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ABSTRACT

Methods by which campuses with similar information needs for similar decisions can set up a common data base are identified and discussed. Advantages and disadvantages of achieving the common data base by bulk paperwork, functional objectives, and piecemeal empiricism are considered. Practical suggestions for instituting each method are given. Use of a computer in compiling the base is briefly discussed. (SK)

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TITLE:

ICIS AND THE REDUCTION OF PAPERWORK

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RESUME

This document attacks the problem of answering the question:

"How can several campuses with similar information needs for similar decisions set up a common data base without immediately going to a computer for which the system may not be ready?"

This implies that "the right piece of information can often be detached from a large amount of accompanying paperwork."

This results in more speed, performance, and planning together with less cost, time, and paper.

INTRODUCTION

This document is an attempt to lay down some fundamental systems principles about evaluation.

These principles of evaluation are conceived in the framework of a multi-campus information system. This information system is not necessarily computerized even though this would be one way to go about the task.

This information system is an attempt to come up with a low cost, high quality system that will provide the right decision maker, with the right information, in the right form, in the right format, at the right time, and for the right purpose, that is, to achieve prespecified institutional objectives.

Having been exposed to several DIRECTORS OF INSTITUTIONAL RESEARCH, it is the opinion of the author that each of these researchers in an expert at creative writing. Having looked at description of the service available on a local campus, the present author concluded that the Director of Research must have just recently visited UTOPIA and written up a glowing summary of the glories found therein.

After a short visit to the campus, it became obvious that a dusty office, an in-basket piled high with letters, and an out-basket filled with dust were the only approaches to a systematic process.

I am certain that what happened between the in-basket and the out-basket was systematic, but unfortunately, it was much too slow and much too expensive.

The main cause seems to have been in providing a human intelligence that would receive each request either by the mail or by the phone and act upon them. It is also conceivable whether this human intelligence would walk into the office of a high placed faculty member or a high placed administrator and carry out requests demanded.

It began to dawn upon the current author that such a way of doing things is a lot more expensive than hiring an outside consultant on a piece-by-piece basis. The outside consultant will receive more per day than the director of institutional research, but when output is measured, the high paid consultant actually is less expensive on a per product basis.

The consultant will set up a system that functions with high quality and with low cost.

EVALUATION ON A SHOESTRING

The title of this article is meant to summarize its cost. This cost analysis is based upon the following assumption:

After a project is proven educationally sound, it must be proven low cost before it can be implemented.

This should not be interpreted as penny pinching. This approach realizes that there are many sound alternatives to attain a significant educational evaluation. Sometimes it is difficulty to rank these alternatives educationally. When this paradox arises, it is the assumption of this article that cost analysis does give another way of looking at an evaluation. Thus, if three or four approaches are equally sound educationally, it might not be a bad idea to try out the most economical one.

This above concept has been presented on several occasions. Almost every time, three questions emerged. Here they are:

QUESTION 1:

HOW CAN SEVERAL PROGRAMS WITH SIMILIAR OBJECTIVES SHARE RESULTS OF EVALUATION AND AVOID DUPLICATION?

There are several ways to achieve the establishment of a common data base:

(a) Bulk paperwork;

(b) Functional objectives; and

(c) Piecemeal empiricism

Let's look at examples of each approach:

BULK PAPERWORK: It is possible to collect all the planning documents, working documents, evaluation forms, and internal memos of a given project.

FUNCTIONAL OBJECTIVES: It is possible to sort out all this bulk paperwork by objectives. Under each objective would be listed the appropriate evaluation criteria and the corresponding resources. This collection could be based in a computer storage unit that would permit continuous input and classified retrieval.

PIECEMEAL EMPIRICISM: It is possible to take only the best one or two components of each project whatever these may be. A collection of these components would give some idea of precisely what are the most successful techniques across a number of projects.

There are advantages to each of these approaches:

(a) BULK PAPERWORK: The collection of all the paperwork involved in a project is certain to include those ingredients that make for an integrated approach. In other words, each project is so unique that it most be considered as almost unimitable as far as its total ensemble is concerned. Gathering all the paperwork is one way to look a the total picture.

(b) FUNCTIONAL OBJECTIVES: Looking at a reduced pile of paper, via a classification based on objectives, would permit a more systematic input and retrieval from this system. Thus, if somebody was interested only in objective R in several projects, it would be theoretically possible to obtain all this information from one central bank rather than going to each individual project.

(c) PIECEMEAL EMPIRICISM: Instead of concentrating on a large amount of bulk paperwork which is then reduced into a smaller, though quite large, list of functional objectives, the piecemeal empiricism approach tries to find the one or two tiny components that seem to constitute the success of the given projects. These components are smaller to look at and perhaps easier to apply. A complete picture may not be provided, but clues to overall success are inherent in this format.

Each of these methods of comparing evaluation programs can have typical disadvantages:

(a) BULK PAPERWORK: In this approach, there is simply too much paper to assemble, to xerox, to transport, to read, and to digest. Not only is there too much data, but most of this data is not in a state to be easily transmitted or transplanted.

(b) FUNCTIONAL OBJECTIVES: Going through the vast amount of paperwork in removing a lot of the fact does leave a basic substructure of objectives, resources, and evaluations. The paperwork involved in this system can be considerable. Going to a computer cuts down on the paperwork, but this computerization does not solve the semantic difficulty. The semantic difficulty tells us that what two people call objective S may operationally be two entirely different objectives even though they are both mingled and confused together into the computerized data bank.

(c) PIECEMEAL EMPIRICISM: This approach gathers much less data. It gathers only the data that has been found to be effective in a given situation. Theoretically, this data should be transplantable by educators just as surgeons can transplant a good heart into someone in need of this vital organ. In evaluation as in surgery, the difficulty is transplant rejection. A heart that functions perfectly in one healthly person may not be able to overcome the shock of transplant when it is used to replace a damaged heart. Thus the evaluation that worked somewhere else, may not be able to make roots in a different environment.

Let's try to put all of this together into a couple of practical suggestions:

(a) BULK PAPERWORK: Uniform specifications for the type of paperwork to be exchanged among projects should be highly specific. It is necessary to cut down on needless repetition and on unnecessary content.

(b) FUNCTIONAL OBJECTIVES: When going through this reduced amount of bulk paperwork, it must be ascertained whether or not two different projects actually share one or more objectives in common. When these objectives are shared in common and not only shared semantically, it is possible to merge this data into a common retrievable source.

(c) PIECEMEAL EMPIRICISM: Gathering the best from a number of projects will give a distorted picture. It will also be an incompleted picture. In order to avoid the shock of transplanting an evaluation from one project to another, both the distortion and the imcompleteness must be remedied. One of the best ways to remove the distortion from this project is to lay out a grid that makes it evident to all concerned: (a) exactly

what is missing from the bits and pieces gathered by piecemeal empiricism, and (b) exactly what should be done to look for or to fill in the missing pieces of the picture. When piecemeal empiricism is put together with functional objectives and bulk paperwork via such an x-ray approach, it is possible to share the results of evaluation while avoiding duplication. Instead of several projects looking for a piece that is already there, it would be better to assign the priority areas for the next research project. This would mean looking for the missing pieces and trying to find existing pieces that can be transplanted into a specific project.

QUESTION 2:

WHEN MUST WE COMPUTERIZE?

ANSWER: When you want to!

When costs justify it!

When speed requirements require it!

QUESTION 3:

CAN YOU SET UP THIS SYSTEM FOR US?

ANSWER: Yes.

Today!

Now!

Let's start using the ICIS request form as an example.

BENEFIT A

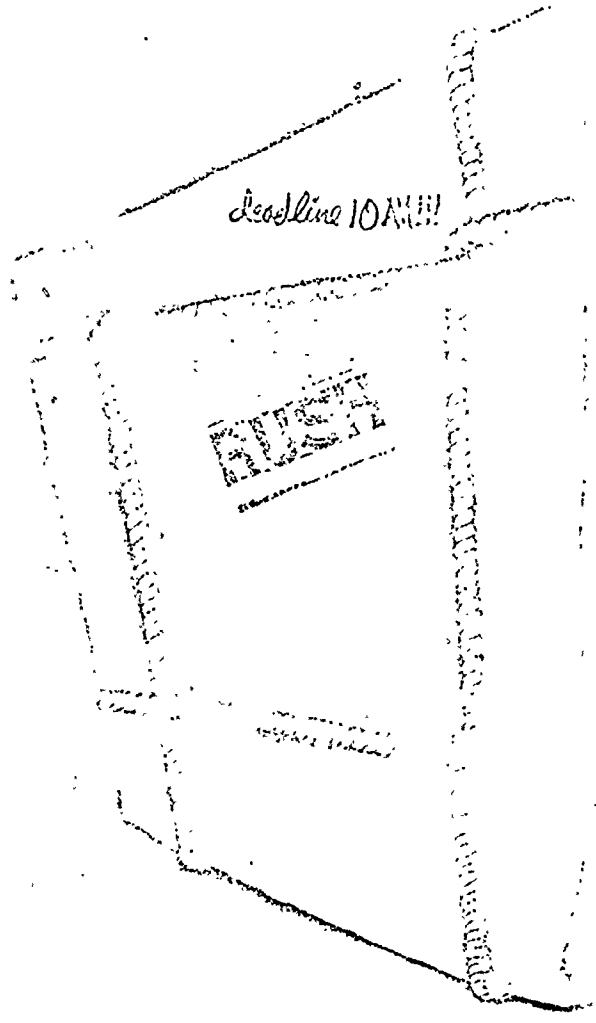
Speed, Accuracy, Performance

ICIS permits searchers to find a "bundle" of information

- rapidly _____ with speed
- accurately _____ the proper decision
- consistently _____ with performance

There is no need to be so all inclusive that the main expen$e is $torage.

Conclusion: DATA shouldn't just sit around.



If your shipments are sitting around all day, it may look like you are too.

Finding any record in seconds. That's speed.

Keeping it up year after year. That's performance.

BENEFIT B

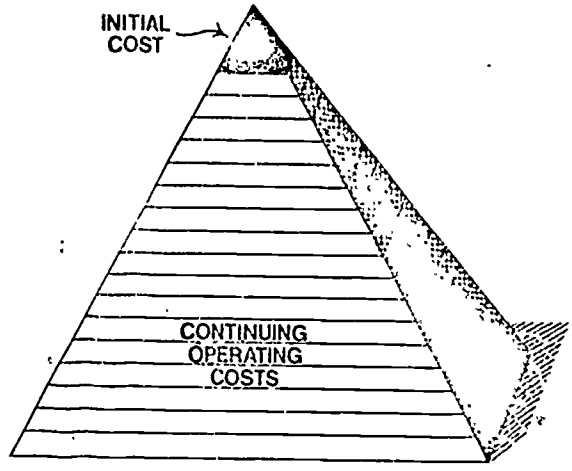
Low Operating Costs

A system is expensive to PLAN and inexpensive to OPERATE.

A human being is less expensive than a system for one or two "odd" information searches.

However, a system is necessary to minimize "continuing operating costs."

Conclusion: Buy a system that reduces "built-in" costs.



Planning will preview

this cost pyramid

to your

advantage.

BENEFIT C

Non-Cost for Two-Way Users

Users can share information. This is preferable to paying for "each use" and to being paid for "each contribution."

Two-way users both GIVE and RECEIVE without cash remuneration.

Distinguish between "necessary" costs and "avoidable" costs. Cut the avoidable costs.

Conclusion: Certain systems can't be bought for money, but are funded by mutual convenience.

Use mine, will you?

DIRECT INQUIRY

ICIS

1. The Inter-Campus Information System (ICIS) allows teachers to use works developed by each other for mutual sharing.

2. There is no intention here to circumvent the rights of authorship or of certain copyright privilege .

3. A system has been developed which transmits information on a gratis basis, a barter basis, or a fee basis. The author of the material decides which format is most conducive to the best information in the best possible educational framework.

4. If you interested in this system, help is available to you.

BIBILOGRAPHY

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