

Congruency Between Student Interns and Worksite Supervisors Regarding Critical Elements of an Internship Experience

Janice S. Henry

Susan S. Rehwaldt

George M. Vineyard

Internships provide real world experiences for students in academic programs. They require three-way communication among the educational institution, the student intern, and the business or industry worksite supervisor. The authors examined student interns' and worksite supervisors' identification of the importance of 15 critical academic elements and 9 worksite elements both in general, i.e., to all interns, and in particular, i.e., as they specifically related to their own recent internship experiences. Significant relationships were found in these four areas using the Spearman Rho correlation and the Wilcoxon procedure: (1) between the in general and the in particular academic elements as identified by the students; (2) between the in general and the in particular academic elements as identified by the employers; (3) between the in general and the in particular worksite elements as identified by the worksite supervisors; and (4) between the student interns and worksite supervisors regarding the academic elements in the in particular area. The findings of the study may lead to improvements in the program studied by the researchers, and may be helpful to other educational institutions with (or considering) an internship program to address critical academic and worksite elements in their internship program so that all partners share in a win-win-win relationship.

Internships are work-based, educational experiences that require the cooperation of academic programs, employers, and students to be successful. Internships that are an integral part of an academic degree program require some level of agreement, understanding, or congruence among these three parties regarding this cooperative endeavor.

While the balance of power over the years among these three parties has been tipped first from one to another, in the present economic environment, internships are a positive activity for all three parties. Students in computer-related degree programs, the employers, and the academic institutions each have much to gain through well-run, formalized internship programs.

Tripartite benefits of a formal internship, according to Patterson (1999), are most obvious. She noted that the students could gain real world experience, while the academic programs'

reputations grew, and employers would then have an improved pool of student-applicants from which to recruit for full-time work employment. Likewise, internships are "a win-win situation for companies

Janice S. Henry is Professor, Department of Information Management Systems, College of Applied Sciences and Arts, Southern Illinois University Carbondale, Carbondale, Illinois.

Susan S. Rehwaldt is Assistant Professor, Department of Information Management Systems, College of Applied Sciences and Arts, Southern Illinois University Carbondale, Carbondale, Illinois.

George M. Vineyard is Teaching Assistant, Department of Educational Psychology and Special Education, College of Education, Southern Illinois University Carbondale, Carbondale, Illinois.

and students alike. Companies tap into a pool of fresh talent, ...students (receive) practical work experiences and a better understanding of the business world” (Jacobs, 2000, para. 4). An internship was perhaps best defined as a “three-way partnership between the educational institution, the student intern, and the organization where the interns take on the challenges of a program of systematic experiential learning” (Inkster and Ross, 1998, p. 6).

Students can utilize internships to gain valuable real-world experiences that will strengthen their positions, allowing them to gain an edge during the job search (Neuman, 1999). Students can also acquire additional expertise and confidence in the specific area that they expect to target when they seek permanent jobs. Employers should set up internships for their own maximum benefit—e.g., choose projects that are manageable and rewarding for interns, assign the writing of training manuals to interns, appoint mentors for each intern (Markem, 1999).

Academic programs in cutting-edge technology areas, first of all, want to achieve the proper blending of classroom learning, laboratory work, and real-world experience. These programs, likewise, recognize the need to establish close contacts with employers as a way of monitoring the world of work for which they are preparing their graduates. Often, these relationships result in the accumulation of useful data to which the program can turn as it continually evaluates and modifies its curriculum. From a public relations point of view, such data assist an academic program in its recruitment, retention, and fund-raising efforts when its graduates are perceived as well-trained and, therefore, highly sought after in the workplace.

Statement of the Problem

With three important entities (students, worksite supervisors, and the academic institutions) contributing to the quality of the internship experience, it is appropriate for the educational institution to assess its two partners. For example, the degree of importance that students attach to a required academic element of the internship may differ from the employer’s assessment of the

importance awarded to each required academic element. Likewise, the degree of importance that students attach to an element in the internship worksite may differ from the employer’s assessment of the importance of that worksite element. Such periodic assessments can prepare the way for improved communications and have the potential to enhance the relationship among the three entities involved in the internship experience.

Purpose of the Study

This research addressed two areas—those elements currently required by the academic program of its student interns and those elements related to the employer and the worksite. The survey instrument asked respondents to identify and rank the academic and the worksite elements in terms of how critical they were to the success of the internship, both *in general*, i.e., how critical they were to all internships, and *in particular*, i.e., how critical they were specifically to the respondent’s individual internship experience. This research examined whether or not there was a significant difference between the ranking of the critical academic elements by the interns, *in general* and *in particular*, and the ranking given by the employers, also *in general* and *in particular*, to the same academic and worksite elements.

1. Academic elements. The first group of elements considered was the “academic” elements (evaluations, weekly reports, final report, etc.) which required the cooperation of the employer or worksite supervisor. The faculty, of course, saw educational value in each of these elements, and the employers became virtually an extension of the faculty as they were required to evaluate their student interns and cooperate in the administration of the internship program. Employers who had become players in this three-part relationship were queried regarding their opinion about these elements required by the academic program.
2. Worksite elements. The second group of critical elements was related to the worksite and to the decisions employers made regarding

the internship program. These items were not under the control of the academic program or the students and included such aspects as orientation, supervision, a nurturing environment, and salary—elements clearly in the domain of the employer.

Research Questions

1. Is there a relationship in the ranking of the academic elements identified by the student interns as the most critical elements in an internship program *in general* and *in particular*?
2. Is there a relationship in the ranking of the worksite elements as identified by the student interns as the most critical elements in an internship program *in general* and *in particular*?
3. Is there a relationship in the ranking of the academic elements as identified by the worksite supervisors as the most critical elements in an internship program *in general* and *in particular*?
4. Is there a relationship in the ranking of the worksite environment elements identified by the worksite supervisors as the most critical elements in an internship program *in general* and *in particular*?
5. Is there a difference in the combined (*in general* and *in particular*) rankings given by student interns and worksite supervisors regarding the most critical academic elements?
6. Is there a difference in the combined (*in general* and *in particular*) rankings given by student interns and worksite supervisors regarding the most critical worksite elements?

A comparison of the answers to questions 1 and 2 above indicate the congruence regarding the most critical *academic* elements. A comparison of the answers to questions 3 and 4 above indicate the degree of congruence regarding the most critical

workplace elements. Questions 5 and 6 consider the responses in *total* and compare the totals.

Significance

Without periodic surveys of this type, it is highly possible that the degree of congruence or level of understanding between these three important entities would gradually erode—until a student is penalized or an employer is embarrassed. This type of research paves the way for fruitful, ongoing communication that has the goal of an improved educational experience for the students participating in the internship program.

Related Literature

Academic institutions and employers have a long history of cooperative activities and common concerns. Much research has been focused on the level of congruence or similarity in their understandings and goals between the two groups in terms of the academic program requirements and skills of the students.

For example, Tanyel, Mitchell, and McAlum (1999) examined the amount of common agreement between employers and faculty regarding the skills of the students. They found congruence or agreement in the ratings of skills needed for success, with a few statistically significant exceptions where one group placed more value on the skill than the other group. Employers rated the following significantly higher than the faculty respondents did: ethical values, project management skills, and persuasive ability. Faculty rated the following significantly higher than the employer-respondents: oral communications, written communications, creativity, and decision-making. Lightfoot (1999) studied employer and student influence on curricular modifications and concluded that business “exerts the most influence on curriculum design,” which she found to be unfortunate as “businesses have a very short term perspective on curricular issues” (p. 49).

Deck (1999) acknowledged that employers today are using internships as a recruitment device, particularly in fields with significant personnel needs, such as information systems. Darowski (1999) boldly proclaimed that such business-

education partnerships can solve the technology talent shortage. He advised companies to become internship sites for appropriate technology programs. "Internships," he stated, "offer companies a chance to further the education of students through real-world experience while testing out prospective employees without incurring huge expenses" (p. 68).

Internships are often used as filtering devices by employers. Most new graduates, according to Fitter (1999), lack real-world related job experience, making it difficult for prospective employers to evaluate them. Therefore, she noted that internships "can be useful in teasing out the truth" about applicants (p. 46). Stanton (1992) identified five major advantages for students completing an internship. They were: (a) acquiring relevant work experience; (b) exploring different career options; (c) establishing networking opportunities; (d) acquiring new skills; and (e) applying classroom learning to real-world situations.

Grantz and Thanos (1996) identified the *sine qua non*, or those critical activities that need to be present for a quality internship experience. The educational institution provided advisement, placement, and monitoring activities for the student. The student sought to apply course work in a professional work setting, to gain an understanding of organizational structures, and to assume personal responsibility for professional development. Beard and Morton (1999), using data gathered in a national sample of advertising and public relations students, identified six broad areas that they found to be predictors of internship success. They were: (a) the student's academic preparedness; (b) the student's initiative; (c) the student's positive attitude; (d) the quality of worksite supervision; (e) the employer's practices and policies; and (f) the compensation.

Previous research has considered critical elements of internship programs. Goad (1998) utilized material from Zanville and Markwood (1982) and Inkster and Ross (1995) to identify common internship components critical for a successful internship program. They were:

- Setting and maintaining internship program goals

- Preparing prospective interns
- Developing and certifying internship sites
- Evaluating the learning of the interns
- Evaluating the internship program

Goad's research (1998) centered on internships in academic programs of business that were approved by the American Association of Colleges and Schools of Business (AACSB). She looked at the key internship components of successful internships as identified by AACSB internship coordinators. Her independent variables were (a) program goals; (b) intern preparation; (c) site identification; (d) evaluation of the intern; and (e) evaluation of the internship program. She found that her respondents identified all five components as important to a successful internship program. The research presented in this paper expands the findings in Goad's study.

Method

This study focused on the internship experience as required in the Information Systems Technologies (IST) baccalaureate program offered in the College of Applied Sciences and Arts at Southern Illinois University (SIU), a large public institution located in Carbondale, Illinois. More specifically, the researchers studied those academic and worksite elements of the internship program that enhanced the internship experience of the students. This study utilized two survey instruments designed to collect information on 15 academic elements of the IST internship program and 9 worksite elements.

Site

This research focused on the critical elements of the internship program in the Information Systems Technologies (IST) baccalaureate degree program at Southern Illinois University Carbondale. The program was created in response to the burgeoning use of computer technology in our society. IST graduates typically take positions involving troubleshooting, maintenance and repair work, database creation, network administration, help-desk activities, sales and customer service work, website design, and e-commerce.

Population

The population for this research was all student interns (N= 48) who had participated in the IST internship program from its inception in the Fall of 1997 through December 1999. One instrument was sent to every student intern who participated in the IST internship program between those dates. The other survey form was sent to worksite supervisors who had supervised an IST intern during that same time period (N= 45). A number of worksite supervisors had more than one intern during that two-year period.

Return Rate

Completed survey forms were returned by 39 of the 48 student interns for a return rate of 79%. Completed survey forms were returned by 30 of the 45 employers for a return rate of 67%. Some supervisors had more than one intern over that period of time. However, the instructions to the supervisors asked them to rate only their most recent intern on the *in particular* section of the survey.

Instrument

The survey instrument used in this research was divided into two sections, each having two parts:

1. academic elements of the internship experience (*in general* and *in particular*); and
2. worksite elements related to the internship experience (*in general* and *in particular*).

Academic Elements

Educational programs with an internship requirement have identified certain elements in support of the internship. These elements further the educational goals of the internship activity as defined by the faculty of the academic program. Typical elements include a contract between the student and employer, an evaluation process, a tabulation of hours worked, a structured final report, and a letter grade that then appears indelibly on the student's transcript. Table 1

identifies each of the academic elements and describes each briefly.

Worksite Elements

Employers assumed responsibility for the worksite and the worksite supervisor. Students occasionally contracted with a corporation for an internship and were then assigned to a particular supervisor at a certain location. Usually, the student's initial contact was with the person who would ultimately be responsible for supervising the internship. What happens at the worksite was outside of the purview of the academic program. Scheduled periodic reports by the interns and occasional visits or calls by the faculty coordinator were the typical means of monitoring the worksite activities. Researchers asked students and employers to consider nine elements related to the worksite, as noted in Table 2, and comment on the importance of each item, *in general*, and then on the level of satisfaction with each element, *in particular*, focusing on the *most recent* internship experience.

Procedures

Respondents were asked to complete the *in general* part and the *in particular* part in both the academic and worksite sections. They were directed to indicate the degree of importance that they felt should be given to each of the 15 academic elements and each of the 9 worksite elements, first *in general*, and secondly, *in particular*. A Likert scale was used containing values from 1 to 5, with "1" being the least important and "5" being the most important. Their responses were coded onto a computer sheet for optical scanning and were analyzed using the Statistical Analysis System (SAS).

Summary of Responses *In General* and *In Particular*

Utilizing the "academic-related" and "worksite-related" elements, two types of data were gathered from employers who have had IST interns in their organizations and from the students who have completed an IST internship. First, the employers and the student interns were asked to consider

Table 1: Critical Academic Elements of the IST Internship Program at Southern Illinois University

Academic Element	Brief Description
Internship Agreement (contract)	A document requiring basic information about the student intern and the worksite (names, addresses, phone/fax/email numbers) and agreement to participate in internship. Requires signatures of student, worksite supervisor, and representative of academic program. Includes items such as hours, pay, location, and general description of internship.
Internship Learning Objectives	A document listing the objectives (usually between five and ten specific statements) of the internship as conceived by the worksite supervisor and the student. Requires signatures of student, worksite supervisor, and representative of academic program.
Faculty Coordinator	The faculty coordinator represents the internship program to the students and employers, usually meets two or three times with the student prior to internship, and is initial point of contact for the employers. The faculty representative also calls on the interns to forestall any potential problems.
Weekly Journal	Student interns are required to keep track of their internship hours, and submit a weekly time sheet signed by the worksite supervisor to the representative of academic program.
Required Clock-Hours	For four hours of academic credit (the minimum credits required), the student is required to complete 225 clock-hours (55 clock-hours per credit-hour) of work experience.
Credit Hours	A minimum of four credit hours is required.
Midterm Evaluation	A two-page form utilizing a Likert scale with questions in three categories, with additional space for comments. Requires signature of employer and student.
Final Evaluation	Two-page form identical to the midterm evaluation. Requires signature of both the employer and student.
Portfolio:	Items to be included in Internship Portfolio:
Final paper	A final 3-5 page paper, written as a retrospective of the internship
Project	One or more projects completed at the internship worksite
Prior projects	One or more projects completed prior to the internship
Chart	An organizational chart of the company/department where internship took place
Literature	A promotional/informational piece of literature from the employing company
Resume	An up-to-date copy of the intern's resume including the names of two references from the internship site
Letter grade	The letter grade of A, B, C, D, or F for four (or more) credit hours

these two sets of elements in relation to internship programs *in general*, and not focus on any particular intern or internship experience. Second, the employers were asked to consider these same elements in relation to his or her most recent intern *in particular*, and each student intern was asked to consider these elements as they related to his or her own recent internship *in particular*.

Data Analysis

Research questions 1 through 4 were analyzed using the Spearman-Rho procedure (Howell, 1997), which analyzed the relationship between the two rankings of data in the four different ways.

The ranks for the individual items were determined by summing their Likert values within the two respondent categories and within the *in general* and *in particular* designations. If two or more values were the same, the same ranking was assigned to each item.

Research questions 5 and 6 were analyzed using the Wilcoxon 2-matched-paired signed-ranks alternative to the t-test for two related sample to compare the students and the employers (Howell, 1997; and Cody & Smith, 1997). Four areas were analyzed—academic *in general*, academic *in particular*, worksite *in general*, and worksite *in particular*—for the two groups, student interns and employers.

Table 2: Critical Worksite Elements of the IST Internship Program at Southern Illinois University

Worksite Element	Brief Description
Nurturing and challenging environment	A work setting that does not threaten the student, is accepting of the skill level the student brings to the work-site, and is able to provide challenges to the intern as well.
Adequate supervision	Student interns need significant contact with their supervisors and immediate feed-back regarding their activities.
On-site orientation	Student interns are initially a relatively insecure group needing appropriate orientation to their new environment. They need to know the personnel, the policies and procedures, their limits, and the duties and responsibilities associated with the internship position.
Internship learning objectives	This is an "academic" element that immediately requires input from the worksite supervisor. The student intern and the employer, working together, identify the learning objectives of the internship, and it is the responsibility of the employer to see that the student has the opportunity to fulfill these objectives.
Significant work for intern's professional and educational development	This element separates an internship from a part-time job. The Student intern is not there to produce a return on the money invested as would happen with a factory position, but is there to learn, to develop professionally, to apply classroom learning to the workplace.
Administrative needs of the academic program	This item refers to the completion of the midterm and final evaluations, the verification of the intern's weekly journals, the fulfillment of the learning objectives, and the meetings with the faculty coordinator.
Satisfactory work environment	This is a health and safety issue and, therefore, important to all parties.
Appropriate work hours	This is the employer's agreement to help the student with work hours that fit into the student's schedule while also meeting the clock hour requirements of the degree program.
Salary	This is an element left to the discretion of the employer.

Findings and Discussion

1. Is there a relationship in the ranking of the academic elements identified by the student interns as the most critical elements in an internship program *in general* and *in particular*?

Table 3 shows the rankings of the academic elements, *in general* and *in particular*, as identified by the student interns. The correlation of the students' responses to the academic elements, *in general* and *in particular*, was $r = .57$, $p = .03$. There was a significant relationship between the *in general* and the *in particular* academic elements as identified by the students.

The researchers expected to find a strong positive relationship in the ranking of the academic elements as it was unlikely that students would desire something different for themselves (*in particular*) than they would for the other students in the same academic program (*in general*). This

expectation was confirmed by the statistical analysis.

Researchers noted the disparate rankings of two items between the *in general* and the *in particular* categories: the letter grade (ranked first *in particular* and twelfth *in general*), and the learning objectives (ranked twelfth *in particular* and ranked fourth *in general*). The possible reasons for the incongruence are based on the researchers' years of experiences with coordinating internships. They feel that a given student is usually quite focused on the letter grade as being of great importance to him or her *in particular*, but when considering internships *in general*, that student does not see the letter grade as important as some of the other factors. Some interns have suggested that pass-fail is a more appropriate grading scale for the internship.

Regarding the second item, a given student—when discussing his or her internship—tends to focus on the ongoing activities at the worksite rather than the learning objectives formulated prior to the

Table 3: Rank of the Critical Academic Elements of an Internship Program, as Identified by the Student Interns, *In General*, and *In Particular* (N=39)

Description of Elements	Rank of Elements, In General	Rank of Elements, In Particular
Final Evaluation	1	2
Internship Agreement	2	8
Midterm Evaluation	3	5
Learning Objectives	4	12
Resume	5	4
Credit Hours	6	3
Faculty Coordinator	7	8
Completed Projects	7	7
Required Clock Hours	7	5
Final Paper	10	10
Weekly Journal	11	11
Letter Grade	12	1
Organizational Chart	13	13
Prior Projects	14	15
Piece of Literature	15	14

r= 0.57, p=.03

internship. On the other hand, when considering other students' internships, students rated the learning objectives much higher in importance.

2. Is there a relationship in the ranking of the worksite elements as identified by the student interns as the most critical elements in an internship program *in general* and *in particular*?

Table 4 delineates those environmental elements related to the worksite and identified by student interns as the most critical items to internships *in general* and to their own internship *in particular*. The correlation of the students' responses to the worksite elements, *in general* and *in particular*, was $r=0.62$, $p=.08$. There was no significant relationship between the *in general* and the *in particular* worksite elements as identified by the students.

Once again, the researchers expected to find a strong positive relationship in the ranking of the worksite elements as it was

unlikely that students would desire something different for themselves (*in particular*) than they would for others completing the same program (*in general*). This expectation was confirmed by the statistical analysis.

3. Is there a relationship in the ranking of the academic elements as identified by the worksite supervisors as the most critical elements in an internship program *in general* and *in particular*?

Table 5 lists the ranks of the academic elements, *in general*, and, *in particular*, as identified by the worksite supervisors (the employers). The correlation of the employers' responses to the academic elements, *in general* and *in particular*, was $r=.92$, $p=.0001$. There was a significant relationship between the *in general* and the *in particular* academic elements as identified by the employers.

Like the students' responses regarding the academic elements, the worksite supervisors' responses showed a positive relationship in the ranking of the academic elements between their positive response regarding the program (*in general*) and their most recent internship experience (*in particular*). This finding, along with the students' responses regarding the academic elements, showed a strong congruence among the students, the worksite supervisor, and certainly the academicians who direct the program—thus validating the academic elements.

Table 4: Rank of the Critical Worksite Elements of an Internship Program, as Identified by the Student Interns, *In General*, and *In Particular* (N=39)

Description of Elements	Rank of Elements, In General	Rank of Elements, In Particular
Satisfactory Work Environment	1	1
Nurturing/Challenging Environment	2	4
Appropriate Work Hours	2	2
Adequate Supervision	4	5
Significant Work	5	5
Learning Objectives	6	5
Pays Salary	7	9
On-Site Orientation	8	8
Administration of Program Needs	9	3

r= 0.62, p=.08

Table 5: Rank of the Critical Academic Elements of an Internship Program, as Identified by the Worksite Supervisors, *In General*, and *In Particular* (N= 30)

<i>Description of Elements</i>	<i>Rank of Elements, In General</i>	<i>Rank of Elements, In Particular</i>
Final Evaluation	2	4
Internship Agreement	1	1
Midterm Evaluation	4	3
Learning Objectives	3	2
Resume	7	11
Credit Hours	6	8
Faculty Coordinator	7	5
Completed Projects	10	10
Required Clock Hours	7	5
Final Paper	5	7
Weekly Journal	11	8
Letter Grade	12	12
Organizational Chart	15	14
Prior Projects	13	13
Piece of Literature	14	15

r= 0.92, p= .0001

4. Is there a relationship in the ranking of the worksite elements identified by the worksite supervisors as the most critical elements in an internship program *in general* and *in particular*?

Table 6 ranks the items identified by the worksite supervisors as the most critical worksite elements in internship programs, *in general* and *in particular*. The correlation of the worksite supervisors' responses to the worksite elements, *in general* and *in particular*, was 0.67, p= .05. There was a significant relationship between the *in general* and the *in particular* worksite elements as identified by the worksite supervisors.

The researchers expected to find a strong positive relationship in the ranking of the worksite elements as it was unlikely that students would desire something different for themselves (*in particular*) than they would for fellow interns from the same academic program (*in general*). This

expectation was confirmed by the statistical analysis.

5. Is there a difference in the combined (*in general* and *in particular*) rankings given by student interns and worksite supervisors regarding the most critical academic elements?

Table 7 indicates no significant difference between the student interns and the worksite supervisors' ratings of the academic elements, *in general*. However, as shown in Table 8, there was a significant difference in the Wilcoxon comparison of student interns and worksite supervisors regarding the academic elements in the *in particular* area.

Employers, when considering a single intern, rated the academic elements significantly lower than the student's ranking of his or her own internship (*in particular*). The importance of the academic elements was less for the supervisors who had a limited investment in the ultimate academic grade.

6. Is there a difference in the responses of student interns and worksite supervisors, regarding the worksite elements both *in general* and *in particular*?

Data in Tables 9 and 10 indicate no significant difference was found using the Wilcoxon 2-sample test between the student interns and the worksite

Table 6: Rank of the Critical Worksite Elements of an Internship Program, as Identified by Worksite Supervisors, *In General*, and *In Particular* (N= 30)

<i>Description of Elements</i>	<i>Rank of Elements, In General</i>	<i>Rank of Elements, In Particular</i>
Work Environment	2	1
Nurturing/Challenging Environment	4	2
Appropriate Work Hours	7	3
Adequate Supervision	2	5
Significant Work	1	4
Learning Objectives	5	5
Pays Salary	9	9
On-Site Orientation	6	5
Administration of Program Needs	8	8

r= 0.67, p= .05

supervisors' ratings of the worksite elements, *in general* and *in particular*.

The students appeared to be accepting of the worksite elements associated with their internships. Often this was the first real-world work experience in their field of study for these students. The supervisors, on the other hand, were basically in control of these elements and therefore applied them as they deemed appropriate.

These findings support the recommendations of Beard and Morton (1999) who found that two of the predictors for a successful internship were the student's positive attitude and the employer's practices and policies. Goad (1998) found that supervisors identified evaluation of the intern (*in particular*) as an important element to a successful internship program.

Using the Spearman Rho correlation, significant relationships were found in the *in general* and the *in particular* comparisons of academic elements as identified both by the students as a group (Table 3) and the supervisors as a group (Table 5). In addition, the *in general* and the *in particular* comparison of the worksite elements was significant in the supervisors' group (Table 6) but no significance was found in the *in general* and the *in particular* comparison of the worksite elements as identified by students. This means that the student interns have a high correlation in what they perceive to be the important academic elements of an internship *in general* and their own (*in particular*) internship. Also, the worksite supervisors

have a high correlation in both areas—the academic and the worksite elements.

Recommendations

The IST faculty at Southern Illinois University should consider the results of this survey since it

Table 7: Comparison of Students' and Supervisors' Ratings of Academic Elements, *In General*, of an Internship Program using the Wilcoxon Procedure

GROUP	N	Sum of Scores	Expected Under H0	St. Deviation Under H0	Mean Score
Students	39	1464.50	1365.00	82.45	37.55
Supervisors	30	950.50	1050.00	82.45	31.68
		S = 950.50	Z = -1.20	Probability > Z = 0.23	

NOTE: The above is a Wilcoxon 2-Sample Test (Normal Approximation) with Continuity Correction of .5

Table 8: Comparison of Students' and Supervisors' Ratings of Academic Elements, *In Particular*, of an Internship Program using the Wilcoxon Procedure

GROUP	N	Sum of Scores	Expected Under H0	St. Deviation Under H0	Mean Score
Students	39	1550.50	1365.00	82.51	39.76
Supervisors	30	864.50	1050.00	82.51	28.82
		S = 864.50	Z = -2.24	Probability > Z = 0.03	

NOTE: The above is a Wilcoxon 2-Sample Test (Normal Approximation) with Continuity Correction of .5

Table 9: Comparison of Students' and Supervisors' Ratings of Worksite Elements, *In General*, of an Internship Program using the Wilcoxon Procedure

GROUP	N	Sum of Scores	Expected Under H0	St. Deviation Under H0	Mean Score
Students	39	1439.00	1365.00	82.34	36.90
Supervisors	30	976.00	1050.00	82.34	32.53
		S = 976.00	Z = -.892	Probability > Z = 0.37	

NOTE: The above is a Wilcoxon 2-Sample Test (Normal Approximation) with Continuity Correction of .5

Table 10: Comparison of Students' and Supervisors' Ratings of Worksite Elements, *In Particular*, of an Internship Program using the Wilcoxon Procedure

GROUP	N	Sum of Scores	Expected Under H0	St. Deviation Under H0	Mean Score
Students	39	1278.50	1365.00	82.38	32.78
Supervisors	30	1136.50	1050.00	82.38	37.88
		S = 1136.50	Z = 1.04	Probability > Z = 0.30	

NOTE: The above is a Wilcoxon 2-Sample Test (Normal Approximation) with Continuity Correction of .5

directly mirrors the required elements of that internship program. Among those elements that were not valued highly by either the employers or the students, the faculty should consider whether these are actually necessary. For items deemed critical by students and not very critical by employers, it may be necessary to help employers understand why this is important to students and faculty.

Other institutions with academic programs requiring internships could duplicate this study, including using the statistical analyses employed. The Spearman Rho can assist researchers in identifying the consistency within the groups of students and employers, while the Wilcoxon procedure can identify the differences between those groups.

Academic programs that are considering an internship component could also study those elements consistently identified as most critical and least critical by both employers and student interns as they consider their own programs. This information could assist developers in making decisions affecting their internship requirements as they affect both student interns and worksite supervisors.

Future researchers could also try to identify the specific factors that make for a safe, satisfactory, nurturing, and challenging work environment; that are part of adequate supervision; or that elevate a work experience from the mundane into the significant category. Researchers and faculty involved with internship programs could consider those items identified by student interns and by worksite supervisors as highly critical and evaluate those elements in terms of their own programs. Likewise, developers could evaluate those items ranked low in terms of their ramifications.

References

- Beard, F., & Morton, L. (1999). Effects of internship predictors on successful field experiences. *Journalism & Mass Communication Educator*, 53(4), 42-53.
- Cody, R., & Smith, J. (1997). *Applied statistics and the SAS programming language* (4th ed.). Upper Saddle, NJ: Prentice Hall.
- Deck, S. (1999, September 6). Interns: For summer and beyond. *Computerworld*, 33(36), 1, 16.
- Darowski, M. (1999, April 5). Business and education partnerships can solve the technology talent shortage. *InfoWorld*, 21(14), 68.
- Fitter, F. (1999, May 10). A matter of degrees. *Computerworld*, 33(19), 46.
- Goad, S. M. (1998). *Successful internship program as perceived by AACSB internship coordinators*. Unpublished doctoral dissertation, Northern Illinois University, DeKalb.
- Grantz, R., & Thanos, M. (1996). Internships: Academic learning outcomes. *NSEE Quarterly*, 22(1), 10-11, 26-27.
- Howell, D. (1997). *Statistical methods for psychology* (4th ed.). Albany, NY: Wadsworth Publishing Company.
- Inkster, R. P., & Ross, R. G. (1995). *The internship as partnership: A handbook for campus-based coordinators and advisors*. North Carolina: National Society for Experiential Education.
- Inkster, R. P., & Ross, R. G. (1998). *The internship as partnership: A handbook for business, nonprofits, and government agencies*. Needham Heights, MA: Simon and Schuster.
- Jacobs, P. (2000, March 24). From the classroom to the real world. *InfoWorld*. [Online]. Retrieved November 15, 2000 from the World Wide Web: <http://iwsun4.infoworld.com/articles/ca/xml/00/03/27/000327cafutur.xml>
- Lightfoot, J. (1999). Fads versus fundamentals: The dilemma for information systems curriculum design. *Journal of Education for Business*, 75(1), 43-50.
- Markum, L. (1999, April 5). Set up internships carefully for maximum benefit. *InfoWorld*, 21(14), 90.
- Neuman, H. (1999). Internships: The experience-builders. *Career World*, 27(6), 16-19.
- Patterson, V. (1999). The employers' guide: Successful intern/co-op programs. *Journal of Career Planning & Employment*, 57(2), 30-34.
- Stanton, M. (1992, Summer). Internships: Learning by doing. *Occupational Outlook Quarterly*, 30-32.
- Tanyel, F., Mitchell, M., & McAlum, H. (1999, September/October). The skill set for success of new business school graduates: Do prospective employers and university faculty agree? *Journal of Education for Business*, 75(1), 33-37.
- Zanville, H., & Markwood, R. (1982). *A casebook on practice in internship education*. Boulder, CO: Western Interstate Commission for Higher Education.

Material published as part of this journal, either on-line or in print, is copyrighted by the Organizational Systems Research Association. Permission to make digital or paper copy of part or all of these works for personal or classroom use is granted without fee provided that the copies are not made or distributed for profit or commercial advantage AND that copies 1) bear this notice in full and 2) give the full citation. It is permissible to abstract these works so long as credit is given. To copy in all other cases or to republish or to post on a server or to redistribute to lists requires specific permission and payment of a fee. Contact Donna Everett, d.everett@morehead-st.edu to request redistribution permission.