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ABSTRACT
                A decision making system for educators to enable them
to plan and make information-based decisions is briefly described.
The information system's characteristics are explained, along with a
summary of information systems in higher education. A self-test
criteria of effectiveness and feedback and evaluation methods are
also included. A request form and an evaluation form are appended.
(SK)

TITLE:

I.C.I.S.

INTER-
CAMPUS
INFORMATION
SYSTEM

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DATE:

April 15, 1975

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INTRODUCTION TO ICIS

I.C.I.S. =

Inter-
Campus
Information
System

ICIS is a decision-making system designed for busy educators who

want to move from crisis-management and reactionary decisions to planning

and information-based decisions.

NOTE:

INTER-Campus = Multi-Campus

INTRA-Campus = One Campus

Enclosures

I. Characteristics

II. ICIS Entry and Service Forms

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PART I

IS Characteristics

Information System (IS)
Characteristics

CONDITIONS	PERFORMANCES (Characteristics)	CRITERIA
Given the following:	The information system will:	According to the following standards:

1.11 Data (including multi-media)
1.12 Classification routines (Entry)
1.13 Thesaurus
1.14 IS programs (when computerized)
	2.10 Classify	3.11 Screening criteria
		   Accept (on target)
		   Reject (off target)
		   Seek out (update and improve)
		   Nonduplication (of other available systems)
		3.12 Generic category (file)
		3.13 Thesaurus commonality (synonyms)
		3.14 Cross-Reference (system)
		3.15 Classification criteria (1/0)
		3.16 Policy input (IS controlled consensus)

1.21 Classification
1.22 Storage routines (input)
1.23 Memory bank
1.24
	2.20 Store	3.21 Unique identifier for item (#)
		3.22 Easy access (logic)
		3.23 Thesaurus update
		   KWIC (key words in context)
		   KWOC (key words out of context)
		3.24 Physical entry (data) or reference (multi-media)

1.31 IS Item
1.32 Need to edit
1.33 Editing routines (throughput)
	2.30 Edit
	   2.31 Add to
	   2.32 Delete
	   2.33 Change
	   2.34 Restructure
	   2.35 Update
	   2.36 Verify
		3.31 Exact item (data)
		3.32 Accuracy (quality) and completeness (quantity)
		3.33 Proper change (information gain)
		3.34 File integrity (internal) and security (external)
		3.35 Documentation (written "how to" for the next guy)
		3.36 Backup procedures ("carbon" hardcopy)

1.41 Request 1.42 Retrieval routines (access)	2.40 Retrieve	3.41 Authorized user (only) 3.42 Allowable items (for user category) 3.43 Proper request form (or equivalent) 3.44 Acceptable time frame 3.45 Requested information 3.46 Beyond "one human" interface
1.51 Specific usage (and user) 1.52 Specific requirements (priorities)	2.50 Formatize	3.51 Usable format (beyond useful) 3.52 "Decision power" 3.53 Customized fit (to request and user)

INFORMATION SYSTEMS

IN HIGHER EDUCATION

Information systems refer to computerized and non-computerized methods of coming up with the right information at the right time. After all, educational decisions can never exceed the validity of the information upon which the decisions are made.

The stress on computerized information systems seem to arise from the common belief that the faster the information is available, the better the decisions will be. In other words, information systems are intended to improve decisions by making decisions faster and thus resulting in more timely decisions.

The semantics of the above sentence might be confusing to some.

Once again, let's repeat the message in simpler language this time:

Information systems provide data rapidly. This undeniable fact is sometimes interpreted to mean that information systems insure better decisions.

Without wishing to offend the feelings of anyone, it must be asserted that the major difficulty today is not unavailability of data but the super-abundance of uncoordinated data. Executives -- as citizens -- are being bombarded with a myriad of data sources. Each one of these individual data sources is spewing out information every day, every hour, and sometimes every minute as in the case of the wire services.

There is so much data available, that individuals are likely to be submerged in a sea of factual information, half truths, and misinformation unless the human person is able to sort it all out.

Sorting out the available information means coordinating reliable sources with a priority framework.

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SELF-TEST ON INFORMATION SYSTEMS

DIRECTIONS: Read each of the following statements.

Circle AGREE or DISAGREE in order to express your opinion about the statement under evaluation.

AGREE   DISAGREE   1. Any campus that has a successful advisory committee procedure should insist that this procedure be adopted on other campuses in any inter-campus cooperation.

AGREE   DISAGREE   2. No matter how busy individual faculty members are with meetings, the time consuming process of meeting face-to-face is valuable enough to put off important inter-campus meetings two or three months into the future rather than discuss things over the telephone.

AGREE   DISAGREE   3. One of the best ways to motivate faculty members to work in projects that have a multi-campus payoff is to offer to pay individual teachers at least an honorarium for the extra services rendered that will benefit other teachers on other campuses.

AGREE   DISAGREE   4. In order to save time and money, two or three key people on each campus ought to get together and decide how the inter-institutional cooperation should be done.

AGREE   DISAGREE   5. In an inter-institutional data gathering survey, each individual campus and each individual specialty area should make sure that "their" data needs are not compromised in the group data needs.

AGREE   DISAGREE   6. The average community college, college, or university professor is making a mistake in taking material that could be copyrighted for publication and contributing it to an inter-campus cooperative information system venture.

AGREE   DISAGREE   7. Old timers on the administrative scene should react to even the most highly computerized information system by asserting, "That's the way I've been doing it for 20 years, even without a computer."

AGREE DISAGREE 8. One of the best roads to the top is inter-campus cooperation which gives greater exposure than intramural contributions.

AGREE DISAGREE 9. Rather than accept a number of constraints necessary for inter-institutional cooperation, the qualified expert should insist professionally, "Give me the money and I'll do a good job!"

AGREE DISAGREE 10. The difficulty with information systems designed by professors and administrators is the fact that only a limited type of intelligence goes into the planning of the system. This limited intelligence is restricted to high-IQ, highly verbal types, good writers, good researchers, likable personalities, and talkative scholars,

AGREE DISAGREE 11. From an emotional climate point of view, one of the greatest obstacles to inter-campus cooperation is the fact that gloomy and negative anticipations often color the scene because of memories of past failures.

AGREE DISAGREE 12. As far as inter-campus information systems are concerned, quality, and not speed, is the primary objective.

REMEMBER:

INTRA-CAMPUS = one campus

INTER-CAMPUS = multi-campus

INFORMATION SYSTEMS ANSWERS

In general, there are no right or wrong answers to the above questions. After all, each individual manager of an information system has a right to specific opinions.

On the other hand, judged from the criteria of being able to provide the right information, at the right time, in the right format, in an understandable form, and from an inter-campus system, certain answers did appear to more effective than others.

The more successful individuals tended to have the following response pattern:

> Questions 1 to 9 were answered with disagree while questions 10 to 12 were answered with agree.

This type of test does not establish an objective norm.

Rather, this type of examination is intended to provide a criterion-referenced framework with which to pinpoint and correct specific operational difficulties that impede the effectiveness of any given information system.

Thus, no effective information system surveyed with the above 12 questions got all 12 questions exactly right according to the ideal profile.

Ineffective systems got 5 of the questions or less according to the ideal profile.

Average systems got between 6 and 8 questions correct according to the ideal profile.

Exceptional systems got 9 or more of the questions correct according to the ideal profile.

These norms can be used to compare your system with others.

However, the biggest point is to compare your system with itself according to the 12 criteria implicit in the preceding 12 questions.

One final joker should be pointed out. It must be remembered that the above 12 criteria are for multi-campus and inter-campus information systems. Whenever the emphasis is strictly on local needs, the ideal profile of inter-campus is very often turned around. In other words, the right answers for inter-campus are sometimes the wrong answers for one man, one department, and one activity type of information systems.

CRITERIA OF EFFECTIVENESS
(MULTI-CAMPUS INFORMATION SYSTEMS)

The above data obviously presupposes some criterion of effectiveness for multi-campus information systems.

In the data reported, the following criteria were utilized:

1. Directors of multi-campus information systems were asked to rate their own system as "exceptional, average, or ineffective."

2. Users of multi-campus information systems were asked to list those information systems being used and to rate each system as "exceptional, average, or ineffective."

3. All systems rates were given three simple information requests. The results of each request was rated upon the criteria of a) the right information, b) the right time, c) the right format, d) an understandable form, and e) inter-campus accuracy.

The above survey was not difficult to make because in 1975 there are very few multi-campus information systems in operation.

READER FEEDBACK

The above analysis of the 12 criterion-referenced questions is based upon a specific sample.

One of the best ways to test out a theory is to replicate an experimental survey elsewhere with a wide variety of variables.

Readers who wish to participate in this replication and empirical validity study may do the following:

1. Answer each of the preceding 12 questions.

2. Identify the respondent as working with an intra-campus information system or working an inter-campus information system. Inter-campus information system refers to several different institutions of posttest-secondary education. Intra-campus information system refer to systems developed for one specific campus of post-secondary education.

NOTE:

INTER	=	Multi-campus
INTRA	=	One campus

EVALUATING AN
INTER-CAMPUS INFORMATION SYSTEM (ICIS)

DIRECTIONS: React to the following quotations in terms of an inter-campus
information system.

"There are no free riders. Everyone is expected to give the best
contribution possible. There is no sense in trying to do anything
unless the doer gives the job maximum effort. The doer may not
always succeed, but at least the effort and dedication and interest
should be there."

IDEAS ABOUT INFORMATION SYSTEMS

1. Information systems can be used in decision making in order to document full details about cost.

   In this way, the institution starts with the end product, goes on to the programs needed, and then specifies the departments needed.

2. A planned payoff is essential.

   A planned payoff means that there are benefits to everyone involved. This avoids people asking, "What happened to the data I gave??"

3. Some information systems are very quick to raise issues and very slow to provide documentation and implementation strategies. These supportless systems resemble the Tennessee bear hunter that spent most of his time rounding up bears and leaving to others the problem of killing the bears and skining them. After all, the Tennessee bear hunter would say, "I'll leave you fellows to handle that one alone while I go after another bear."

4. Some faculty members resemble Mr. Chips, they are always in the classroom.

   Other faculty members resemble Johnny Appleseed, they are always listed in the catalogue and often off campus.

   Some faculty members resemble hired hands, who are almost migratory workers.

   An honest informational system used for effective decision making

will identify faculty loads, roles, timetables, and workload.

PART II

ICIS Entry and Service Forms

I.C.I.S. Request Form
(Inter-Campus Information System)

DIRECTIONS: Type or print all information requested below on this form or on an attachment.

Staple to letterhead request for service.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

1. Name and Title: Person making request.

2. Name and Title: Person to receive Information Package (IP)

3. Name and Title: Decision Maker(s) to use IP

4. Title: Give a brief unique identifier name to the IP requested

5. Specifications: Describe exactly the IP requested

6. Form: Indicate how the IP is be delivered (for example, mail, phone call, interview, cassette, TV, telegram, teletype, CRT, printout, manuscript, photoready)

7. Format: Sketch out a sample table of contents, index, experts, dimensions, trends, glossary, bibliography, and other expectations.

8. Time Frame: Estimate reasonable and acceptable dates for progress reports and final report

9. Overview: Cite the organizational or personal objective under which the IP is to be used for decision making

EVALUATION OF SERVICE

An evaluation service has a very definite commitment; namely, to make sure that the right decision-maker is provided with the right information, in the right form, at the right time, and in the right way so as to facilitate decision-making in light of institutional, organizational, and personal goals and objectives.

In order to make sure that this information service has lived up to these criteria, please express your opinion about it by circling yes or no in front of each question and providing comments where appropriate.

YES NO   1. Are you the right decision-maker to receive the enclosed information?

YES NO   2. Is the enclosed material the right information?

YES NO   3. Is the enclosed information in the right form, that is, a usable form?

YES NO   4. Has this material reached you at the right time, as far as possible?

YES NO   5. Has this material been presented to you in the right way?

YES NO   6. Has this material helped facilitate the decision-making process?

YES NO   7. Has this material furnished more help to the decision-making process than would be available through normal channels?

YES   NO   8. Has this material been channeled into institutional
                 goals and objectives?

YES   NO   9. Has this material been channeled into organizational
                 goals and objectives?

YES   NO   10. Has this information been channeled into personal
                 goals and objectives?

YES   NO   11. Do you believe that educational decisions can never
                 be more accurate than the information upon which
                 the decisions are made?

YES   NO   12. Do you have specific comments, recommendations,
                 suggestions, and reactions to the information system
                 service with which you have been provided?