Because different educational goals are based on individual sets of values, research findings considered highly significant by one group of educators will seem irrelevant to others. Empirical studies of educational objectives are needed to investigate (1) the relationship between the way objectives are formulated and their quality, (2) the extent to which teachers have educational objectives, (3) the effect objectives have on curriculum planning and instruction, and (4) the usefulness of educational objectives in facilitating learning. Educational objectives may be divided into two divisions: instructional objectives, which emphasize the acquisition of the known (skills defined in a predictive model of curriculum development), and expressive objectives, which elaborate and modify existing knowledge. Expressive objectives may produce new knowledge as a result of an educational encounter in which the child is free to explore. When expressive objectives are used by teachers, diversity (rather than homogeneity of response) is sought. Research needs to be undertaken on the consequences of the use of each kind of objective. (MS)

INSTRUCTIONAL AND EXPRESSIVE EDUCATIONAL OBJECTIVES:

THEIR FORMULATION AND USE IN CURRICULUM

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The concept of educational objectives holds a central position in the literature of curriculum, yet the way in which educational objectives should be formulated -- if at all -- continues to be the subject of professional debate. This paper will examine the concept "educational objectives," as well as its evolution in educational literature. The primary function of the paper is to distinguish between two types of objectives -- instructional and expressive. This distinction might prove useful for ameliorating the arguments of those holding contrasting views on their usefulness in curriculum theory and instruction.

There is little need to document the fact that educational literature has devoted much attention to the character and the methods through which educational objectives are to be formulated. Bloom (1956), Gagné (1967), Krathwohl (1964), Mager (1962), Tyler (1950) and others have worked diligently at the task of clarifying, classifying and specifying the manner in which objectives are to be formulated and the characteristics they are to have once developed.

Tyler, in describing the importance of educational objectives in his rationale for curriculum development, states,

> By defining these desired educational results (educational objectives) as clearly as possible the curriculum-maker has the most useful set of criteria for selecting content, for suggesting learning activities, for deciding on the kind of teaching procedures to follow, in fact to carry on all the

further steps in curriculum planning. We are devoting much
time to the setting up and formulation of objectives because
they are the most critical criteria for guiding all the other
activities of the curriculum-maker. (Tyler, 1950a)

And Gagné writing in an AERA monograph goes beyond Tyler in

emphasizing the importance of educational objectives by reducing

"content" to objectives. He writes:

Possibly the most fundamental reason of all for the central
importance of defining educational objectives is that such
definition makes possible the basic distinction between content
and method. It is the defining of objectives that brings an
essential clarity into the area of curriculum design and
enables both educational planners and researchers to bring
their practical knowledge to bear on the matter. As an example
of the kind of clarification which results by defining content
as 'descriptions of the expected capabilities of students,'
the following may be noted. Once objectives have been defined,
there is no step in curriculum design that can legitimately be
entitled 'selecting content.' (Gagné, 1967a)

Here we have two distinguished students of education emphasizing

the importance of educational objectives. Each of these statements,

as well as the statements of other thoughtful citizens of the educational

community, affirms belief in the importance of educational objectives

as a boon to teaching, curriculum making, and educational planning.

And yet, and yet . . . if we reflect on our own teaching or

observe the teaching behavior of others, if we compare the courses of

the "have" and "have nots" of educational objectives we are, I believe,

hard pressed to identify the power they are believed to have by their

advocates. Why is it that teachers do not eagerly use tools that

would make their lives easier? Perhaps because they are ignorant of

how objectives should be specified. . . perhaps. But why should those

who know how objectives are to be specified disregard them in their own

course work? Perhaps because they have acquired "bad" professional

habits . . . perhaps. It is possible that the power and utility
assigned to objectives in theoretical treatises are somewhat exaggerated
when tested in the context of the classroom? Is it possible that the
assumptions on which prescriptions about objectives are based are some-
what oversimplified? Is it also possible that the prescription of
a set of procedures for the formulation of objectives and the identi-
fication of appropriate criteria for their adequacy implicity contain
an educational "weltanschuung" that is not shared by a substantial
proportion of those who are responsible for curriculum planning and
teaching in America's schools?

The formulation of educational means is never a neutral act.
The tools one chooses to employ and the metaphors one uses to describe
education lead to actions that are not without consequences with
respect to value. Many of the metaphors used to describe the importance
and function of educational objectives have been associated with con-
ceptions of education that I believe are alien to the educational
values held by many of those who teach. These metaphors are not new;
they have been with educators for some time and it will be fruitful,
I believe, to compare some of the arguments and metaphors used today
with conceptions of education developed within the past fifty years.

It seems to me that three metaphors can be used to characterize
dominant views about the nature of education -- at least as it has been
conceived and carried on in American schools. These metaphors are
industrial, behavioristic, and biological.

The industrial metaphor was perhaps most influential in education
during the first and second decades of this century, a period in which

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the efficiency movement emerged. This movement, described brilliantly
by Callahan (1962), adopted and adapted industrial methods -- especially
time and motion study -- to improve the educational process and make
it more efficient. Under pressure from local boards of education and
muckrakers working for influential magazines, school administrators
tried to protect their positions and to reduce their vulnerability to
public criticism by employing methods developed by Francis Taylor in
industry in order to improve the efficiency of the school. If the
school could be managed scientifically, if the procedures that had
been employed so successfully in the production of steel could be
used in schooling, education might become more efficient and school
administrators would have a mantle to protect themselves from the
barrage of criticism that befell them during these times. With adoption
of scientific methods they would have evidence that they were not
running a "loose shop."

To bring about this metamorphosis in the schools certain tasks
had to be accomplished. First and foremost, quantitative and qualitative
standards had to be formulated for judging the educational product.
Second, time and motion studies had to be made to identify the most
efficient means. Third, nothing that could be routinized and prescribed
was to be left to the judgment of the worker since his decisions might
lead to inefficiency and error. Fourth, the quality of the product
was to be judged not by the workers in the school but by the consumers
of the product -- in this case, society. Fifth, the tasks to be under-
taken were to be divided into manageable units so that they could be
taught and evaluated at every step along the production line. With

these prescriptions for practice, prescriptions taken from industrial

management, emerged metaphors through which education was viewed.

These metaphors, like the means, were industrial in character.

The school was seen as a <u>plant</u>. The <u>superintendent</u> directed the

operation of the plant. The teachers were engaged in a job of <u>engine-</u>

<u>ering</u> and the pupils were the <u>raw material</u> to be processed in the plant

according to the demands of the <u>consumers</u>. Furthermore, the product

was to be judged at regular intervals along the production line using

<u>quality control standards</u> that were to be quantified to reduce the

likelihood of error. <u>Product specifications</u> were to be prescribed

before the raw material was processed. In this way efficiency, measured

with respect to cost primarily, could be determined.

The industrial metaphor once having been imposed on schools

had several tragic consequences. Callahan identified these:

> The tragedy itself was fourfold: that educational questions
> were subordinated to business considerations; that administrators
> were produced who were not, in any true sense, educators; that
> a scientific label was put on some very unscientific and dubious
> methods and practices; and that an anti-intellectual climate,
> already prevalent, was strengthened. As the business-industrial
> values and procedures spread into the thinking and acting of
> educators, countless educational decisions were made on economic
> or on non-educational grounds. (Callahan. 1962a)

The behavioristic metaphor had its birth with efforts to con-

struct a science of education and psychology. At the same time that

school administrators were embracing the principles of scientific

management in an effort to make schools more efficient, Thorndike,

Watson, Judd, and Bobbitt were trying to construct and employ scientific

methods useful for the study and conduct of education. One part of the

task, if it was to be accomplished at all, was to relinquish the heritage

of a psychology that did not lend itself to scientific verification.

Intra-psychic events, thoughts, and mental states couched in romantic language saturated with surplus meaning had to give way to careful, quantifiable descriptions of human behavior. The poetic and insightful language of a William James had to give way to the objective precision of a John Watson if psychology was to become a science. By defining psychology as "That division of natural science which takes human activity and conduct as its subject matter" (Watson, 1919), Watson was able to attend to the observable event in order to accomplish two scientific goals: "To predict human activity with reasonable certainty" and to formulate "laws and principles whereby men's actions can be controlled by organized society" (1919). And Thorndike, although more broadly ranging in his interest in and his conception of psychology, shared Watson's quest for precision in science and wrote of three stages in the description of human nature.

The significance of these views about the nature of a science of psychology and education cannot in my opinion be overemphasized. If what education is after is a change in behavior -- something that you can bring about and then observe -- there is little use talking about the development of fugitive forms of non-empirical thought. If educational objectives are to be meaningful, they must be anchored in sense data and the type of data with which education is concerned is that of human behavior.

A third metaphor that can be used to characterize educational thought and practice during the twentieth century is biological in character. The birth of the child study movement in the 1880's, the development of egalitarian liberalism, but especially the ideas of Darwin -- all had implications for conceiving the means and ends of

education. With the advent of John Dewey, educationists had a powerful spokesman whose conception of man was biological. According to Dewey, man is an organism who lives not only in but through an environment. For Dewey and for those who followed his lead the child was not simply a matter to be molded but an individual who brings with him needs, potentialities, and experiences with which to transact with the environment. What was important educationally for Dewey was for the child to obtain increasing, intelligent control in planning his own education. To do this, to become a master of his own educational journey, required a teacher sympathetic to the child's background and talents. Educational experience was to be differentiated to suit the characteristics of a changing child; the cultivation if idiosyncracy was a dominant concern of those who held a biological view.

The conception of education implied by the biological metaphor is one concerned neither with molding behavior through extrinsic rewards, nor with formulating uniform, quantifiable and objective standards through which to appriase achievement. Those who viewed -- and view -- education through the bilogical metaphor were -- and are -- much more concerned with the attainment of lofty goals, with helping children realize their unique potential, with the development of a sense of self-respect and intellectual and emotional autonomy that can be used throughout their lives. Educational practice in this view is an artful, emerging affair, one that requires teachers who are sensitive students of children and who follow as well as lead the child in the development of intelligence. (Harap, 1937)

Now the reason for identifying these strains in the educational thought of the past is because I believe they are still with us. Indeed,

I believe it is the differences in the metaphoric conception of educaion that, in part, accounts for the debates and differences regarding the use and the import of educational objectives. If education is conceived of as shaping behavior, then it is possible, indeed appropriate, to think of teachers as behavioral engineers. If the process of education is designed exclusively to enable children to acquire behaviors whose forms are known in advance, then it is possible to develop product specifications, to use quality control standards and to identify terminal behaviors which students are to possess after having been processed properly. In this view the task of the teacher is to use scientifically developed materials which reduce error and thus make her task as a behavioral engineer more efficient. If the child is not interested in doing the task we set for him, the teacher's problem is not to find out what he is interested in but to motivate him. By establishing the appropriate reinforcement schedule we can mold the child in the image identified previously. In this view, it is not crucial to distinguish between the process of education and the process of training. The process of education enables individuals to behave intelligently through the exercise of judgment in situations that demand reflection, appraisal, and choice among alternative courses of action. The process of training develops specific types of behavioral responses to spcific stimuli or situations.

If, however, education is viewed as a form of experience that has something to do with the quality of life an individual undergoes, if it involves helping him learn to make authentic choices, choices that are a result of his own reflection and which depend upon the

exercise of free will, then the problem of educational objectives takes
a different turn.

What I am arguing is that the problem of determining how
educational objectives should be stated or used is not simply a question
of technique but a question of value. The differences between individuals
regarding the nature and the use of educational objectives spring from
differences in their conceptions of education; under the rug of technique
lies an image of man.

Compare for example the following two statements related to
educational objectives:

> The behavioral technologist equates 'knowledge' and 'understanding'
> with behavior. He argues that there need not be any concern
> as to whether knowledge is basically behavior or not. The
> significant consideration is that the only tangible evidence
> of 'knowledge' is behavioral evidence.
>
> To sum up, then, the behavioral technologist approaches a
> problem by going through the following basic steps:
>
> 1. He specifies the behavior which the student is to acquire.
>   (Behavior may be considered as evidence of knowledge.)
>
> 2. He specifies the relevant characteristics of the student,
>   including the student's present level of knowledge.
>
> 3. He performs a behavioral analysis of the material to be
>   taught. This involves "atomizing" the knowledge to be
>   imparted according to learning theory principles. The
>   knowledge is broken down into concepts, discriminations,
>   generalizations, and chains.
>
> 4. He constructs a teaching system or program by which the
>   behavior may be built into the student's repertoire.
>
> 5. He tests the teaching system on sample students and
>   revises it according to the results, until the desired
>   result is obtained reliably in student after student.
>
> (Mechner, 1965)

Now consider the following:

> The artist in the classroom is neither prevalent, nor, in fact

particularly valued. He balks at established curricula, which makes administrators nervous and parents fearful, and oftentimes confuses children. He is constantly told that the school is for the students, and not a place for the teacher to push his pet fancies. When small avid groups of students congregate around him, he is reminded that school if for all the students, not just the few who see some perverse value in his unique conversations.

So we begin with the fact that most teachers see themselves as professionals. In their training, they want to be shown how to become professional; they want to learn how to purvey the wisdom of the culture in a reasonably standard and explicit way. In short, they want to know how to do their job. . . .

In these terms, the problem of teaching is construed less as the need for more creative artists to teach, but rather as the need for general scientific solutions to meet educational problems. We look not for unique personalities to provide a leavening for the flat culture; we create teams of increasingly specialized professionsl to administer full-tested teaching 'systems.' The ultimate educational context then is not the free-flowing human dialogue; it is the student in the booth strapped up with a variety of teaching-learning devices monitored by a professional teacher. The implicit image is the operating room or the blood-cleansing kidney machine.

(Oliver, 1967)

What we have here are not merely two views related to the problem of stating educational objectives but to radically different conceptions of the nature of education. The former conceives of education as the shaping of behavior; the latter as an emergent process guided through art.

As long as individuals in the field of education aspire toward different educational goals there can be no single set of research findings that will satisfy an individual who holds educational values different from those toward which the research was directed. While we can properly ask, for example, whether a clear statement of objectives on the part of the teacher facilitates curriculum planning, teaching or student learning and while, in principle, we can secure data to answer such questions, the significance of the answer depends not merely

on the adequacy and precision of the research undertaken but on the goals

toward which the educational program was directed. If education is seen

as the practice of an art in which children have an opportunity to work

as young apprentices with someone who himself is inquiring into a

problem for which he has no answer, the relevance of concepts like terminal

behavior, educational product, and deployment to learning stations, as

well as research bearing upon them is likely to be considered beside the

point educationally.

But what of the research on educational objectives? What in fact

has been found concerning the utility of educational objectives when

specified according to criteria identified in the opening pages of this

paper? -

A number of questions can be asked about educational objectives

that are in principle amenable to empirical study. We can attempt to

determine how in fact they are formulated by various groups such as

curriculum developers, administrators and teachers. And it is possible

to compare the methods used in their formulation to the recommendations

of experts. We can determine the extent to which teachers have educa-

tional objectives and whether they meet the criteria for adequacy described

by Tyler, Bloom, Gagné, and others. We can compare the curriculum

planning behavior of those who have precise educational objectives

with the planning of those who do not have precise educational objectives.

We can determine the effect of clearly stated objectives on the process

of instruction and, perhaps most important, we can determine the re-

lationship between clearly formulated educational objectives and student

learning. Do teachers who know what they want students to be able to do

as measured by the teachers' ability to state their objectives precisely

(using cirteria set forth by Mager, for example), have a greater effect

on particular types of learning than teachers who do not? In short, we

can ask questions about 1) the relationship between the way educational

objectives are formulated and their quality, 2) the extent to which

teachers have educational objectives, 3) the effect of educational ob-

jectives on curriculum planning and 4) instruction, and 5) the useful-

ness of educational objectives in facilitating learning.

Although such questions are complex they are important objects

for empirical attention. When one looks for research on these questions,

one soon finds that for the most part they have been neglected.

In view of the admonitions in curriculum leterature to state

objectives in behavioral terms, it is surprising to find such a paucity

of empirical studies available. Most of the studies that have been

undertaken were done in training systems in industry or in the military

services. One would think--and hope--that there would be some differences

between industrial and military training and education. In the 1960

Review of Educational Research John Goodlad (1960) wrote "There appear

to be no studies establishing an actual relationship between increased

clarification of educational objectives and improved discrimination in

the selection of classroom learning opportunities for students." With

respect to quantitative empirical research in school settings the

situation appears not to have changed much in the past eight years.

From the studies of educational objectives that have been published

one can conclude that:

1) a very limited amount of empirical data is available on the subject,

2) a narrow range of questions have been asked, and

3) most of the discussion on the usefulness of educational objectives

has been based primarily upon rational analysis.

Now I have no bone to pick with the rational analysis of educational
issues if empirical data are unavailable or unobtainable. Indeed, in a
previous paper (1967) I explicated some of the problems concerning high
level specification of educational objectives and such explication was
a result of analysis rather than a result of conclusions based upon
quantitative data. In that paper I identified a number of limitations
in theory about high level specification of objectives. Without
elaborating them here, they were as follows:

1) they tend to overestimate the degree to which it is possible to

predict educational outcomes,

2) they tend to treat all subject-matters alike regarding the degree

of specificity possible in stating educational objectives,

3) they tend to confuse the application of a standard and the making

of a judgment regarding the appraisal of educational outcomes,

4) they have tended to imply that the formulation of objectives should

be a first step in curriculum development and hence have confused

the logical with the psychological in educational planning.

In a subsequent paper (1967b), I argued further that those who
have advocated high level specification of objectives have not differ-
entiated between establishing a direction and formulating an objective.
I argued that much in school practice which is educational is a conse-
quence of establishing directions rather than formulating objectives.

I see even more problems now. For one, if we follow Gagne's suggestions (1967) regarding the identity of content and objective we would select or use no content that had no objective and therefore have objectives for each unit of content we selected. What would this mean in the classroom? If the suggestion is followed strictly, the teacher would have to formulate behaviorally defined objectives for each unit of content for each educational program for which she was responsible and in the elementary school she may teach as many as fourteen subject-areas.

Let's assume that a teacher has one unit of content to be learned by a group of thirty children for each of seven subject areas a day. Let's assume further that she has her class divided in thirds in order to differentiate content for students with differing abilities. This would mean that the teacher would have to formulate objectives for seven units of content, times five days a week, times three groups of students, times four weeks a month, times ten months a school year. She would therefore have to have 4,200 behaviorally defined objectives for a school year. A six-year school employing such a curriculum rationale would have to have 25,200 behaviorally defined educational objectives.

Aside from the question of the sheer feasibility of such a scheme-- of a teacher having 4,200 behaviorally defined objectives for a class of thirty children--what those who object to such an approach are, I think, concerned with is that even if the scheme could be implemented, it would alter the type of relationship between the teacher and the student that they value. If a teacher focuses primarily on the attainment of clearly specified objectives, she is not likely to focus on other aspects

of the educational encounter, for although clearly specified objectives provide windows, they also create walls. Those who are not enthusiastic about high level specification of objectives are not eager, I believe, to look through the windows of those who conceive of education as behavioral engineering.

Can such differences in orientation to education be resolved when it comes to the issue of how, if at all, educational objectives should be formulated? The remainder of this paper will elucidate a conception of educational objectives that might make this resolution possible.

As an institution responsible for the transmission of culture, the school is concerned with enabling students to acquire those intellectual codes and skills that will make it possible for them to profit from the contributions of those who have gone before. To accomplish this task an array of socially defined skills must be learned--reading, writing and arithmetic are some examples of coding systems that are basic to further inquiry into human culture.

But while school programs attempt to enable children to acquire these skills, to learn to employ the tools necessary for using cultural products, schools are also concerned with enabling children to make a contribution to that culture by providing opportunities for the individual to construe his own interpretation to the material he encounters or constructs. A simple repetition of the past is the surest path to cultural rigor mortis.

Given these dual concerns--one with helping children become skilled in the use of cultural tools already available and the other

with helping them modify and expand these tools so that the culture remains viable--it seems to me appropriate to differentiate between two types of educational objectives that can be formulated in curriculum planning. The first type is familiar to most and is called an <u>instructional objective</u>; the second I have called an <u>expressive objective</u>.

Instructional objectives are objectives which specify unambiguously the particular behavior (skill or item of knowledge, etc.) the student is to acquire after having completed one or more learning activities. These objectives fit the scheme or criteria identifed earlier. They are usually drawn from cultural products such as the disciplines and are laid out in intervals of time appropriate for the children who are to acquire them.

Instructional objectives are used in a predictive model of curriculum development. A predictive model is one in which objectives are formulated and activities selected which are predicted to be useful in enabling children to attain the specific behavior embodied in the objective. In this model, evaluation is aimed at determining the extent to which the objective has been achieved. If the objective has not been achieved, various courses of action may follow. The objective may be changed. The instructional method may be altered. The content of the curriculum may be revised.

With an instructional objective the teacher as well as the children (if they are told what the objective is) are likely to focus upon the attainment of a specific array of behaviors. The teacher in the instructional context knows what to look for as an indicator of achievement since the objective unambiguously defines the behavior. Insofar as the children are at similar stages of development and insofar

as the curriculum and the instruction are effective, the outcomes of
the learning activity will be homogeneous in character. The effective
curriculum, when it is aimed at instructional objectives, will devel op
forms of behavior whose characteristics are known beforehand and, as
likely as not, will be common across students--if not at the identical
point in time, at some point during the school program.

The use of instructional objectives has a variety of educational
ramifications. In preparing reading material in the social studies,
for example, study questions at the beginning of a chapter can be used
as cues to guide the student's attention to certain concepts or generali-
zations that the teacher intends to help the student leam. In the de-
velopment of certain motor skills the teacher may provide examples of
such skills and thus show the student what he is supposed to be able to
do upon terminating the program. With the use of instructional objectives
clarity of terminal behavior is crucial since it serves as a standard
against which to appraise the effectiveness of the curriculum. <u>In an</u>
<u>effective curriculum using instructional objectives the terminal behavior</u>
<u>of the student and the objectives are isomorphic</u>.

Expressive objectives differ considerably from instructional ob-
jectives. An expressive objective does not specify the behavior the
student is to acquire after having engaged in one or more learning
activities. An expressive objective describes an educational encounter:
it identifies a situation in which children are to work, a problem with
which they are to cope, a task they are to engage in--but it does not
specify what from that encounter, situation, problem, or task they are
to learn. An expressive objective provides both the teacher and the

student with an invitation to explore, defer or focus on issues that are
of peculiar interest or import to the inquirer. An expressive objective
is evocative rather than prescriptive.

The expressive objective is intended to serve as a theme around
which skills and understandings learned earlier can be brought to bear,
but through which those skills and understandings can be expanded,
elaborated and made idiosyncratic. With an expressive objective what is
desired is not homogeneity of response among students but diversity.
In the expressive context the teacher hopes to provide a situation in
which meanings become personalized and in which children produce pro-
ducts, both theoretical and qualitative, that are as diverse as them-
selves. Consequently the evaluative task in this situation is not one
of applying a common standard to the products produced but one of re-
flecting upon what has been produced in order to reveal its uniqueness
and significance. In the expressive context, the product is likely
to be as much of a surprise to the maker as it is for the teacher who
encounters it.

Statements of expressive objectives might read:

1) To interpret the meaning of _Paradise Lost_,

2) To examine and appraise the significance of _The Old Man and the Sea_,

3) To develop a three-dimensional form through the use of wire and wood,

4) To visit the zoo and discuss what was of interest there.

What should be noted about such objectives is that they do not
specify what the student is to be able to do after he engages in an
educational activity; rather they identify the type of encounter he is
to have. From this encounter both teacher and student acquire data

useful for evaluation. In this context the mode of evaluation is similar to aesthetic criticism: that is, the critic appraises a product, examines its qualities and import, but does not direct the artist toward the painting of a specific type of picture. The critic's subject-matter is the work done--he does not prescribe a blueprint for its construction.

Now I happen to believe that expressive objectives are the type that teachers most frequently use. Given the range and the diversity of children it is more useful to identify potentially fruitful encounters than to specify instructional objectives.

Although I believe that the use of expressive objectives is generally more common than the use of instructional objectives, in certain subject-areas curriculum specialists have tended to emphasize one rather than the other. In mathematics, for example, much greater attention has been given historically to the instructional objective than in the visual arts where the dominant emphasis has been on the expressive (Eisner, 1965).

I believe that the most sophisticated modes of intellectual work--those, for example, undertaken in the studio, the research laboratory, and the graduate seminar--most frequently employ expressive rather than instructional objectives. In the doctoral seminar, for example, a theme will be identified around which both teacher and students can interact in an effort to cope more adequately with the problems related to the theme. In such situations educational outcomes are appraised after they emerge; specific learnings are seldom formulated in terms of instructional objectives. The dialogue unfolds and is followed as well

as led. In such situations the skills and understandings developed are
used as instruments for inquiring more deeply into the significant or
puzzling. Occasionally such problems require the invention of new
intellectual tools, thus inducing the creative act and the creative
contribution. Once devised or fashioned these new tools become candi-
dates for instructional attention.

Since these two types of objectives--instructional and expressive--
require different kinds of curriculum activities and evaluation procedures,
they each must occupy a distinctive place in curriculum theory and de-
velopment. Instructional objectives embody the codes and the skills that
culture has to provide and which make inquiry possible. Expressive ob-
jectives designate those circumstances in which the codes and the skills
acquired in instructional contexts can be used and elaborated; through
their expansion and reconstruction culture remains vital. Both types
of objectives and the learning activities they imply constitute--to
modify Whitehead's phrase--"the rhythm of curriculum." That is, in-
structional objectives emphasize the acquisition of the known; while
expressive objectives its elaboration, modification and, at times, the
production of the utterly new.

Curriculum can be developed with an eye toward the alternating of
such objectives. We can, I believe,study curriculum to determine the
extent to which instructional and expressive educational objectives are
employed and we can raise questions about the types of relationships
between them that are most productive for various types of students,
for various types of learning, and for various subject matters.

In this paper I have argued that the problem of formulating educational objectives is not simply a question of technique but is related directly to one's conception of education. The manner in which educational objectives are couched is, at base, a value decision. Second, I have tried to provide evidence of the differences among these values by examining the metaphors used by those who have contributed to the literature of the field. Third, I have distinguished between two types of educational objectives--instructional and expressive-- and indicated how they function in curriculum planning. The formulation and use of these objectives have implications for the selection of learning activities and for evaluation. The consequences of their use seem to me to be appropriate subject matter for research.