis of strengths and weaknesses might be a good start in developing an enhanced model for practical training programs in Russia and internship programs in the U.S.A. The comments made by internship participants provide a natural feedback loop for program assessment as it bridges the gap between the academic and the applied worlds of communication. A future study could explore the utility of the analysis of student internship feedback and its subsequent impact on program assessment and development of a public relations program at a university.

Summary

The respondents in the study acknowledged the impact of internship/practical training programs on professional and personal growth as well as on professional and personal skills development. Both Russian and American interns perceived that students need learning experience programs in order to gain practical work experience in the field of interest. Also, respondents in both countries rejected the statement that there are some problems in seeking and accepting an intern work assignment. The difference in respondents was found regarding the impact on professional growth. Russian students highly rated changes as a result of their practical training programs. American students preferred to give the highest score to an impact that related to applying knowledge gained in internships.

The study confirmed that internship/practical training programs most likely contribute to communication skills and skills working with people. But students in NNSAA indicated their higher perceptions regarding the development of interpersonal skills and critical thinking skills than students in ISU.

The impact on personal growth was associated with the personal maturity resulting from experiential learning. Russian interns changed positively their interest in agricultural business activities. In personal skills development, respondents from NNSAA recognized that through the practical training programs interns gain maximum respect for people different from themselves. The respondents at ISU indicated that skill in managing oneself has been positively influenced by internship programs.

In addition, internship/practical training program participants perceived that a company benefits from interns' participation, and the most benefited group involved in internships was a group of interns.

The findings of how experiential learning, including internships and practical training programs, have impacted the participants' personal lives give useful information on the overall effect that internalization of agricultural education has had on the participants, their communities and their families.

CHAPTER VI. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter will provide a summary of the study, make conclusions based on the findings of the study, and offer recommendations to the profession for further research in the U.S.A. as well as for curriculum improvement in Russia. The chapter will include sections on: (a) Purpose, (b) Objectives, (c) Methods, (d) Findings, (e) Conclusions, and (g) Recommendations. Finally, a discussion of internship/practical training activities to address the career development of students is presented.

Purpose

The purposes of this study were a) to determine major benefits of internship programs and make an analysis of their impact on students, universities and companies in U.S. colleges, b) to identify existing practical training programs in Russia and c) to propose the opportunity to apply a new model of internship programming based on both American and Russian experiences.

Objectives

Objectives of the study in general

This study sought to determine if internship programs help graduates to develop careers and occupy good positions. This core question of assumed impact has not been well analyzed by researchers, so there is inadequate data to confirm the impact of internships on graduates' careers. To make an analysis of impact, the data set that was taken into consideration included surveys of graduates from an agricultural college who had internships.

Estimating the wide impact of the presence of internship programs by analyzing two target groups is possible, and this was a major emphasis of the research.

In order to achieve the purpose of this study particular objectives were to:

1. Determine and describe the characteristics of internship program participants and their participation background.
2. Identify perceptions of internship program completers regarding the impact on their professional and personal growth.
3. Identify perceptions of internship program participants about the impact on a company.
4. Determine whether significant differences exist between the perceived impacts of American and Russian graduates of agricultural colleges.
5. Determine strengths and weaknesses of selected practical training activities in Russia and existing internship programs in the U.S.A.
6. Develop recommendations for further improvement of internship and practical training programs.

Methods

A descriptive mail survey was used to gather the participants' perceptions. The survey contained five parts that assessed statistically, using the SPSS® statistical package, the participants' views on the impact that internships and practical training program experiences have had on students and companies. Three parts utilized a Likert Scale type to assess the participants' perceptions about the impact on their personal and professional

growth, on personal and professional skills development as well as on employers. Seven demographic questions concluded the survey.

Findings

Descriptive statistics were utilized to summarize the characteristics of respondents. This information was presented concerning respondents according to age, gender, degree, length of internship/practical training program experience, current and future employment, semester enrolled, internship background, and reasons for participation.

A review of the findings of this study resulted in the following:

1. The majority of ISU students enrolling in internships were male (63.5%); females accounted for 36.5% of the population. In contrast to the U.S. population, the preponderance of students enrolling in practical training programs in Russia was female (63.1%); males accounted for 36.9% of the population.
2. In terms of education, ISU internship participants had a bachelor's degree (81.1%), master's (17.6%), or Ph.D. (1.4%). Most of the NNSAA interns had a bachelor's degree (96.9%) or a master's (3.1%), but none had a Ph.D.
3. The age distribution of American respondents ranged from 22 to 48 years old. The age distribution of Russian respondents ranged from 21 to 54 years old. Sixty-two (83.8%) respondents in ISU indicated an age of 26 years or less. Twenty-nine (44.6%) respondents in NNSAA indicated an age of 26 years or less.
4. Most of the ISU students (81.1%) were enrolled in internships during the summer session. In NNSAA almost half of the students (56.9%) were enrolled in practical

training programs during the Spring/Summer semester, and 29.2% had interned during Summer and Fall semesters.

5. The length of internship experiences for most students in ISU (64.8%) ranged from 7 to 16 weeks. For students in NNSAA it was a requirement to take practical training programs with a length of at least 14 weeks during their course work.
6. The preponderance of ISU students (91.9%) had an interest in working with agriculture before internship participation. The preponderance of NNSAA students (73.8%) had an interest in working with agriculture before practical training program participation.
7. Results of the study confirmed that working in crop/livestock production was the first professional position of nearly 40.5% of the ISU population. The same number of students in ISU (40.5%) indicated other agriculture-related businesses. In NNSAA working in crop/livestock production was the first professional position of nearly 36.9% of the population. Almost twenty-eight percent (27.7%) of the Russian interns had agribusiness management positions and 20% of them worked for Extension.
8. The majority of the ISU respondents (82.4%) indicated that the main reason for their participation in an internship program was their own decision to gain practical experience. The majority of the NNSAA respondents (50.8%) expressed the main reason for their participation in practical training programs was the advisor-recommended elective course; another reason for NNSAA respondents was a departmental course requirement (27.7%).
9. As for students' expectations, more than half of them in ISU (52.7%) and in NNSAA (58%) indicated that they expected from internship participation to obtain a link between classroom learning and workplace reality and a direction for better preparation for an

independent life. Less than 46% of the ISU respondents and less than 34% of the NNSAA respondents expected to receive academic credit from internship involvement.

10. The preponderance of ISU respondents (77%) indicated a positive influence of internships upon obtaining their current jobs, and nearly 53% of the respondents said “yes, my interning experience will help me get future job promotions.” Slightly more than 86% of the NNSAA respondents indicated a positive influence of practical training programs upon obtaining their current jobs, and nearly 37% of the respondents said “yes, there is the influence of practical training programs upon future job promotions.” But 63.1% of Russian respondents did not believe that practical training programs influence future job promotions positively.
11. Both American and Russian respondents perceived the impact of internships and practical training programs on professional growth of students at ISU and NNSAA. Scores ranged from 3.89 to 4.23 at ISU and from 3.68 to 4.4 at NNSAA. All the internship participants disagreed with the statement that some problems in seeking and accepting an intern work assignment occurred, with a mean of 1.84 in ISU and 1.35 in NNSAA.
12. Respondents believed that internship and practical training programs contribute to participants’ professional skills development. The mean scores ranged from 2.93 to 4.26 at ISU and from 2.86 to 4.71 at NNSAA, with a grand mean of 3.94 in Russia and 3.70 in the U.S. Interns indicated their strong belief (4.26 at ISU; 4.71 at NNSAA) that internships and practical training programs influence skills development in working with people. They also believed in impact on problem-solving skills development. Results

confirmed that impact on professional skills development is the second most valuable for students who participated in internships and practical training programs.

13. Respondents perceived that personal growth is the most impacted by internship experience in the U.S. as well as in Russia. The mean scores of the perceived impact of internship and practical training programs on personal growth of students ranged from 3.67 to 3.97 in ISU and from 3.72 to 4.09 in NNSAA. Results of the study confirmed that Russian respondents indicated higher impact (3.95) than American ones (3.85).
14. Respondents indicated positive impact of experiential learning programs on skills development in self-management (3.99 in ISU; 4.01 in NNSAA). The mean scores ranged from 3.26 to 3.94 in ISU and from 3.14 to 4.37 in NNSAA. Russian respondents indicated that practical training programs impacted greatly (4.37) on the skills development of respect for people different from oneself. For American respondents the initiative-taking skills are greatly (3.99) influenced by internship programs. The personal skills development is the third influenced by internship and practical training programs with the grand mean of 3.69 in the U.S. and 3.83 in Russia. The lowest-rated impact of internships and practical training programs in ISU was the impact on ethics (3.26). In Russia the skill of learning how to learn was the lowest ranked with a mean score of 3.14.
15. The means for the perceived impact of internship and practical training programs on a company ranged from 3.82 to 4.30 in ISU and from 3.22 to 4.09 in NNSAA. The statement “A company benefits from interns’ participation in internship/practical training programs” received the highest-rated agreement, with a mean of 4.30 in ISU and 4.09 in NNSAA. The respondents in ISU indicated their lowest agreement (3.82) with the statement that company employees experience personal impact from interns. In Russia

respondents were not sure (3.22) whether company employees generally react positively to interns.

16. Participants in internship and practical training programs indicated that the group that benefits the most was interns, with a mean of 4.69 in ISU and 4.32 in NNSAA. The lowest-rated group of beneficiaries (3.35 in ISU and 2.89 in NNSAA) was “college faculty”. The second-highest rated group of people involved in practical training programs for Russian graduates was “company colleagues” with a mean of 4.17, whereas for American graduates it was “other trainees” with a mean score of 3.91.
17. Respondents identified the needs for companies and students to take part in experiential learning programs. The mean scores for perceived needs of participation for students ranged from 3.26 to 4.39 in ISU and from 3.45 to 4.02 in NNSAA. Gaining practical work experience in the field of interest was the highest need for participation in internship and practical training programs for both ISU (4.39) and NNSAA (4.02) interns.
18. The mean scores for companies’ needs in internship participation ranged from 3.62 to 4.10 in ISU and from 3.39 to 3.69 in NNSAA. The highest-rated need (mean = 4.10) for participation in internship programs for American companies was providing means for enhancing the organization’s recruitment activities. In NNSAA the highest-rated need (3.69) for companies’ participation was the need to permit better utilization of full-time personnel by providing staff support. American and Russian interns indicated that the lowest-rated need for companies’ participation was providing a source of inexpensive qualified temporary employees (3.62 in ISU; 3.37 in NNSAA).

19. Results of the study confirmed the fact that former interns in the U.S. indicated that students (3.88) have lower needs for their participation in internships than companies (3.93). The grand means of Russian interns indicated that students (3.73) have higher needs for their participation in practical training programs than companies have (3.51).

The Independent Samples t-Test, which allows for the comparison of means, was employed to determine specific mean differences between two groups of respondents, Russian and American. The design of the study included testing the statistical null hypotheses at the 0.05 level of significance for the means. The major findings of these statistical analyses were as follows:

1. No significant difference was found between respondents from ISU and NNSAA in perceptions regarding the impact of internship/practical training programs on professional growth.
2. The null hypothesis that there is no difference between American and Russian internship participants on the impact of internships and practical training programs on professional skills development failed to reject. Students in Nizhni Novgorod indicated their higher agreement than in Iowa State regarding the impact on professional skills development, with a confidence interval beyond the 0.01 level. In particular that difference of means was determined concerning the impact on communication skills, interpersonal team skills, critical thinking skills, skills in working with people and skills in technical agriculture. ISU students rated the impact of experiential learning on computer skills development significantly higher with a mean score of 2.93 versus 2.86 for NNSAA. Significance between groups on impact

on decision-making skills and problem-solving skills was not found. Both groups indicated that impact with means ranging from 3.78 to 4.71.

3. A difference was found in impact of internship/practical training programs on personal growth between groups with significance at the 0.05 level of confidence and beyond the 0.01 level of confidence. Interns in NNSAA indicated a higher range of agreement (4.03) with the statement that students are matured as a result of internship practical training programs than interns in ISU (3.97), $p<0.05$. The analysis of variance for perceived impact on positive changes of interest in agricultural business activities after internship programs indicated a significant difference between groups at the level of confidence beyond 0.01.
4. No significant difference between groups was found in the perceived impact of internships on skills of showing respect for people. Respondents' agreement with the statement was "somewhat". An analysis of other variances indicated significant differences, such as on conscientiousness (3.48 in ISU; 3.99 in NNSAA, $p<0.01$); ethics (3.26 in ISU; 3.22 in NNSAA, $p<0.01$); learning how to learn (3.62 in ISU; 4.37 in NNSAA, $p<0.01$); managing oneself (3.99 in ISU; 3.14 in NNSAA, $p<0.05$); social skills (3.77 in ISU; 4.02 in NNSAA, $p<0.01$); and initiative taking (3.99 in ISU; 4.05 in NNSAA, $p<0.01$).
5. The analysis of variance for the impact of internships and practical training programs on companies indicated that there was no difference between groups ($p>0.05$). Respondents indicated their agreement (4.30 in ISU; 4.09 in NNSAA) that a company benefits from internship programs. Moreover, company employees experience personal impact from interns, shown by a mean score of 3.82 in ISU and 3.63 in

NNSAA. ISU respondents indicated (4.00) that company employees generally react positively to interns; in NNSAA respondents were “neutral” with a mean of 3.22.

Conclusions

Based on the findings of this study, the following conclusions were made:

1. Demographic characteristics of the respondents indicated that differences and similarities were observed in the way respondents perceived the impact of internship/practical training programs on a student and a company.
2. The preponderance of ISU and NNSAA students had an interest in working with agriculture before internship participation; working in crop/livestock production was beneficial to them in their first professional position. This conclusion is supported by Andersen (1998), who found that the content and procedures of experiential learning programs were useful and beneficial to respondents.
3. For the majority of the ISU students the main reason for their participation in an internship program was their own decision to gain practical experience. For the majority of the NNSAA respondents it was the advisor-recommended elective course. More than a half of interns in ISU and in NNSAA expected from internship participation to obtain a link between classroom learning and workplace reality and a direction for better preparation for an independent life.
4. The preponderance of ISU respondents indicated a positive influence of internships upon obtaining their current jobs, but more than half of the Russian respondents did not believe that practical training programs influence future job promotions positively.

5. Respondents indicated that they agreed that the internships and practical training programs impacted the professional and personal growth as well as professional and personal skills development of the participants. This conclusion is supported by Williams (2000), who found an impact on the respondents' professional life and indicated that internship completers were using or had used the gained skills in their regular extension work.
6. Respondents supported statements about the impact of internship/practical training programs on a company. Enabling company employees to participate in a learning experience and receive personal impact from interns were important to students who had internships. In Williams's (2000) study, respondents felt that their co-workers held mostly positive opinions about internship programs and that they would benefit further by participating in other internships.
7. Since no significant difference between two groups was found regarding impact of internship/practical training programs on professional growth of participants, it can be concluded that these activities are appropriate and beneficial to program completers.
8. Additionally, since some significant differences between two groups were found regarding the impact of internship/practical training programs on personal growth, it can be concluded that practical training programs are more beneficial for participants in Russia for their skills development in communication, interpersonal interactions, critical thinking and working with people.
9. Since significant differences between American and Russian respondents were found regarding impact of internship/practical training programs on personal growth and personal skills development, it can be concluded that experiential learning activities

are more beneficial for Russian students than for American ones in changing personally and in their personal aspirations as well as major skills development.

10. Since no significant difference between two groups were found regarding impact of internship/practical training programs on companies, it can be concluded that these activities are appropriate and beneficial to program participants.
11. Based on results of the study, it can be concluded that students in the U.S.A. have lower needs for their participation in internships than companies have. Russian students have higher needs for their participation in practical training programs than companies.

Recommendations for Further Improvement of Internship and Practical Training Programs.

The investigator of this research is very sympathetic with the recommendations proposed by respondents for the reform of the U.S.A. university. The initiative aims to create a new universal educational model for Russian and American schools in agricultural education by preparing students for a productive life following graduation from high school and providing all students with college and career opportunities that far exceed anything offered by any school system in the U.S.A. and Russia.

Based on the findings and conclusions of this study, the major recommendation for both Iowa State University and Nizhni Novgorod State Agricultural Academy is that the internship and practical training programs provide a unique educational experience to their participants combining skills of experiential learning and work opportunities that could be required of all departmental majors.

Recommendations for further research in the U.S.A.

Assessing the benefits of internship participation through self-report or observational data was the focus of early research on internship (Hagerty, 1968; Morse, 1967; Wilson & Lyons, 1961). More recent research has relied on experimental designs comparing internship to non-internship programs and generally supported the hypothesized benefits (Fletcher, 1989; Marks & Wohlford, 1971; Weinstein, 1980). Wilson (1974) found that interned students appeared to make more informed career decisions, while Weinstein (1980) reported that non-interned students demonstrated greater uncertainty about career choices. These researchers also showed that interned students had greater autonomy and independence, social maturity, and interpersonal skills when compared with their non-interned peers (Trach & Harney, 1998).

Based on the findings and conclusions of the study, the literature review and the researcher's experience, the following recommendations are made by the researcher:

1. Further studies could be conducted gathering family and community perceptions on the international programming offered by the respondents, and the effectiveness of these programs. Comparative studies could also be conducted observing the differences in the programs offered by Extension staff who have participated in international training programs and those who have not.
2. Business schools should accordingly ensure that the strategic focus of their internship programs reflects the reality of today's employment market and what students expect from such programs. Researchers should strongly consider allocating additional resources to conduct their research on improving program flexibility, and further encouraging student participation.

3. Extension Education from land grant universities can provide international opportunities for research, which will benefit people throughout the United States and Russia. International offerings through Extension may include staff training programs, youth exchange programs (4-H and IFYE), international work assignments, and job exchanges. International staff training programs may also offer employees of Extension opportunities to learn about different cultures and briefly experience life working outside of the United States. Youth exchanges can often accommodate young teens, giving them an experience lasting a few weeks to a year abroad. International work assignments and job exchanges tend to have a lasting effect on the individuals who participate.
4. As internationalization becomes common in everyday lives, the opportunities to receive international training and experiences are increasing in demand. Through its research activities, Iowa State University College of Agriculture is encouraged to develop special programs to meet these needs in the future.

Recommendations for curriculum improvement in NNSAA

Oliver, Que, and Farinacci (1996) found that there are still some deficiencies in accounting graduates' background qualifications. The areas include verifying computations by hand and job and internship experiences, especially ones involving computers (pp. 82-86). Based on the findings of this research, the literature review and the investigator's experience, it was recommended in general that revisions in marketing and management curricula in Russia may need to focus on continuing internship improvement in computer proficiency and in the area of hand verification of computations.

The internship allows students to enhance their education through experiences in local business and industry (DiPasquale, 1997).

In terms of recommendations for agricultural educational programs improvement in Russia, the researcher would like to propose the following actions: (1) review and clarify financing arrangements for the first level of Agricultural Education; (2) establish local training and employment agencies with representation of employers, vocational schools and students; (3) design and implement pilot programs in Agricultural Education to modernize curricula and phase in more general education disciplines.

Implications

This section presents information relevant to college administrators on workplace changes and implications of the changes in practical training and internship programming.

Preparing students for their future roles in the world of work has become increasingly important for school counselors and educators generally. As a result of changes taking place in the workplace, the challenge is to prepare students to enter and be competitive in a world-class workforce (Feller, 1996). In addition, given the level of competitiveness and the rate of change in the workplace, it is essential that students become as prepared as possible to enhance their chances of success. Further, hopefully, students will be prepared to be contributors to society and have the opportunity to live a satisfying, productive life. It follows that for students to be prepared to meet the challenges of the changing workplace, career development must be a priority.

Parsons (1909), the father of vocational guidance, stated,

The building of a career is quite as difficult a problem as the building of a house, yet few ever sit down with pencil and paper, with expert information and

counsel, to plan a working career and deal with the life problem scientifically, as they would deal with the problem of building a house, taking the advice of an architect to help them (p. 4).

Results of this study support and extend the research literature on benefits and use of internship experiences with students in different countries. Our results also have implications for current practice and policy. We discuss these issues in this chapter, as well as offer directions for future investigation.

Findings indicate that American students who participate in an experiential learning process benefit from internship experiences in ways similar to those of their Russian peers. The positive effects of an internship/practical training experience on career and lifestyle planning (Weinstein, 1980; Wilson, 1974) and clarifying a sense of purpose (Laycock et al., 1992) established by previous work were supported in this study for students in different countries. Students from American institutions benefit from participation in the same manner as Russian peers. In addition, internship is a viable service model for this study. The results support the inclusion of students into programming and indicate that identification of career goals and outcomes through experiential education benefits all students.

There are four issues raised by our research and findings. First, as established by the work of Winston and Miller (1987), students with higher scores on the establishing and clarifying purpose task have more well-defined educational goals and plans, are self-directed learners, have a better understanding of the world of work, have a strong commitment to realize their career goals, and have established a personal direction in their lives. Gross (1981) maintained that independent side development must be fostered and is necessary for a more complete functioning individual. If, as our results suggest, internship experiences contribute to this personal skills development, they may be particularly critical to the career

development of individuals who often lack these skills and the opportunity to develop them. Development of such skills seems essential for persons to realize a more normal life and opportunities. In fact, these outcomes might be the goal of education for ISU students in the future.

Second, students in their comments indicated that they have more awareness of the world of work; greater understanding of their own abilities and limitations; a better knowledge of emotional, educational, and skill requirements for various occupations than those who did not have internship experience; and have taken steps to prepare themselves for beginning a job search and eventual employment. Internship work experience may be able to diagnose these positive developments and even reverse the process.

Third, students with internship experience may demonstrate more personal direction and orientation in their lives including personal, ethical, and religious values; future family plans; and vocational and educational objectives. These skills are associated with a logical progression toward, and achievement of, positive post-school outcomes. Given the poor employment and independent living outcomes cited for persons, it would seem possible that internship experience could facilitate development in another area of critical need. Webber (1996) reported that some youth are behind their peers in employment and independent living outcomes. Further research is needed to explore how students with internship experience fare in terms of employment and independent living outcomes. It would also seem logical to examine the extent to which internship experience could be extended to persons who currently probably do not gain access to community colleges and have the poorest outcomes of all.

Finally, to reinforce all that has been stated previously, the single significant finding in the internship impact provides some indication of the extent to which an internship experience addresses the needs of students. Students who participated in an internship/practical training experience were able to conduct career planning. These students also scored commensurate with their Russian peers. Provision of those opportunities has the potential to bring ISU students up to the level of their peers in NNSAA.

It is recognized that this study is only an initial investigation of the benefits of internship and practical training programs. Research should develop around the issues of access in expectations and college curriculum, and compare the quality of university programs for students in different countries. With additional empirical evidence, sound policy can be formulated addressing access, equity, implementation, and evaluation of internship programs, as well as role of experiential education in the internship.

Model

Experiential learning through activities such as internship and practical training is becoming more and more prevalent with college and university courses of study. Practical learning experience seems to be a very important link between the academic world and the work world. According to Gross (1981, students, enthusiasm for an internship type of experience abounds, and companies, too, are seeing the value of hosting interns.

In helping students, universities and companies, the proposed model can be of value to universities wishing to set up effective internship programs or to improve existing programs.

The investigator considers the model for internship/practical training program improvement to be based on the idea of linking theory and practice. Figure 6 represents the proposed model for future consideration in enhancing practical curricula in Iowa State University and Nizhni Novgorod State Agricultural Academy.

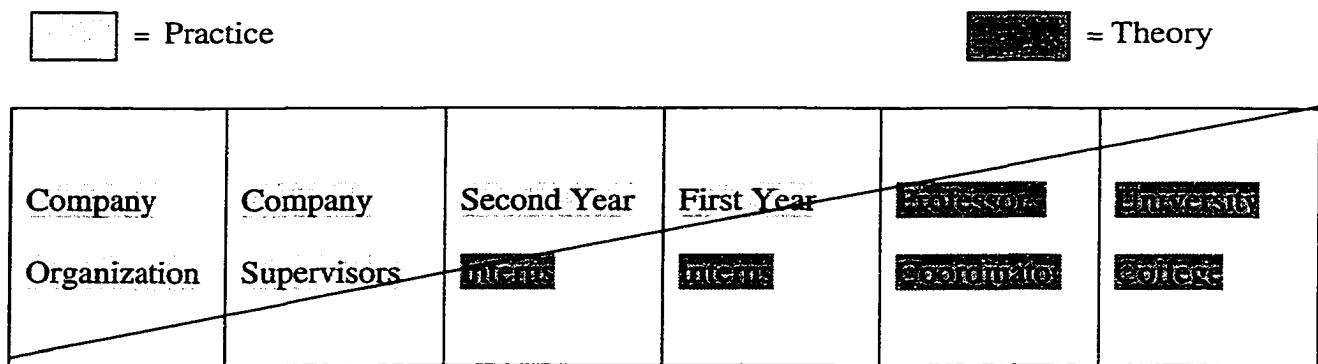


Figure 6. Theory/Practice Continued Learning Process

The model reflects the investigator's belief regarding the improvement of existing internship programs that might be implemented not only in the U.S.A. but in other countries as well. For easier implementation of that model, it is described below.

An internship is a practical learning experience outside the educational institution in an organization that deals with the line of work students hope to enter. Its purpose is to fill the gap between the academic and professional environments. Through using this model is provided the opportunity for interns, academic instructors and company supervisors to see the impact of the work world for those who are involved in this experience. This model is a tool that helps see the learning process in a fairly non-threatening manner so that they can stand back and even philosophize about the details and generalities they perceive.

The study mostly emphasized student benefits. Therefore, for them the model is a good visioning tool to understand the process of moving from the status of interns to full-time employment within the organization where they interned. Gross (1981) explained the view that an intern is in a “Janus-like” position because, although he/she is a part of an organization, he/she is not a real employee under real pressure.

More specifically, the internship model shows a relationship students have with a company or organization in which they are treated as quasi employees. Basically, internship should be a place where students are given minor tasks to accomplish and are allowed to observe various operations of the organization. Also, students should be encouraged to contribute ideas and accomplishments that will aid the company. This “job” might be either paid or unpaid depending on the policies of the educational institution and the company with which students are interning. Generally, students have to work with one specific person who gives them guidance and responsibilities. For this practical experience students receive a certain number of credit hours toward their graduation.

A new idea for a proposed internship model suggests the combination of theoretical and practical activities divided into several blocks including periods of time in a classroom and at work. In the classroom students have access to gather theory under the facilitation of an instructor. At work they have a company supervisor who oversees interns and who, in association with the academic instructor, grades them and counsels them on their work.

Additionally, there are internship/practical training experiences related to professional work. These experiential learning opportunities cover a variety of experiences made in conducting business, gaining new skills, gathering information about different companies or a combination of these activities. Internship/practical training programs done professionally

can have a meaningful impact on individuals, either adding interest in different cultures or closing off all interest in a repeat internship. Practical training programs in Russian universities require more commitment by both the college instructor and the working individual.

It seems that a very important trend was found in this study, which is associated with short-term outcomes of experiential learning. Creating a network, a bridge between potential employees and companies, is the first stage in finding good jobs that match employers' requirements for qualification followed by high starting salary and finally reflect satisfaction. But job satisfaction is a subject of further research, which will be suggested for investigation.

Laycock et al. (1992) found that students with internship experience possessed networks for finding future jobs and earned higher starting salaries than those students without internship experience. They also reported that internship employees experienced realistic employment expectations and good job matches, resulting in increased job survival and work effectiveness, work motivation, and job satisfaction (pp. 23-25).

Indeed there was an objective necessity to deliver the research available for the investigator. New ideas in this study have been synthesized in regard to how to improve the internship curriculum, so that, by generating them into a new educational paradigm. Results of this research may be used to help people in development of new standards in pedagogical settings. Also, doing this research can help the investigator create new theory for his philosophical reflection.

APPENDIX A. HUMAN SUBJECTS APPROVAL FORM

Last name of Principal Investigator Novotorov

Checklist for Attachments and Time Schedule

The following are attached (please check):

12. Letter or written statement to subjects indicating clearly:
 - a) the purpose of the research
 - b) the use of any identifier codes (names, #'s), how they will be used, and when they will be removed (see item 17)
 - c) an estimate of time needed for participation in the research
 - d) if applicable, the location of the research activity
 - e) how you will ensure confidentiality
 - f) in a longitudinal study, when and how you will contact subjects later
 - g) that participation is voluntary; nonparticipation will not affect evaluations of the subject
13. Signed consent form (if applicable)
14. Letter of approval for research from cooperating organizations or institutions (if applicable)
15. Data-gathering instruments

16. Anticipated dates for contact with subjects:

First contact

Last contact

09/01/00

09/30/00

Month/Day/Year

Month/Day/Year

17. If applicable: anticipated date that identifiers will be removed from completed survey instruments and/or audio or visual tapes will be erased:

9/30/00

Month/Day/Year

18. Signature of Departmental Executive Officer

Date

Department or Administrative Unit

08/18/00

Agricultural Education & Studies

19. Decision of the University Human Subjects Review Committee:

Project approved

Project not approved

No action required

Name of Human Subjects in Research Committee Chair

Patricia M. Keith

Date

8-25-00

Signature of Committee Chair

APPENDIX B. COVER LETTER AND QUESTIONNAIRE

Iowa State University
OF SCIENCE AND TECHNOLOGY

Department of Agricultural
 Education & Studies
 201, Curtiss Hall
 Ames, IA 50010
 Phone: 515 294-4349
 Fax: 515 294-0530
 11/30/00

Dear Former ISU student:

Thank you very much for the postcard we received indicating your participation in an internship program. This particular study is focused on internship experiences. ***We are very interested in your ideas because you have been a participant in an internship program.*** We hope that you will help us by providing your perspective to this brief set of questions.

Practical training is always an important element of teaching students. Gaining experience and skills for career development is equally important. Educators need to place additional emphasis on the improvement of educational programs at the undergraduate level based upon practical work.

Many people believe that internships are valuable tools for preparing students for their careers. However very little information is available concerning the benefits to students, colleges and companies.

We are collecting information from graduates of ISU's College of Agriculture. Your responses are extremely important and will be held in strict confidence. It should take less than 15 minutes for you to complete this questionnaire. Your questionnaire has a code number on it so that we will be able to follow up if necessary.

The purpose of this study is to clarify perceptions of former students about the impact of internships. The information gained in this project will be very helpful in analyzing and planning for future internship programs. You should also be aware that this data will become part of a Ph.D. dissertation.

We are looking forward to hearing from you very soon and appreciate your cooperation in this study. **Please return the questionnaire in the enclosed envelope by December 15th.**

Respectfully:

Andrew Novotorov
 Graduate Student

Lynn Jones
 Associate professor

Part 1.**Participation in Internship and Background**

1. Why did you decide to become involved in the internship or practical training program?
(Please check all that apply)

- Department course requirement
- Advisor recommended elective course
- Own decision to gain practical experience
- Others (*Please explain*):

2. What did you expect to gain from the internship?
(Please check all that apply)

- Academic credit
- Link classroom learning to work place reality
- Direction for better preparation for independent life
- Others (*Please explain*):

3. Were you interested in working in agriculture or an agriculture related business before the internship?

(Please Circle) Yes No

4. What type of agricultural work, if any, have you experienced since your internship/practical training?

(Please mark all answers that apply)

- Crop/livestock production
- Working in agribusiness management
- Extension work
- Consulting to community groups
- Other agriculture related businesses (*Please explain*)

5. When did you perform your internships?

(Please check all that apply)

- Spring
- Summer
- Fall
- Spring/Summer
- Summer/Fall

Part 2. 1.**Professional Growth**

Please indicate your level of agreement with each of the following statements about internship impact. Please check the appropriate response.

	<i>Statements</i>	<i>1 Strongly Disagree</i>	<i>2 Disagree</i>	<i>3 Neutral</i>	<i>4 Agree</i>	<i>5 Strongly Agree</i>
	I changed professionally as a result of my internship/practical training involvement					
	Internships changed my career aspirations and confirmed my career goals					
	I have applied things gained from internships or practical training in my regular work					
	I had some problems in seeking and accepting an intern work assignment					
	I needed internships in order to (<i>Please provide response for each letter</i>): <ul style="list-style-type: none"> a) Achieve my career objectives b) Identify the skills needed to enter a chosen field c) Gain practical work experience in my field of interest d) Improve (promote) from status of interns to full-time employment within the organization where I interned 					

Part 2.2. **Professional Skills**

To what extent do you believe internship programs contributed to your development of the following professional skills? Please circle the appropriate number

	<i>Skills</i>	<i>1 Not at all</i>	<i>2 Very Little</i>	<i>3 Some what</i>	<i>4 Much</i>	<i>5 Very Much</i>
1	Communication	1	2	3	4	5
2	Interpersonal team skills	1	2	3	4	5
3	Critical thinking	1	2	3	4	5
4	Decision making	1	2	3	4	5
5	Problem solving	1	2	3	4	5
6	Skills in working with people	1	2	3	4	5
7	Computer skills	1	2	3	4	5
8	Skills in technical agriculture	1	2	3	4	5

Part 3.1.**Professional Growth**

Statements in this section pertain to personal development skills related to internship experiences. Please indicate your level of agreement by checking the appropriate boxes.

	<i>Statements</i>	<i>1 Strongly Disagree</i>	<i>2 Disagree</i>	<i>3 Neutral</i>	<i>4 Agree</i>	<i>5 Strongly Agree</i>
1	I generally matured as a result of practical training and internship programs					
2	My personal aspirations changed in some ways as a result of internships					
3	After internship programs my interest in agricultural business activities generally changed positively					

Part 3.2.**Personal Skills**

To what extent do you believe the following characteristics are positively influenced by internship programs? Please circle the appropriate number

	<i>Skills</i>	<i>1 Not at all</i>	<i>2 Very Little</i>	<i>3 Some what</i>	<i>4 Much</i>	<i>5 Very Much</i>
1	Conscientiousness	1	2	3	4	5
2	Ethics	1	2	3	4	5
3	Respect for people different from oneself	1	2	3	4	5
4	Learning how to learn	1	2	3	4	5
5	Skills in managing yourself (time management, money management, for example)	1	2	3	4	5
6	Social skills	1	2	3	4	5
7	Initiative taking	1	2	3	4	5

Part 4.**Impact on Company**

To what extent do the following statements reflect your own perception about the impact of internship programs on a company? Please check as appropriate.

	<i>Statements</i>	<i>1 Strongly Disagree</i>	<i>2 Disagree</i>	<i>3 Neutral</i>	<i>4 Agree</i>	<i>5 Strongly Agree</i>
1	A company benefits from interns' participation in internship programs					
2	Company employees generally react positively to interns					
3	Company employees experience personal impact from interns					
4	The following groups benefit from the internship programs (Please provide response for each letter): a) Intern b) Other trainees c) College faculty d) Company colleagues e) Customers of a company f) Others you would like to mention _____					
5	Employers need interns in order to (Please provide response for each letter): a) Provide means for enhancing organization's recruitment activities b) Permit better utilization of full-time personnel by providing staff support					

	<i>Statements</i>	<i>1 Strongly Disagree</i>	<i>2 Disagree</i>	<i>3 Neutral</i>	<i>4 Agree</i>	<i>5 Strongly Agree</i>
	<p>c) Reduce rate of renewal by attracting career-oriented candidates who already have experience with a company</p> <p>d) Source of inexpensive qualified temporary employees</p>					

Part 5.**About Yourself:**

Please respond to the related questions in this section

1. What degree do you have?
 - a) Bachelor ____
 - b) Masters ____
 - c) Ph.D. ____
2. What is your current job title? _____
3. Length of internship experience
 - a) How many weeks of duration was your internship? _____
4. Current and future employment
 - a) Do you believe your interning experience helped you get your current job?
(Please Circle) Yes No
 - b) Do you believe your interning experience will help you get future job promotions?
(Please Circle) Yes No
5. While being with a company as an intern
 - a) Do you believe company awards are important incentives to interns?
(Please Circle) Yes No
 - b) Did you receive any company awards as an intern?
(Please Circle) Yes No
 - c) Have you received any company awards since being employed after graduation?
(Please Circle) Yes No
6. What is your age? _____(Years)
7. What is your gender?
 - a) Male ____
 - b) Female ____

Additional comments (you can use next page):

APPENDIX C. POSTCARD, REMINDER AND FOLLOW-UP LETTER

Dear ISU Agriculture College Graduate:

We are conducting research concerning the impact of internship experiences on our recent graduates. This post card is to verify whether or not you did complete an internship during your time as a student in higher education. We simply ask that you check the appropriate box below and return this postcard in tomorrow's mail, if possible.

- Yes, I did complete an internship experience
- No, I did not complete an internship experience

Iowa State University of Science and Technology

Date: January 5, 2001

To: Selected Internship Program Participant

From: Andrew Novotorov

Dear Internship Participant:

A few days ago I sent you a questionnaire concerning your perceptions of internship impact on students and companies. Unfortunately, I have not yet received your reply.

I understand this is one of the busiest times of the year. However, I still need your participation. Please help me by completing and returning the questionnaire in the envelope provided earlier.

If you have already sent your completed questionnaire, please accept my sincere appreciation. If you choose not to take part in this study, please return the blank questionnaire in the envelope provided as soon as possible.

If you have any questions, or need another questionnaire, please contact me at (515) 294-4349. I appreciate your participation in this important study.

Thank you for your cooperation and hope to hear from you soon.

Respectfully,

Andrew Novotorov

January 9, 2001

<<First>> <<Last>>
<<Address>>
<<City>>, <<State>> <<Zip>>

Dear <<First>>:

A couple of weeks ago you were mailed a questionnaire dealing the impact of an internship program you participated on your personal and professional growth. To this date, we have not received your completed questionnaire.

As you realized, the internship experience is a unique program in providing an experiential opportunity for students to build their career. Your responses to this questionnaire are very vital in maintaining and improving this course. Your responses are held in strict confidence and are only used to track who has or has not responded.

The enclosed is another questionnaire in the event that the original was lost in the mail or otherwise misplaced. Please take a few moments and complete this questionnaire and return it in the enclosed, postage-paid envelope. If you have already completed and returned it, please accept our sincere gratitude. If you have any questions, please do not hesitate to contact us at (515) 294-4349 or e-mail us at avnov@iastate.edu.

Thank you for your cooperation and have a happy holiday season.

Sincerely,

Andrew V. Novotorov
Research Assistant

B. Lynn Jones
Associate Profess

APPENDIX D. DISTRIBUTION OF RESPONDENTS

Table 1. Frequency and percentage distribution for selected demographic characteristics of internship participants in the College of Agriculture, ISU

Item	Frequency	Percent
Age (years)	62	83.8
26 or less	6	8.1
27-30	2	2.7
31-40	4	5.4
41 or older		
Gender	47	63.5
Male	27	36.5
Female		
Semester enrolled		
Spring	10	13.5
Summer	60	81.1
Fall	10	13.5
Spring/Summer	7	9.5
Summer/Fall	6	8.1
Length of internship experience (weeks)		
6 or less	5	6.8
7-16	48	64.8
17-25	10	13.7
26-35	4	5.5
37-43	2	2.7
44 or more	5	6.8
Degree	60	81.1
Bachelor	13	17.6
Masters	1	1.4
Ph.D.		
Interest of working for agriculture before internship participation	68	91.9
Yes	6	8.1
No		

Internship committee assignment	30	40.5
Crop/livestock production	22	29.7
Working in agribusiness management	7	9.5
Extension work	7	9.5
Consulting to community groups	30	40.5
Other agriculture related businesses		

Table 2. . Frequency and percentage distribution for selected career development characteristics of internship participants in the College of Agriculture, ISU

Item	Frequency	Percent
Reasons of participation		
Department course requirement	15	20.3
Advisor recommended elective course	17	23.0
Own decision to gain practical experience	61	82.4
Others	12	16.2
Expectations from internships		
Academic credit	34	45.9
Link classroom learning to work place reality	39	52.7
Direction for better preparation for independent life	39	52.7
Others	15	20.3
Current and future employment		
Influence of internships upon obtaining current job		
Yes	57	77.0
No	16	21.6
N/A	1	1.4
Influence of internships upon future job promotions		
Yes	39	52.7
No	34	45.9
N/A	1	1.4
Company awards		
Important incentives to interns		
Yes	40	54.1
No	31	41.9
N/A	3	4.2
Received awards while being in an internship	19	25.7
Received awards since being employed	28	37.8

Table 3. Frequency and percentage distribution for perceived impact of internship programs on professional growth of participants in the College of Agriculture, ISU

Impact	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Students changed professionally as a result of their internship involvement	1	1.4	4	5.4	12	16.2	42	56.8	15	20.3
Internships changed students' career aspirations and confirmed their career goals	0	0.0	4	5.4	14	18.9	38	51.4	18	24.3
Students applied things gained from internships in their regular work	1	1.4	1	1.4	8	10.8	34	45.9	30	40.5
Some problems in seeking and accepting an intern work assignment occurred	32	43.2	29	39.2	8	10.8	3	4.1	2	2.7

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 4. Frequency and percentage distribution for perceived impact of internship programs on professional skills development of participants in the College of Agriculture, ISU

Skills developed	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Communication	1	1.4	3	4.1	19	25.7	31	41.9	20	27.0
Interpersonal team skills	1	1.4	4	5.4	18	24.3	36	48.6	15	20.3
Critical thinking	0	0.0	7	9.5	25	33.8	25	33.8	17	23.0
Decision making	0	0.0	5	6.8	21	28.4	33	44.6	15	20.3
Problem solving	0	0.0	9	12.2	12	16.2	34	45.9	19	25.7
Skills in working with people	0	0.0	0	0.0	13	17.6	29	39.2	32	43.2

Computer skills	14	18.9	16	21.6	19	25.7	11	14.9	14	18.9
Skills in technical agriculture	8	10.8	11	14.9	14	18.9	27	36.5	14	18.9

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 5. Frequency and percentage distribution for perceived impact of internship programs on personal growth of participants in the College of Agriculture, ISU

Impact	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Students generally matured as a result of internship programs	0	0.0	0	0.0	16	21.6	44	59.5	14	18.9
Students' personal aspirations changed in some ways as a result of internships	0	0.0	4	5.4	13	17.6	42	56.8	15	20.3
After internship programs students' interest in agricultural business activities generally changed positively	1	1.4	0	0.0	28	37.8	38	51.4	7	9.5

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 6. Frequency and percentage distribution for perceived impact of internship programs on personal skills development of participants in the College of Agriculture, ISU

Skills developed	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Conscientiousness	2	2.7	3	4.1	33	44.6	26	35.1	10	13.5
Ethics	3	4.1	11	14.9	30	40.5	24	32.4	6	8.1
Respect to people different from oneself	1	1.4	5	6.8	25	33.8	27	36.5	16	21.6

Learning how to learn	3	4.1	6	8.1	24	32.4	24	32.4	17	23.0
Skills in managing yourself	1	1.4	4	5.4	14	18.9	31	41.9	24	32.4
Social skills	0	0.0	7	9.5	18	24.3	34	45.9	15	20.3
Initiative taking	0	0.0	2	2.7	21	28.4	27	36.5	24	32.4

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 7. Frequency and percentage distribution of ISU interns regarding the impact of internship programs on a company in the College of Agriculture, ISU

Impact	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
A company benefits from interns' participation	0	0.0	0	0.0	6	8.1	40	54.1	28	37.8
Company employees generally react positively on interns	0	0.0	1	1.4	12	16.2	47	63.5	14	18.9
Company employees experience personal impact from interns	0	0.0	1	1.4	20	27.0	44	59.5	9	12.2

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 8. Frequency and percentage distribution of ISU graduates regarding the needs of students in internship program participation

Needs	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Students need internships in order to:										
a) Achieve career objectives	0	0.0	5	6.8	13	17.6	38	51.4	18	24.3
b) Identify the skills needed to enter a chosen field	0	0.0	3	4.1	13	17.6	44	59.5	14	18.9

c) Gain practical work experience in the field of interest	0	0.0	2	2.7	4	5.4	31	41.9	37	50.0
d) Improve from status of interns to full-time employment within the organization where interned	3	4.1	16	21.6	26	35.1	17	23.0	12	16.2

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 9. Frequency and percentage distribution of ISU graduates regarding the needs of companies in internship program participation

Needs	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Companies need interns in order to:										
a) Provide means for enhancing organization's recruitment activities	0	0.0	1	1.4	13	17.6	38	51.4	22	29.7
b) Permit better utilization of full-time personnel by providing staff support	1	1.4	22	2.7	16	21.6	36	48.6	19	25.7
c) Reduce rate of renewal by attracting career-oriented candidates who already have experience with a company	0	0.0	1	1.4	16	21.6	35	47.3	22	29.7
d) Provide a source of inexpensive qualified temporary employees	7	9.5	4	5.4	18	24.3	26	35.1	19	25.7

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 10. Frequency and percentage distribution of ISU graduates regarding the groups of people who benefit from internship programs

Groups	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Interns	0	0.0	0	0.0	2	2.7	19	25.7	53	71.6
Other trainees	0	0.0	2	2.7	20	27.0	35	47.3	17	23.0
College faculty	1	1.4	8	10.8	34	45.9	26	35.1	5	6.8
Company colleagues	1	1.4	2	2.7	20	27.0	43	58.1	8	10.8
Customers of a company	2	2.7	6	8.1	25	33.8	24	32.4	17	23.0
Others	1	1.4	0	0.0	1	1.4	1	1.4	1	1.4

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 11. Frequency and percentage distribution for selected demographic characteristics of practical training program participants in the College of Agriculture, NNSAA, Russia

Item	Frequency	Percent
Age (years)		
26 or less	29	44.6
27-30	9	13.9
31-40	13	12.1
41 or older	14	21.4
Gender		
Male	24	36.9
Female	41	63.1
Semester enrolled		
Spring	0	0.0
Summer	0	0.0
Fall	9	13.8

Spring/Summer	37	56.9
Summer/Fall	19	29.2
Degree		
Bachelor	63	96.9
Masters	2	3.1
Ph.D.	0	0
Interest of working for agriculture before internship participation		
Yes	48	73.8
No	16	24.6
N/A	1	1.5
Internship committee assignment		
Crop/livestock production	24	36.9
Working in agribusiness management	18	27.7
Extension work	13	20.0
Consulting to community groups	10	15.4
Other agriculture related businesses	7	10.8

Table 12. Frequency and percentage distribution for selected career development characteristics of practical training program (PTP) participants in the College of Agriculture, NNSAA, Russia

Item	Frequency	Percent
Reasons of participation in PTP		
Department course requirement	18	27.7
Advisor recommended elective course	36	55.4
Own decision to gain practical experience	10	15.4
Others	6	9.2
Expectations from PTP		
Academic credit	22	33.8
Link classroom learning to work place reality	33	50.8
Direction for better preparation for independent life	13	20.0
Others	5	7.7
Current and future employment		
Influence of PTP upon obtaining current job		

Yes	56	86.2
No	9	13.8
Influence of PTP upon future job promotions		
Yes	24	36.9
No	41	63.1

Table 13. Frequency and percentage distribution for perceived impact of practical training program (PTP) on professional growth of participants in the College of Agriculture, NNSAA

Impact	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Students changed professionally as a result of their PTP involvement	0	0.0	3	4.6	6	9.2	18	27.7	38	58.5
Internships changed students' career aspirations and confirmed their career goals	0	0.0	0	0.0	27	41.5	32	49.2	6	9.2
Students applied things gained from PTP in their regular work	0	0.0	0	0.0	19	29.2	33	50.8	13	20.0
Some problems in seeking and accepting an intern work assignment occurred	29	44.6	25	32.5	3	4.6	8	12.3	0	0.0

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 14. Frequency and percentage distribution for perceived impact of practical training program (PTP) on professional skills development of participants in the College of Agriculture, NNSAA

Skills developed	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Communication	0	0.0	1	1.5	2	3.1	58	89.2	4	6.2
Interpersonal team skills	0	0.0	2	3.1	4	6.2	51	78.5	8	12.3

Critical thinking	0	0.0	0	0.0	19	29.2	40	61.5	6	9.2
Decision making	0	0.0	2	3.1	4	6.2	29	44.6	30	46.2
Problem solving	0	0.0.	4	6.2	11	16.9	35	53.8	15	23.1
Skills in working with people	0	0.0	1	1.5	3	4.6	10	15.4	51	78.5
Computer skills	1	1.3	17	26.2	39	60.0	6	9.2	2	3.1
Skills in technical agriculture	1	1.5	2	3.1	4	6.2	54	83.1	4	6.2

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 15. Frequency and percentage distribution for perceived impact of practical training program (PTP) on personal growth of participants in the College of Agriculture, NNSAA

Impact	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Students generally matured as a result of PTP	0	0.0	0	0.0	6	9.2	51	78.5	8	12.3
Students' personal aspirations changed in some ways as a result of PTP	0	0.0	0	0.0	21	27.3	41	63.1	3	4.6
After PTP students' interest in agricultural business activities generally changed positively	1	1.5	1	1.5	1	1.5	50	76.9	12	18.5

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 16. Frequency and percentage distribution for perceived impact of practical training program (PTP) on personal skills development of participants in the College of Agriculture, NNSAA

Conscientiousness	0	0.0	0	0.0	7	10.8	52	80.0	6	9.2
Ethics	1	1.5	2	3.1	44	67.7	18	27.7	0	0.0
Respect to people different from oneself	0	0.0	1	1.5	4	6.2	30	46.2	30	46.2
Learning how to learn	0	0.0	4	6.2	47	72.3	14	21.5	0	0.0
Skills in managing yourself	1	1.5	3	4.6	47	72.3	14	21.5	0	0.0
Social skills	0	0.0	0	0.0	5	7.7	54	83.1	6	9.2
Initiative taking	2	3.1	0	0.0	2	3.1	50	76.9	11	16.9

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 17. Frequency and percentage distribution of NNSAA interns regarding the impact of practical training program (PTP) on a company in the College of Agriculture, NNSAA

Impact	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
A company benefits from interns' participation	0	0.0	0	0.0	2	3.1	55	84.6	8	12.3
Company employees generally react positively on interns	2	3.1	3	4.6	40	61.5	19	29.2	1	1.5
Company employees experience personal impact from interns	1	1.5	5	7.7	15	23.1	40	61.5	4	6.2

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 18. Frequency and percentage distribution of NNSAA graduates regarding the needs of students in practical training program (PTP) participation

Needs	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Students need PTP in order to:										
a) Achieve career objectives	1	1.5	9	13.8	16	24.6	23	35.4	16	24.6
b) Identify the skills needed to enter a chosen field	0	0.0	3	4.6	16	24.6	39	60.0	7	10.8
c) Gain practical work experience in the field of interest	0	0.0	1	1.5	12	18.5	37	56.9	15	23.1
d) Improve from status of interns to full-time employment within the organization where interned	2	3.1	10	15.4	22	33.8	19	29.2	12	18.5

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 19. Frequency and percentage distribution of NNSAA graduates regarding the needs of companies in practical training program (PTP) participation

Needs	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Companies need inters in order to:										
a) Provide means for enhancing organization's recruitment activities	2	3.1	7	10.8	26	40.0	24	36.9	6	9.2
b) Permit better utilization of full-time personnel by providing staff support	1	1.5	4	6.2	22	33.8	25	38.5	13	20.0

c) Reduce rate of renewal by attracting career-oriented candidates who already have experience with a company	1	1.5	5	7.7	23	35.4	27	41.5	9	13.8
d) Provide a source of inexpensive qualified temporary employees	2	3.1	12	18.5	20	30.8	22	33.8	9	13.8

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 20. Frequency and percentage distribution of NNSAA graduates regarding the groups of people who benefit from practical training program (PTP)

Groups	1		2		3		4		5	
	F	%	F	%	F	%	F	%	F	%
Interns:	0	0.0	0	0.0	3	4.6	38	58.5	24	36.9
Other trainees	3	4.6	8	12.3	46	70.8	8	12.3	0	0.0
College faculty	0	0.0	15	23.1	42	64.6	8	12.3	0	0.0
Company colleagues	0	0.0	0	0.0	1	1.5	52	80.0	12	18.5
Customers of a company	0	0.0	0	0.0	36	55.4	28	43.1	1	1.5
Others	0	0.0	0	0.0	0	0.0	4	6.2	1	1.5

F=frequency, 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree

Table 21. Means and standard deviations of ISU and NNSAA graduates regarding the groups of people who benefit from internship programs in the Colleges of Agriculture

Impact	Means		S.D.	
	ISU	NNSAA	ISU	NNSAA
Interns	4.69	4.32	0.52	0.56
Other trainees	3.91	2.91	0.78	0.66
College faculty	3.35	2.89	0.82	0.59
Company colleagues	3.74	4.17	0.74	0.42
Customers of a company	3.65	3.46	1.01	0.53
Others	0.11	0.32	0.59	1.13

1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly

APPENDIX E. QUALITATIVE OBSERVATIONS AND RESPONDENT COMMENTS

- My job description was to be the herdsman at Mehmen Busyhill Simmental & Seed farming operation. I also was to assist in the Dekalb seed business and in the crop production of the operation. I was to perform all daily duties that were needed in the cattle operation.

- The most important skill I feel that I gained was better time management. I had to be responsible for setting a schedule to accomplish the tasks that needed to be done in a timely manner. I know this is something that I still need to work on, but by having this internship I feel my time management skills have gotten better.

- What changes would you have made in this internship? It was a great learning experience and I enjoyed it. I liked the part that I got to do things by myself and motivate myself to get things done as needed to be done. This showed me that the Mehmen's had a lot of trust in me. If I were to change anything about what I did it would be to get more involved in a different part of the Mehmen's fanning operation. I think that I would be able to expand my learning to something that I have never done before.

- Are there future job possibilities at this site? When it comes time for me to find a job after school I will defiantly look into what Mehmen Busyhill Simmental & Seed has to offer me. I know that the Mehmen's could have a number of different job opportunities in many different areas. I would really look into something that the Mehmen's would have to offer. I will just have to see what happens.

- The job that I did this summer at the Mehmen's was a very good job for the time being. I really enjoyed my position. If I were to do something in this field it would have to be more permanent and I would have to have more control of what I did. This job makes me realize that this is the type of job I want to have in the future for myself and be in total control of everything.

- Problem solving skills were developed when I had trouble finding information that I was researching. Often I would come across something that I just couldn't find. What I would do would be to first look around for any related topics or issues that might bring up something. Next if all else falls I would take it to the CRS researchers to see if they had any ideas, and they were usually able to help.

- Decision making skills were often used at the state fair. I often had to make decisions about when to open a second line, when to take orders and the hardest decision was to order new produce. The other main decision I made was when I was in charge of the grills and when to grab and when to wait. This was really hard since you didn't know who was going to come, and also it took a while for the meat to cook.

- Taking initiative skill was used often when I had to decide what information to use when I was researching. It was also used when I had to figure out routes for my tours. At the Pork Tent it was used every night, to start cleaning up.

- Listening skill was extremely important when I was attending meetings or hearings and I was the only one there from Grassley's office. If I didn't listen and take notes, they might be left in the dark on an issue.

- I think that I showed leadership skill in both places, for one at the state fair I had to lead orientation for the new counties and also take over whenever a committee member.

- Teamwork was everywhere in my internship. I had to work as a team with Grassley's staff and with the IPPA staff. I really had to work with Mark in DC as a team to get all of the Ag issues accounted for.

- Critical thinking skill was used when deciding what to order and what to cook at the Pork Tent. I often looked at records from last year as well as earlier in the week. I would always take this extremely serious since I was dealing with meat that could not be reuse and would just go to waste.

- Creativity was called for a lot when working for the IPPA. I would have to be creative in my promotion designs so that people would be interested in them. I also use creativity to come up with signs for the Pork Tent to entice to eat there.

- Oral communication skill was used everyday of the summer. It could be leading a tour, attending a meeting or talking with other interns. Oral communication was also a big part of the Fair in getting it all organized and put together.

- Written and visual communication forms were used in writing of letters or of memos. I also had to use written to make schedules that people would understand. I used visual communication in the displays and signs that I made while working for the IPPA.

- The main reason I was interested in working for the IPPA is that I liked the total package that their internship had. I wanted to go to DC and work for Grassley and also wanted to work for the pork producers of Iowa. I think that both of these are great experiences that make me better as I enter the career of my choice. I have always admired Senator Grassley and have thought that he is strait forward and stands up for Iowa. The IPPA is also the same way in that they represent the producers.

- During this internship I really didn't learn a lot of new skills, rather I developed and improved on skills that I had learned in the classroom. This summer was great to develop my communication skills, verbal, written and visual. It also helped to improve my skills in problem solving, and management.

- I really would not make any changes about this internship, the only one would be more time at these places. I would be able to get job at either place if there were openings. This was a great opportunity and really excited me about getting into at least a similar field.

- The most important skill that I learned was human relations. I had to deal with customers all of the time. I learned how to treat certain people and how to help them get what they needed. I also learned the art of making feed. Making feed was very important since having minimal mistakes was very important to the company.

- If I were to make some changes in the internship I would make it so I could learn about more departments. If I could have spent two weeks in every department I could have learned a little about everything. It would make it a more interesting experience but wouldn't be very feasible.

- I am sure that the coop would hire me in Mstant if I were to ask for a job. They are always looking for good workers with good ethics and people skills.

- I am not really interested in working at any job outside of farming so I would probably decline any offers. The job wouldn't be to bad but the pay really isn't too great in any area of the coop. I am more interested in working independently for myself.

- My entire summer consisted of decision-making on a daily basis. When I began early in the summer my decision making skills were not quick and responsive. When a producer or retailer asks me a question a certain products I didn't know the answer as quickly

as I should of Many questions were directed at products on the market and why should I be using it. For example, Robert Hunter asked, "Why didn't the Basis Gold + Clarity kills the broad-leaves"

- Time management is included on decision making because I had to set appointments and stay by my schedule to make the retailer and producer happy or DuPont was going to lose business.

- The most important skills learned was increased communication, listening and problem-solving skills. I believe that these were increased dramatically because I dealt with many of the same issues on a daily basis.

- Some changes that I would make to my internship was the ability to have at least 2 good accounts that sold a substantial amount of product to work with. It was very disappointing to keep knocking down the doors of retailers when you knew that they would turn you away after the sales pitch had been giving. This occurred because the previous reps in the area never called on the retailers and the DuPont business and trust didn't exist.

- I believe that there is a huge potential for future employment on the Iowa Crop Protection team. I have gotten many compliments on the effort and energy I put into the internship. This is the kind of commitment from an employee DuPont Crop Protection is looking for.

- I'm very interested in pursuing a career in Ag Chemical Sales. I think with my past experiences in the field that I would be very competent to support a successful territory.

- This summer my internship with Novartis Crop Protection would be described as intensive. Novartis is a very sound company in the agricultural industry and their internship program reflects just that.

- Throughout the summer I gained knowledge on several skills. The most important skill that I learned the value of would be listening. To be successful in the ag industry, you need to provide the products that your customers want and need. This was also important with the large, progressive farmers that I worked closely with.

- One suggestion that I provided Novartis was that my internship only focused on working with 2 of the 9 sales reps in the district. I believe that I would have gained more skills if I worked with every rep. Each sales rep has a difficult technique to their success, and if I would have had the opportunity to spend 2-3 days with each of them, I could have learned several new styles.

- All of the Novartis employees who are sales reps are products of their internship program. In other words, Novartis doesn't hire anyone that did not go through their internships. This adds a lot of credibility and importance to their internships because they have to develop the individual. The possibility still lies there for a position, but I would like to know before that time on what I am going to do for fulltime employment.

- I have always been interested in this area as a career, but I've got quite an unusual opportunity to go and farm down near Newton. Next year I will probably go down and start farming with them. Right now there is very little profitability in farming, but I thin this may be the time to get into it.

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