



# A METHODOLOGY FOR VALIDATING ENTRY LEVEL VALUE VERSUS CAREER VALUE OF COURSES IN AN MIS PROGRAM

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## ABSTRACT

*The purpose of this study was to determine which entry-level course evaluations are drivers of an attitude of approval toward an MIS program, which career-level course evaluations are drivers of an attitude of approval toward an MIS program and whether alumni evaluations coincide with the beliefs of faculty who designed the curriculum.*

*Alumni were asked to indicate the value of the content of each required course of the program during their first year on the job, then in their current position and then asked to evaluate the entire MIS program yielding a factor score for one's overall attitude toward the MIS program. The resulting factor score for each alumnus was related to the scores for the value of courses during one's first year on the job and the scores for the value of courses in one's current position.*

*The plans of the faculty who designed the MIS curriculum as to what point in time, entry-level position, later in one's career, or a combination of the two, each course would be of value is reviewed. The perceptions of the alumni are compared to the beliefs of the faculty.*

## BACKGROUND

When the faculty of an MIS area design a curriculum they consider providing their students with courses that provide entry-level skills and knowledge and courses that provide skills and knowledge that will be more applicable at points later in their careers.

There are various methods of determining the extent to which the courses in an MIS program are providing students with an education that is valuable both initially and at a later time in one's MIS career. One method would be to survey firms recruiting graduates of an Information Systems program as to how well graduates are performing, as suggested by Van Auken (4). Still another method of assessing the effectiveness of an educational program is to have the program evaluated by the graduate, another approach mentioned by Van Auken (4). A survey approach used by Gasen et al (1) asked students to evaluate various aspects of an MIS program. This study focused only on the satisfaction students perceived with the entire MIS program and not the content value of individual courses. A questionnaire proposed by Hanchey (2) asks the graduate to indicate the value of specific MIS topics in addition to the quality of preparation in several areas such as analytical skills, values and ethics, etc. rather than specific course content.

## THE PURPOSE OF THE STUDY

The objectives of this research were to determine

1. The perceived content value of each required course in an MIS program during a graduate's first year on the job;
2. The perceived content value of each required course in an MIS program in a graduate's current position;
3. A graduate's overall satisfaction index with an MIS curriculum;

riculum;

4. The relationship between one's overall satisfaction index score and one's evaluation of each of the curriculum's required courses during the first year on the job and in one's current position;

5. The differences between the relationships between one's overall satisfaction index scores and course evaluation scores in the two frames of reference in number 4 above and

6. Whether the differences found are consistent with the objectives of the faculty when they designed the required courses.

## METHODOLOGY

### A. Course Evaluations

A questionnaire asked the respondent to evaluate the content value of each required course using a six-point Likert scale.

### B. Frame of Reference

The graduates were asked to evaluate the content of a course at graduation versus one's current position.

### C. Overall Satisfaction Index

Graduates were asked, again using six-point Likert scale, to indicate their feelings toward the MIS program on several sets of bipolar semantic differential adjectives. This method is based upon the technique of Mitchell and Olson (3) as applied to research in the field of Marketing.

### D. Subjects

A questionnaire was sent to students who graduated between 1986 and 1994 from an MIS program of an AACSB accredited College of Business in California.

## FINDINGS

### Required Course Content Evaluations - First Year On The Job

The mean and rank for each of the required courses are shown in Table 1.

**TABLE 1**  
MEAN SCORES FOR REQUIRED COURSES  
DURING FIRST YEAR ON THE JOB

Course Title	Mean	Rank
Business Information Systems and Organizations	3.86	6
COBOL Language Programming	4.56	4
Accounting Information Systems	3.20	8
Structured Systems Analysis	4.67	3
Software Project Management	4.89	2
Data Base Concepts	4.92	1
Information Center Administration	3.65	7
Systems Development Practicum	4.47	5

### Required Course Content Values - In One's Current Position

The next phase yielded the alumni evaluations in Table 2 for the same set of courses with their current position as the frame of reference.

**TABLE 2**  
MEAN SCORES FOR REQUIRED COURSES  
IN ONE'S CURRENT POSITION

Course Title	Mean	Rank
Business Information Systems and Organizations	4.05	5
COBOL Language Programming	3.13	7
Accounting Information Systems	3.09	8
Structured Systems Analysis	4.89	3
Software Project Management	5.37	1
Data Base Concepts	5.22	2
Information Center Administration	3.74	6
Systems Development Practicum	4.85	4

### Development of Overall Program Satisfaction Index

The graduates were asked to indicate their feelings toward the entire MIS program on several sets of bipolar semantic differential adjectives. A principal components factor analysis revealed that only one factor was present. The items shown in Table 3 had high factor loadings. The Cronbach alpha for the items was .9245, showing a very high level of internal consistency of the responses to the items.

**TABLE 3**  
SEMANTIC DIFFERENTIALS AND THEIR FACTOR  
LOADINGS

Scale Item	Factor Loading
Good Experience-Bad Experience	.67448
Good Use of My Time-Bad Use of My Time	.82859
Valueless-Valuable	.78144
Useless-Useful	.77598
Desirable-Undesirable	.80548
Ineffective-Effective	.81820

### Analysis of First Year On The Job Course Content Scores

The overall program satisfaction index score for each graduate was then matched to the graduate's evaluation of the content of each required course during the first year on the job. The Pearson product moment correlation values are shown in Table 4.

**TABLE 4**  
CORRELATION OF PROGRAM SATISFACTION INDEX  
SCORE WITH VALUE OF COURSE CONTENT DURING  
FIRST YEAR ON THE JOB

Course Title	Correlation Coefficient	N
Business Information Systems and Organizations	.4528*	3
COBOL Language Programming	.1643	57
Accounting Information Systems	-.0159	56
Structured Systems Analysis	.3898**	58
Software Project Management	.3358*	58
Data Base Concepts	.2917	58
Information Center Administration	.2833	54
Systems Development Practicum	.4088**	55

\* P <.01

\*\* P <.001

### Analysis of Current Position Course Content Scores

The overall program satisfaction index score for each graduate was then matched to the graduate's evaluation of the content of each required course in one's current position. The Pearson product moment correlation values are shown in Table 5.

**TABLE 5**  
CORRELATION OF PROGRAM SATISFACTION  
INDEX SCORE WITH  
VALUE OF COURSE CONTENT IN ONE'S CURRENT  
POSITION

Course Title	Correlation Coefficient	N
Business Information Systems and Organizations	.5598**	30
COBOL Language Programming	.1902	57
Accounting Information Systems	.0484	56
Structured Systems Analysis	.4339**	58
Software Project Management	.3536*	59
Data Base Concepts	.2250	59
Information Center Administration	.3370*	54
Systems Development Practicum	.5235**	54

\* P <.01

\*\* P <.001

## ANALYSIS

When the faculty designed the MIS curriculum, they planned that the content of the following courses would have primarily entry-level value:

COBOL Language Programming

Accounting Information Systems  
 Structured Systems Analysis  
 Data Base Concepts

It was also planned that the content of some courses would have major applicability later in one's career. Those courses were:

Software Project Management  
 Information Center Administration

Some courses were designed in such a manner that the course content would have applicability not only in an entry-level position but as one progressed in the MIS field. The courses of this type were:

Business Information Systems and Organizations  
 Structured Systems Analysis  
 Software Project Management  
 Systems Development Practicum

The following findings are consistent with the faculty plans. The Business Information Systems and Organizations course showed a high correlation between the value of the course in the first year on the job and the graduates' overall measure of satisfaction with the MIS program. The correlation was even higher and much more significant statistically when the graduates related the course value in one's current position to overall satisfaction with the MIS program.

The Structured Systems Analysis course content both during one's first year on the job and in one's current position was very highly correlated with one's overall satisfaction with the MIS program. The Software Project Management course exhibited the same relationship as the Structured Systems Analysis course.

The Information Center Administration course content value during one's first year on the job was not significantly correlated with a graduate's overall satisfaction with the MIS program. However, there was a significant correlation between the perceived value of the content of the course in one's current position and one's overall satisfaction with the MIS program.

As to the Systems Development Practicum course, the score for the value of the course content during the first year on the job was significantly correlated with one's overall attitude toward the MIS program. Additionally, the value of the content of the course in one's current position was correlated even more strongly with a graduate's attitude toward the entire MIS program.

Some other findings were worthy of note. The Data Base Concepts course content value during one's first year on the job was more highly correlated with a graduate's overall satisfaction with the MIS program than in one's current position, but was not significantly correlated in either case. Also, the COBOL Programming course had a high perceived value during one's first year on the job. However, its content either during the first year on the job or in one's current position was not correlated with graduates' overall satisfaction with the MIS program. Since this course was offered by the Computer Science Department rather than the MIS area, it is possible that the students did not relate this course as part of their MIS program. Similarly, the Accounting Information Systems course showed low correlation, whether viewed during one's first year on the job or in one's current position, with overall satisfaction with the MIS program. Once again, this course was offered by the Accounting Department rather than the MIS area. As a consequence, the students may have perceived the course as a peripheral rather than core member of the MIS program.

## SUMMARY AND CONCLUSIONS

### Summary

The extent to which the value of the content of a course is a driver of, i.e., correlated to, a graduate's overall attitude toward, or satisfaction index for, the entire MIS program differs as a function of the graduate's frame of reference, i.e., first year on the job or one's current position.

### Conclusions

It is suggested that if an MIS faculty wishes to validate the extent to which its beliefs as to the entry-level versus career value of course content are consistent with the perceptions of its graduates, they can do so by using the method described in this paper.

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