ABSTRACT
        In founding an instructional materials and methods
center on a university campus, it must be borne in mind that the type
of university and degree of faculty power greatly affect the eventual
form of an instructional center. Many people have different ideas
concerning how a center fits into the content model of knowledge or
the transmission model of teaching. The purpose of an instructional
center is often called "improving instruction", but this can be
ambiguously interpreted. On the one hand the purpose could be to aid
and supplement existing methods and objectives of instruction. This
is likely to mean the center is to be a service agency for the
faculty. On the other hand the center might seek to go beyond the
existing methods and curricula on campus. In the latter case a
conflict with faculty can easily develop. The survival of an
instructional center sometimes depends on the independence of its
funding and the vagueness of its stated purposes. The idea of being a
"catalyst for change" should be avoided. Overall, centers should be
expected to engage in research, science, and teaching. (WH)

ABOUT TO HAVE A CENTRE?

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Couples who are about to become parents are likely
to go to those veterans who have several children. They
ask advice and opinions on all kinds of problems ranging
from how to raise a mature, self-fulfilling offspring to
what to do if the child smokes marihuana. And people
about to start a learning centre on their campus are
likely to go to an established centre to seek counsel.

In both cases the questioners are likely to be
naive: they ask the wrong questions and ignore the
important ones.

Since our Centre has been in business we have
entertained scores of delegations representing incipient
centres. Their questions have served as the impetus for
several of the papers in this symposium.

Talk delivered at a symposium at the National Society for
Instruction and Performance annual meeting, Miami, April
1974.

Reasons for a Taxonomy

Bruce Shore and I have been developing a taxonomy of Centres: a set of descriptions, one of which describes any learning Centre. We have three purposes for doing this.

1. Empirically constructing a taxonomy uncovers many people and places. We learn about a lot of Centres we did not know about. The resultant taxonomy will include a systematic descriptive index through which Centres and personnel with similar interests can get in touch with each other in order to exchange ideas, products, and people.

2. A detailed taxonomy and accompanying documents would stimulate the thinking of people setting up a new centre. By providing lots of examples and instances which differ along subtle dimensions, the taxonomy would force discriminations which newcomers would not otherwise make.

3. By constructing a taxonomy and in reviewing it later, we might see some useful generalizations about this business of instructional innovations and instructional centres.

Today we are going backwards. We will start
with purpose no. 3. I plan to make some general remarks
about ways of thinking, acting, and organizing on most
any campus that will affect any Centre set up on it. Bruce
will then describe the taxonomic scheme we have devised
to describe and categorize instructional Centres.

The Historic Milieu

Let's start back in time in order to establish a
most important aspect of Centre birth, growth, and
development - the milieu in which it is planted.

Although the situation is somewhat different on
different campuses, I'll choose one kind of environment,
the one most typically found on the campus of an older
private institution with activities in research as well
as teaching. Since these campuses are often prestigeous
and traditionally have led the major movements in higher
education, it is a justifiable choice. However, it is
important to note that several critical factors may
have to be changed when considering, for example, a
state supported institution, the primary, sometimes only,

purpose of which is to teach.

    The Basic Control System. To understand some of
the problems that campus Centres face, it is necessary
to follow the set of assumptions which underlie most
older colleges and universities.

Definition no. 1. A university is an institute of learning.
Definition no. 2. Although "learning" includes scholarship
    and research, it is through its teaching that the
    university justifies its existence to society.
    Its most visible, best known products are its students.
    Therefore for most public purposes learning is
    equivalent to teaching.
Definition no. 3. Teaching is what a teacher does. The
    professor teaches. (There are subtleties, like:
    "doesn't a textbook teach?" I think most professors
    would reply: "No, a student can learn from a textbook,
    but it doesn't teach him in the sense that a professor
    teaches him.")

    Historically knowledge - its generation, certifi-
cation and dissemination - has been in the hands and

heads of the professor.

Historically the control of the university as
an organization has similarly been in the hands of the
faculty.

Historically the instructional materials, as well
as face-to-face instruction, has been controlled by the
professors. This activity was the teaching process.

What is the teaching process? How does it
happen that the teacher does what he does? How is the
teaching process conceptualized? Most teaching, as you
know, is described in terms of a content model of
knowledge and a transmission model of teaching.

In the content model, knowledge is equated with
verbal stuff such as that which is found in textbooks.
Physics or chemistry means knowledge not performance.
When a contemporary task analyst says something like
"Let's record the behaviour of physicists in order to
find out what to teach in a physics course," he is
swimming up the rapids against the flow of the history
of the university and against almost everything that has

been said in the area of epistemology by scholars.' He is battling all that is instinctively known by - the common sense of - the man or woman in the street.

Surely there is something more to physics than the behaviour of the physicist. The book on thermo-dynamics is not merely the artifact left by the physicist. That may be true of a painting which _is_ the trace, the artistic footprint of the artist. But surely there is a _content_ of physics or chemistry or biology - a set of statements isomorphic or almost isomorphic with reality. There is knowledge - there is content. This is a deeply different starting point for teaching than the one chosen by a task analyst.

But perhaps we could concede the observation that there is content and it equals knowledge. Perhaps the task analyst is less concerned with that than with the performances of the knowledgeable and with the teaching of those performances. Content may not be irrelevant to knowledge maybe it is just irrelevant to teaching. But the traditional teacher again is at odds. Let's look at his teaching model, the _transmission model_.

There is all this content <u>contained</u> in a place - say a book - or better, in the skull of a professor. Somehow that content must be moved across the airwaves from his skull to that of the students. It is a shipping problem, really, and the professor is the captain of the cargo boat.

All of this is, of course, an oversimplification, but basically it sets the stage realistically for the arrival of a new actor - the learning centre. When you think of these definitions, assumptions, and observations when you realize this is the milieu of many campuses you can see how easily a Centre which is organized and staffed by people like us can be misperceived and misused. It can never really get away from such basic problems as:

What is meant by knowledge?

and, Who will select it, control it, and disseminate it?

and, What is the model of learning to be applied?

To the extent that members of the Centre and members of the faculty differ on their answers to these questions, there is bound to be tension and conflict.

The Purpose of a Centre

Early in thinking about setting up a Centre, the founders-to-be are likely to muck around in the area of stating purposes. I will return to this point in more detail later after a brief discussion here. Every centre has as its overall global goal the improvement of instruction, but the particular purposes of such a goal vary. For the moment I'll divide all purposes into two major categories.

The first group includes all the goals aimed at and improving existing methods of instructors and aimed at reaching existing educational objectives. The efforts of a Centre pledged to such goals may be likened to attempts to make the old horse run faster.

The second category includes goals that revolve around producing improved instruction with or without existing methods and curricula. This core goal may be likened to attempting to build the first automobile.

The first type of Centre is invaluable in aiding the faculty. It accepts many, if not all, of the premises

I have just discussed. This is important: the Centre accepts both the content model of knowledge and the transmission model of teaching. It defers to the professor as the locus of instructional control. It aims at improving instruction by improving the professor as teacher, and improving the materials he produces. The control of major decisions remains in the hands of the professor. Those important early decisions, about instructional objectives for example, are his. We can teach him to write behavioural objectives, but those objectives will rise up from the content of knowledge, not from task analysis or a needs assessment based on performance.

An instructional Centre may be available to help the professor work through the now-accepted techniques of instructional design or the University may merely offer him the luxuries of an A-V centre to help him develop a more powerful and engaging information signal to transmit to his students.

Or the instructional centre might offer workshops, courses, and consultations which aim at improving the professor's own performance-as-teacher. Microteaching

and simulation techniques can be used in the effort to make the teacher a better teacher.

Motivation is often seen as critical. The Centre may try to get hold of motivational variables by stressing to the administration the need to reward good teaching as it rewards research and publication. Related to this would be Centre activities concerned with the evaluation of teaching. (Course evaluation is something every existing Centre has had a taste of and for some it is the central theme.)

Whatever the lever, it is always applied to the status quo with a view towards moving it, even if ever so slightly, towards greater effectiveness, increased accountability, increased variety.

It is easy to denigrate such efforts, sitting on the acropolis of instructional design with the collected works of Mager under one arm and under the other a shining marble bust of Jim Popham. However, such a Centre starts where the client and his working environment are at. It tries to displace as few people as possible

while displacing many strongly held assumptions.

The second type of Centre, of course, has a good deal of appeal to groups like ourselves. Freed of traditional methods, able to leap old curricular walls in a single bound, it has the vitality of youth, the shine of newness; it has courage and daring. Such a Centre in one way or another goes directly to the student. It may supply new instructional materials and systems - real alternatives to the classroom. It may find new methods of making out in the traditional system by teaching students, for example, improved reading skills or better ways to study.

It may move in on areas over which the professor, because of choice, prejudice, or tradition, has ignored. Such a Centre might become extremely active in Continuing Education for example.

It must guard itself in one way or another against faculty attacks for it _is_ a threat; it _does_ usurp traditional roles; it _does_ compete for funds and power. Strong administrative backing is one means of support.

But that may not be enough on a campus with a strong faculty.

Perhaps the epitome of such a Centre was described last Fall by Lawrence Fraley and Ernest Vargas in the Georgia State University sponsored conference, "Behavior Research and Technology in Education."* In the Vargas plan, the Centre would be in a sense the implementation unit for instruction. It would utilize professors as content experts or subject matter experts, as counselors and advisors, and occasionally even as the medium of instruction. But control would rest with the instructional experts and clearly, in Vargas' plan, they would not be isomorphic with the traditional faculty. As I said I'll return to the matter of purposes later on. Preparatory to a further discussion of purposes I'd like to look at another related issue: how a Centre goes about producing changes on its campus.

Methods of influence. The methods of persuasion, influence, and control of the Centre differ very much as one looks across the different Centres we have examined. At the base of this topic is the assumption that, in order to change the behaviour of the faculty or for that

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* Fraley, L. E. and Vargas, E. A. (West Virginia University), "Academic Tradition and Instructional Technology" Oct. 1973.

matter of the administration, some kind of control of the reward system in the community must be exercised by the change agency.

Traditionally, we have believed that the word is so persuasive that its mere utterance is enough to change behaviour. In certain instances it may be true that verbal behaviour directly affects on-going behaviour, as when policeman shouts "stop" as we are crossing the street. In most cases the effect is not as obvious or as powerful. We cannot literally shout down the walls of Jerico. The heavenly inspired words on the tablets that Moses brought down from the mountain were not enough to produce the behavioural changes that Moses and his partner had in mind. Even the audio-visual specialists themselves, pledged to an information transmission model of learning, have repeatedly demonstrated in their own research that mere exposure to a message is usually not enough to produce marked behavioural change.

Nevertheless, in sampling the outputs of the Centres we are familiar with, we are struck by the tremendous amount of energy placed on disseminating information and

in descriptions of the right way to teach. Presenting

the ten commandments of teaching will prove to be no more

effective, I'm sure, than the original presentation of

ten commandments. Indeed, since the source of inspiration

and the means of presentation are much less dramatic

in the contemporary case, it probably won't even have

beneficial side-effects.

Charles Pascal has recently presented at the Banff

Conference on Behaviour Modification a very relevant

paper about behaviour analysts and change agents practicing

what they preach when they attempt to change the behaviour

of their students. If you are interested, I recommend

to you his paper. Essentially he makes the point that when

we try to teach or persuade people to give up traditional

and ineffective means of changing behaviour, we often

utilize the ineffective, traditional means of changing

behaviour. A Centre devoted to teaching (defined as

producing behavioural changes in students) ought to be

demonstrating the kind of control techniques that it is

proposing its clients use when dealing with their students.

One would suggest, then, that the proliferation

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of dissemination activities in many Centres is probably
not very effective in changing the behaviour of the
faculty members to whom newsletters, monographs, and
the like are presumably directed. (There maybe other,
important audiences who in fact are being aimed at by
such publications: and it is well within the Centre's
interests to engage in active dissemination activities.
But it ought not assume that such dissemination activities
will produce the desired changes in the teaching of the
faculty members on its campus.)

Control over the reward system on the campus
would strike most behaviour modifiers as a crucial aim
for a Centre. And to some extent, most Centres show that
they have attempted to gain some control.

For example, they often advise the administration
about internal matters which, either directly or indirectly,
affect the reward system. They may be involved in the
awards for good teaching on a campus; they may help in
evaluation efforts to determine a teacher's effectiveness
and consequently the weighting that should be attached
to the teaching of that particular faculty member when

ha is being considered for promotion. This is a passive

side of the coin since most of the things I've mentioned

have to do with rewarding good face-to-face teaching

behaviours.

On a more active note, some Centres have gained

control over funds which are to be allotted at their

discretion, or at least with their approval, to innovative

projects originated by or in cooperation with faculty

members. This is a tricky business since handing out

money can gain friends but also lose them. Maintaining

strict control over the quality of educational development

may be inconsistent with making friends on the faculty

through the allocation of financial support.

Somehow the Centre ought to consider its means

of persuasion, influence, and control and consider

which techniques it proposes to utilize are feasible

in the environment in which it exists, and are compatible

with what it is preaching about techniques for behavioural

change.

Specifying purposes. Now to turn to a point

that I discussed earlier in this paper: the specification

of the purposes of the Centre. Just as they have strong

views on how to modify behaviour, most members of innovative

instructional Centres have a very clear and strong position

concerning stating goals in education. Their demonstrated

skill is less evident when they are stating goals for

their own organization. One reason is that most Centres

have to answer to multiple audiences, and the clear

explication of purposes may be detrimental to the survival

of the Centre. There is a lot to be said, despite James

Popham, for the blurring of objectives. The way of

ambiguity is often the way of increasing funding and

decreasing criticism.

When a Centre is originally being planned the

"fathers-to-be" do make an attempt at stating the purposes

of the Centre. However we have found that most otherwise

highly literate academics on university campuses, who are

engaged in setting up Centres, have great difficulty in

discriminating the difference between the word "and" and

the word "or". We often suggest a set of purposes from

which such people might choose. What we want them to do

is to decide between two purposes. They link the

purposes together with the word "and" and they insist
on saying "yes, both of them." You probably cannot have
your cake and eat it when it comes to certain goals for
instructional Centres.

Surely there are ways of doing a needs assessment
on a campus, finding out the interests of the faculty,
discovering the resources and constraints which must
necessarily influence the selection of goals. But almost
never has a Centre been founded on an empirical data base
such as that. More likely a list of purposes gleaned
from biblical quotations, the preamble to the constitution,
and similar documents is made up and then the Centre
personnel must act as interpreters and mediators, spending
much of their time explaining how their activities really
do meet these many and contradictory goals.

Another apparent way out of the difficulty of
stating specific objectives is for the founding fathers
to state some broad overall goal. Earlier I mentioned
such a goal: improving instruction. In a moment I will
point out in more detail some of the problems that that
ambiguous phrase can produce. Another popular candidate

is "acting as a catalyst for change."

It is a cliché to state that change if often confused with progress. One pitfall of the "catalyst for change" goal is that it encourages this confusion. It can stimulate frenetic activity demonstrating apparently the vitality of the Centre and in reality squandering lots of energy on harebrained ideas - energy that ought to be spent on diagnosing real problems instead of in embroidering pet solutions for non-problems. Several years ago I wrote an article called Premature Instruction which was directed at this sort of thing. Thomas Watson the elder will never know how often his employees conjured up dirty thoughts about IBM while following his ambiguous command THINK. Nor will universities know how much damage has been done by change agencies changing things unnecessarily or changing good things to bad.

And there is a second problem concerned with this ambiguous goal.

Humility is usually not the outstanding trait of an innovator. He has seen the light and spreads the word.

Similarly neither the founding fathers nor the members
of the Centre itself even blush when they declare that
the Centre will be the motive force for innovation on
their campus. The history of change agencies suggests
that they, like any other unit in a complex organization
are likely to be absorbed by or molded by the organization
as a whole. A Centre is but an organ in the whole body;
it may function to administer, demonstrate, facilitate
and expedite certain change activities. It can do so if
it proves compatible after the transplant operation.
But the organization can reject the new organ. Or the
organ can adapt and adapt until it has lost its
originally intended function.

Given the limited resources, including control
of important reinforcements for others, that most Centres
have, it is highly unlikely that they can originate major
changes or produce innovative activity in a campus
environment that is hostile to innovation.

I would strongly suggest that anyone starting
a Centre spend an enormous amount of time specifying
the purposes of the Centre and including, by the way,

flexibility clauses which describe the means by which the purposes may be altered.

Despite the difficulty in explicating goals, most Centres do have a set of them. Basically there are three areas in their descriptions of goals. Centres engage in research, service, and teaching.

By research may be meant basic research in learning, applied research of a mission-relevant type, or mission-oriented development research leading to new products and methods.

By service, the Centre may mean the delivery of hardware upon request to faculty members; it may see its service as analagous to the mailroom on campus or buildings and grounds people. Or it may see its service in quite a different light, picturing itself as a clinic with high level staff members engaging in a good deal of diagnostic work and subsequently prescription.

By teaching it may mean that it has courses for faculty members about instructional techniques, or it may mean that it teaches students in the university principles

of learning, or it may mean merely that its faculty members teach the courses they always would have taught even if the Centre didn't exist.

All of these purposes are usually gathered under some rubric like - to improve instruction and solve instructional problems on campus. Earlier I discussed briefly the problem of defining the phrase "improving instruction." Like "catalyst for change" this phrase is an example of an ambiguous purpose. If improving instruction means aiding the teacher to improve his performance, then the Centre must engage in activities very different than if the phrase means to aid the teacher to change instruction. Similarly, that goal would spell out different activities than if it were interpreted to mean the student ought to be aided in his learning at the university, or, that alternate routes of instruction ought to be devised at such a Centre as models for the university to experiment with. In short, does improving instruction mean improving existing courses or does it mean finding new and better ways to teach?

Similarly ambiguous is the phrase about instructional

problems. Anyone who has engaged in instructional design knows that the definition of a problem is often different for the client than for the instructional designer. Just as in psychotherapy the client may have a problem that the therapist sees only as the superficial symptom of a real problem. (Of course, the fact that someone says he has a problem may well indicate that there is something there, but the particular statement - what he says is his problem - may be misleading.) And, indeed, often the business of the psychotherapist and of the instructional expert at the campus Centre is to try to explicate the real problem that the client has. The teacher, for example, who wants to add audio-visual materials to his course in order to motivate his students and perk up their interests may be slowly led around to an examination of his grading and testing systems. This is a tricky business. Just as the patient in psychotherapy may be turned off by the inexperienced therapist who will not deal with the problem that the patient brings, so the professor may become disenchanted with the Centre when he always leaves with a different problem (and often more problems) than he came in with.

It is of interest, perhaps, to note that we have
kept up at our Centre contact with a variety of people
engaged in clinical work. Our staff members have always
included one or two people who also are engaged in therapeutic
work in clinics, and in June we are acquiring a member
who is cross-appointed in Social Work and has particular
expertise in this area, Larry Shulman.

We are extremely aware of the difficulty of
turning off the client at the problem statement level.
At the same time we fear that we will waste our time
dealing with pseudo-problems that the client brings us
and never face up to, or get him to face up to, the
underlying problems in his instruction.

For example: a continuing problem is whether
one ought to accept the professor's statement of ins-
tructional goals, no matter how well they are spelled out,
if those goals seem to be irrelevant to either the
field as practiced off the campus or if they seem to
be totally irrelevant to the student. How far does the
instructional expert go when he is cooperating with the
faculty member in trying to define the real instructional

problem, and what techniques can he use that are
persuasive and do not lead to alientation?

Regardless of the goals a centre eventually
adopts, the goals ought to be spelled out.and justified
in terms of real needs. And whatever the goals are, the
methods of implementing them ought to demonstrate in
practice what we preach to our clients.