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# SOME LIMITATIONS OF THE USE OF OBJECTIVES IN CURRICULUM RESEARCH AND PLANNING

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## 1. BEHAVIOURAL OBJECTIVES IN CURRICULUM DESIGN: THE CLASSIC MODEL

In common parlance educators often speak of their sense of purpose and intentionality in terms of aims. Such aims are often stated in rather general terms, for example: 'to foster an understanding of lyric poetry' or 'to develop critical intelligence.' In a classic work on curriculum, Taba suggested that 'The chief function of stating aims on such general levels is to provide an orientation to the main emphasis of educational programmes.'<sup>1</sup>

A common strategy in curriculum planning, experiment and evaluation is to subject general statements of aim to analytic scrutiny in order to derive from them checklists of educational objectives as guidelines for curriculum planning. The logic of this strategy is described by Bloom: 'it follows that the nature of a particular sequence of educational experiences should be determined by the educational objectives it is designed to further. Educational objectives are statements of desired changes in thoughts, actions or feelings of students that a particular course or educational programme should bring about. Educational objectives, as they have been used by evaluators, teachers and curriculum workers, are relatively specific statements of the characteristics the students should possess after completing the course or programme.'<sup>2</sup> In short, they are 'behavioural objectives.'

Bloom and his colleagues have produced two notable taxonomies of educational objectives, one of objectives in the cognitive domain,<sup>3</sup> and another of objectives in the affective domain.<sup>4</sup>

The objectives model of curriculum design and planning is no doubt a useful one, but it has severe limitations. Accordingly, it is wrong that it should be taken for granted, or advanced as universally applicable. If Bloom had written: 'It follows that the nature of a particular sequence of educational experiences *can sometimes be usefully thought of as* (instead of *should be*) determined by the educational objectives it is designed to further', then I should have no quarrel with his position.

This might seem a mere quibble were the point at issue not fraught with highly significant practical consequences. Unfortunately, the objectives model has been

advanced dogmatically, and this has placed pressure on those who wish to work along alternative lines. In part, the pressure in America has come from funding agencies, which are able by the use of the objectives model to operate an oversimplified but comforting payment-by-results system in making curriculum research and development allocations. The dogma is, however, not confined to this setting; and in Europe too the objectives model is often advanced naively and yet confidently, even assertively. For example:

Realistic planning of any curriculum involves the direct and careful consideration of three closely inter-related categories of elements. First there are the educational objectives (A) which are being aimed at. These are the developments we wish to see in our pupils: qualities of mind, attitudes, values, skills, dispositions, as well as the acquisition of a great deal of knowledge. Secondly, there is the content or the matter (B) employed in the curriculum as a means to these objectives. By this I mean the plays of Shakespeare to be studied, the historical period that is selected and its particular aspects, the range of problems of a practical kind connected with the house or home, etc. Thirdly, there are the activities and the methods (C) that are employed to achieve the objectives. These nowadays include not merely the traditional methods of chalk and talk, but the more informal methods of model-making, visiting, library and group work, and those methods made possible by technological advance, use of television, teaching machines, etc.

As I understand it, rational curriculum planning consists of developing and tailoring a course under B and C to achieve A, the planning of content and methods to achieve the objectives. It is as simple and straightforward as that.<sup>5</sup> In this paper I propose to argue that it is by no means as simple and straightforward as that.

## 2. THE OBJECTIVES MODEL AND THE PROBLEM OF INSTRUMENTALITY OF CONTENT

One of the problems of the objectives model is well brought out in the statement of Hirst above. He writes of 'the content or matter employed in the curriculum as a means to these objectives.' It appears that the objectives model reduces content in education to an instrumental role. This position appears to have serious weaknesses.

If we look back over the history of thinking about the curriculum, we find that curriculum has sometimes been specified in terms of terminal behaviours (objectives), as in 'the education of the courtier' – where 'courtier' implies an ideal of man analysable in terms of behaviour – and has sometimes been specified in terms of content, as in 'the biology of simple organisms' or *Hamlet*. There are

objections to a model of curriculum which cuts off the second of these traditions of specification.

Let us take as an example one suggested both by Hirst and by me. He cites as content, 'the plays of Shakespeare to be studied', and I have mentioned, *Hamlet*. What are the problems of seeing a work of art – here a play – as a means to pre-specified objectives couched in terms of specified changes in students?

We might argue that the aim is 'to know – or to understand – the play.' Then, if the play could be analysed into knowledge and understandings or interpretations, the capacity to recall or demonstrate these would be the behaviour required of the student. I am doubtful if it is possible to reduce a work of art to a specification of this kind, and others would appear to doubt with me. Northrop Frye, for example: 'From this point of view *poetry* is something to be explained, and the notion that any kind of commentary will ever explain any kind of poetry is of course vulgar. Even if there is a hidden meaning, a poem which contains no more than what an explanation of that meaning can translate should have been written in the form of the explanation in the first place.'<sup>6</sup> In short, if content – the play were analysed into specified items of sub-content to be mastered by the students, then we should simply have an *explanation* in Frye's sense. The content of a work of art cannot be reduced to students' behaviours.

In the arts, at least, a specification of content – such as *Hamlet* – should restrict itself to identifying a work of art, to nominating the stimulus or input, the experience to which students are to be exposed. The aim, 'to understand *Hamlet*', is not susceptible of analysis in terms of content elements. Here, 'understanding' means to respond to or experience the concrete reality of a work of art. The response or experience is individual, though there are canons by which one can judge its appropriateness, by which one can discriminate understanding from misunderstanding.

It might be tempting to couch objectives in terms of these canons, adopting as an aim 'to develop literary judgement'; but it seems to me that this aim too cannot be analysed into pre-specified student behaviours in any acceptable way. The difficulty is that the canons of judgement are reflexive upon the experience. Art is particular and concrete: judgements in art are always subject to modulation by encounters.

An alternative approach to a work of art, using the objectives model, might be to see it as a vehicle for teaching certain transferable skills of reading or interpreting. Indeed, it would be possible to argue that this is what distinguishes the educational use of art from art as part of the experience of ordinary living. This is a cogent argument, for certainly we ask students to read plays to help them to read plays. But I would argue that in practice to analyse reading skills into objectives and then to teach *Hamlet* to promote these objectives is in practice to falsify the material.

Reading Shakespeare's plays intelligently undoubtedly increases vocabulary. This is important. But can it be seen as an objective?

Skill-learning must be kept subservient to the play. To use the play as a vehicle for teaching skills is to imply – and students rather readily pick up the implication – that the skills and vocabulary and so forth are the important matter rather than the play. We know from bitter experience how easy it is to reduce Shakespeare to the status of an exercise. All too often, unless the specification of objectives is more detailed and sophisticated than anyone seems able to make it, the result of Hirst's recipe, 'the planning of content and methods to achieve the objectives', is the use of methods to distort content in order to meet objectives.

The points I have just been making are practical rather than logical; but curriculum design and planning is essentially a practical field. And certainly, curriculum workers who have moved into the area of the arts have found the objectives model a difficult one to work. Hemphill, who has used the objectives model in some scientific areas, encounters difficulty in handling it in a music project<sup>7</sup>. Eisner, working in the curricular area of visual art, writes:

In the arts and in subject matters where, for example, novel or creative responses are desired, the particular behaviours to be developed cannot easily be identified. Here curriculum and instruction should yield behaviours and products which are unpredictable. The end achieved ought to be something of a surprise to both teacher and pupil. While it could be argued that one might formulate an educational objective which specified novelty, originality, or creativeness as the desired outcome, the particular referents for these terms cannot be specified in advance; one must judge after the fact whether the product produced or the behaviour displayed belongs in the novel class<sup>8</sup>.

I think, in fact, that the problem is not that of judging whether the behaviour be novel, but rather, given that the behaviour is in some sense novel and individual, how do we specify a situation in which the teacher is called upon to make judgements of quality or worthwhileness.

It does seem that alternative models to that based on objectives could perhaps help in such situations.

Let us accept that education is concerned with disciplined activity in some broad sense. Then we may distinguish two forms of disciplined action, action disciplined by preconceived goals and action disciplined by form or by principles of procedure. Thus, to set out to learn eight guitar chords is to embark on a course of action disciplined by the consciousness of a specific goal. On the other hand, to write a sonnet is to hammer out a part-formed intention in the framework of a form. And to embark on a philosophical argument is to work in the light of principles of procedure rather than of a preconceived goal.

It would appear that a form or principles model could be used in curriculum research and planning. Thus, one could start from a specification of content,

say lyric poetry or moral philosophy, and then attempt to design a method which would be consonant with a defined view of the nature and educational worth of lyric poetry or moral philosophy. One would rely on the consonance between content and method to provide the teacher with a vehicle through which an area of experience or knowledge could be explored appropriately. One could also sharpen and define the criteria by which students' work might be judged.

This is really to say that if you define the content of a philosophy course, define what constitutes a philosophically acceptable teaching procedure and articulate standards by which students' work is to be judged, you may be planning rationally without using objectives.

This may be a particularly useful strategy in the arts and in the advanced stages of study of the academic disciplines because it allows of students themselves having objectives, and suggests that the teacher can accept a range of objectives rather than one, while still being able to exclude some objectives as wholly inappropriate or misconceived.

A discipline of knowledge or a disciplined art form can in this way be faced squarely without being translated into student behaviours. I believe this is what discipline of content is about. It places knowledge at the disposal of the student, given that he learn its standards and principles, rather than trapping him in objectives conceived by his teacher.

I am arguing then that one of the main functional advantages of the disciplines of knowledge and of the arts is to allow us to specify content, rather than objectives, in curriculum, the content being so structured and infused with criteria that, given good teaching, student learnings can be treated as outcomes, rather than made the subject of pre-specifications. Disciplines allow us to specify input rather than output in the educational process. This is fairer to the needs of individual students because, relative to objectives, disciplined content is liberating to the individual.

### 3. THE OBJECTIVES MODEL AND THE PROBLEM OF SIMPLIFICATION

Rational curriculum planning and curriculum research have to deal with the realities of educational situations. Workers in curriculum are inevitably involved, even when research-oriented, in developmental settings. They are tangled in a complex of variables, at the levels of the school system, of the individual school, of the lesson setting, of the teacher and of the pupil.

Over the whole range of these variables, little is understood. We do know that apparently similar curriculum specifications work differently in different schools, with different teachers in different classrooms teaching different students.

American curriculum workers, who have far more experience than Europeans, have been forced by contact with practice into some ruefully realistic reflections on their planning strategies.

After a decade of work it became apparent that other factors than aims were involved in developing a curriculum that provided the desired articulation or sequential relationships. Personal and social problems, the developmental characteristics of pupils, the essential interrelationships of facts, methods of work, and concepts in various subject matter fields, and the influence of out-of-school situations on school experience were recognised as additional important factors<sup>9</sup>.

The school's operating mechanics are such that fuzziness of priority, conflicting function, orthodoxy, and a predilection toward tidy simplicity all cripple its ability to attain its potential. Investigations have demonstrated again and again that there is a remarkable incongruity among the teachers of a school with respect to the priority of their objectives. The teaching staff may agree that such things as the mastery of basic skills, the development of rational thought, the accumulation of a specific body of information, or the nurture of a set of values are all legitimate objectives. An analysis of classroom teaching, however, reflects a considerable difference of opinion as to things that are important and unimportant. It is not uncommon to find that what is the means to an end for one teacher is in itself the significant end for another teacher, even when both deal with the same grade level or the same subject matter<sup>10</sup>.

Rational curriculum planning must take account of the realities of classroom situations. It is not enough to be logical. And there are two crucial practical problems; achieving a degree of value consensus as a basis for action<sup>11</sup>, and interpreting that consensus into educational practice.

Now, the basic weakness of the objectives approach in any area where these are significant problems is that it attempts to tackle both at once and tends to fail in practice without adequately adding to our knowledge. It rests upon two assumptions: 1. that teachers who assent to lists of objectives agree in their values; and 2. that teachers who profess objectives will be able to operationalise them in the classroom. Because an objective professes both to embody value and to interpret it in terms of student behaviour, it is assumed that it is a ready means of interpreting values in practice.

But when we look at practice, we find, as Rubin observes, that objectives are inadequate as definitions of value positions. Their analytic nature, far from clarifying and defining value divergence, appears to make it possible to mask such divergence. Teachers interpret objectives differently and synthesise them in different ways, according to their differing hierarchical status. Of course, objectives *may* clarify problems of value consensus, but it seems clear that they frequently provide a conceptual framework which serves as a medium through

which to rationalise incoherence of values. Groups of teachers who claim to have agreed on their objectives often demonstrate in the classroom that their agreement was illusory.

The second practical assumption of the objectives approach constitutes a still more important weakness. Teachers who profess objectives cannot easily realise them in intelligent classroom procedures. Hirst writes: 'Rational curriculum planning consists of developing and tailoring a course . . . , the planning of content and methods to achieve the objectives.' In many cases intelligent and experienced people seem unable to do this adequately, despite Hirst's assertion that it is simple.

A course, which involves – as it must – a relatively flexible mix of content and methods, exists primarily in the mind of the teacher. The crucial problem seems to be to write a course specification which communicates even grossly similar things to a number of different teachers. A central concern of any curriculum planner must be to communicate through a specification.

Certainly, it does not appear that in practice teachers can control a course coherently by persistent running reference to schedules of objectives. As Jackson writes:

The business of teaching involves much more than defining curricular objectives and moving toward them with dispatch; and even that limited aspect of the teacher's work is far more complicated in reality than an abstract description of the process would have it seem. When it is remembered that the average teacher is in charge of the twenty-five or thirty students of varying abilities and backgrounds for approximately 1000 hours a year and that his responsibilities extend over four or five major curricular areas, it is difficult to see how he could be very precise about where he is going and how to get there during each instructional moment. He may have a vague notion of what he hopes to achieve, but it is unreasonable to expect him to sustain an alert awareness of how each of his students is progressing toward each of a dozen or so curricular objectives<sup>12</sup>.

The lesson is, I think, that curricular schemes need to be realised in a number of classrooms, closely studied, and turned into meaningful specifications. The language of these specifications will draw on concepts of proven worth in empirically based theory. As Myron Atkin argues, we need to adopt a strategy which 'places classroom analysis and developmental work at the core'<sup>13</sup>. The surest foundation for curriculum planning is grounded theory.

Elsewhere in the same paper, Atkin comments: 'it is always easier to take a simplified view of phenomena being studied when one is unhampered by knowledge of the phenomenon. There is a certain appeal in entering the situation with a certain set of blinders in which one is alert to only a few of the relevant observables.'

I am maintaining that the objectives model, when asserted as a pattern model for all curriculum planning offers just such a set of blinkers. Unhampered by knowledge of practice, the objectives enthusiast blinkers hypotheses with hopes.

The complexity of schools and classrooms and our lack of understanding of it lie at the heart of the problem of rational curriculum planning. For a considerable time, we shall have to struggle to realise new curricular patterns on the classroom floor and then to transmit them by whatever means prove most effective to other classrooms. As we do so, we shall have to build into our developmental work a research element which builds the theory on which more rational curriculum planning can be based. The concept of objectives may figure in that theory. At present, it does not look as if it will be the central concept.

#### 4. OBJECTIVES VS HYPOTHESES IN CURRICULUM RESEARCH AND DEVELOPMENT

In mounting curriculum research and development, we shall in general – particularly since many of the rewards of the objectives model have already been reaped – do better to deal in hypotheses concerning effects than in objectives. To attach the value-laden tag, *objectives*, to some of our hypotheses is an odd and usually unproductive scientific procedure.

The normal procedure in experimental curricular innovation would, we might expect, be derived from the social sciences. Either from past experience or from exploratory case studies or from theory, where this is sufficiently developed, hypotheses may be generated regarding the possible range of effects of a given curriculum specification and their variation in relation to the web of contextual variables in schools. From these hypotheses some would be selected as crucial and tested.

There is a simplification involved here in the selection of hypotheses for testing, but it is much more open to critical examination than the specification of objectives, since untested hypotheses will naturally be listed. By contrast, the use of objectives as a master concept will tend towards the selection of hypotheses in the light of one's hopes.

Thus, Bloom writes: 'The categories of the affective-domain structure are developed to handle primarily positive values rather than aversions, fears, and dislikes. This is because this is the way in which educational objectives are generally stated, and the *Taxonomy* is a framework for classifying these objectives.'<sup>15</sup>

In an experimental setting, there is a strong case for thinking in terms of a taxonomy (including a pathology) of educational effects rather than of objectives, if we are to prevent our perceptions from being blinkered by our inten-

tions. It is important not to underemphasise undesirable effects, cost effects (e.g. the loss in manipulative skill which we may pay for increasing understanding of mathematical concepts) and important side effects (e.g. rise in level of aspiration or I. Q.).

A curriculum planner or developer should be able to tell us much more than whether he has achieved objectives. Indeed, in many cases objectives may be measured for him in the examination system, while he himself needs to concentrate far more on aspects which will not be measured in this way. Thus a curriculum worker or a teacher may often be most interested in exploring some of the aspects of a curriculum in practice which puzzle or surprise. Hypotheses are needed here.

Wall puts the strongest case for the objectives model:

Once aims are stated, they can be accepted as hypotheses for testing. 'Education for democracy', for example, can be turned to the testable hypotheses: 'this form of educational activity (defined) produces men and women whose attitudes (defined) and behaviours (defined) are democratic (defined).' Evidently the possibility of rigorous research here rests upon the definition of the terms in an operational form and their embodiment in forms of expected behaviour. Once this is done, it becomes possible to set up criteria and produce measures<sup>16</sup>.

Apart from the peculiarity of working to hypotheses through aims, this sounds logically compelling. But it will not stand up in practice. No one seems to be able to define an educational activity closely enough to realise it in the same form in a number of classrooms. One is continually faced with situations in which the form of educational activity produces a wide range of effects, differing significantly from classroom to classroom, both because of variations in teaching pattern and variations in the context of the school. Always supposing one could write a detailed definition of what attitudes and behaviours were democratic, one would then expect that the problem of producing these attitudes would be complexly related to the authority structure and organisation of the school, to the personalities of the teachers involved and even to the environmental background of the students. The whole project seems to sink in a morass of uncertainties.

I am really arguing that there is no substitute for an understanding of the ways in which curriculum and methods are likely to impact upon students and of the complex of variables that make the settings of individual schools. And once we face that, the objectives approach, which at first looks like a short cut to effective action, becomes an impediment to the development of less simplistic research designs.

And if workers in curriculum research and development are going to find the language of objectives naive, then curriculum planners must face the developed research frameworks they evolve as the raw material of planning.

Realistic planning of any curriculum involves the direct and careful consideration of alternative curricular offerings which have been shown to have some likelihood of realisation in practice. In order that the planner should have the best possible basis on which to make his decisions, he needs to examine carefully the work of teachers and of curriculum research workers or developers who have described or devised curricula. These workers need accordingly to attempt:

1. to define the value positions embodied in the curriculum specification or specifications.

A possible strategy is to define the value position taken at each major choice point encountered in the design of the specification. This exposes the values of to the decision-maker, and allows the experimenter to regard the values as variables (most often held constant, though not necessarily so).

2. to specify a curriculum in terms of content, materials and method, to spell out what kinds of classroom activity it stands for and to define the most critical observations which reveal whether the specification is or is not being met in any given classroom.

3. to indicate necessary training procedures for teachers, and estimate their importance for realisation of the specification.

4. to define the contextual variables in schools, school systems and out-of-school environment which make it likely or unlikely that the specification will be realised in practice.

5. to list, and so far as is practicable, to test hypotheses regarding the effects of successfully realising the specification and perhaps of failing to realise it in circumstances which are likely to arise in practice. The selection of hypotheses for testing should be made on two grounds, to help the decision-maker (developmental grounds) and because of significance for theory building (research grounds).

6. to attempt to relate differential effects to differential contextual variables of the kind noticed in 4 above.

Rational curriculum planning consists in the exercise of cautious judgement in making inevitably precarious decisions as one attempts to achieve some sort of co-ordinated curriculum in the presence of so many variables and uncertainties. It will usually be important to try to offer a balanced combination of worthwhile experiences likely to serve the needs of students with differing purposes.

Planners might aim to break the hypothesis: 'The effects of any curriculum differ in important ways from those expected by planners, experimenters and teachers.'

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- 3 Benjamin S. Bloom, M. D. Engelhart, E. J. Furst, W. H. Hill & D. R. Krathwohl, *Taxonomy of Educational Objectives I Cognitive Domain*. New York: Longmans Green, 1956.
- 4 David R. Krathwohl, B. S. Bloom & B. B. Masia, *Taxonomy of Educational Objectives: II Affective Domain*. New York: Longmans Green, 1964.
- 5 P. H. Hirst, The Curriculum, *Western European Education*. I, i, 1969, 31-48 (p. 31).
- 6 Northrop Frye, *Fearful Symmetry. A Study of William Blake*. Princeton, New Jersey: Princeton University Press, 1947, p. 9.
- 7 James Hemphill, Verbal communication to author, June, 1968.
- 8 Elliot W. Eisner, Educational Objectives: Help or Hindrance? *The School Review*. 75, 3, 1967, 250-260 (pp. 254-255).
- 9 Hollis L. Caswell, Emergence of the Curriculum as a field of professional work and study. In: *Precedents and Promise in the Curriculum Field*. New York: Teachers College Press, 1966, pp. 1-11.
- 10 Louis J. Rubin, *Synergetics and the school*. Teachers College Record, 68, Nov. 1966, 127-134 (p. 128).
- 11 Robert Emans defines this need for consensus. 'Before values can be considered as focal points for educational objectives suitable for any large numbers of students, they have to become the values of a large, influential segment of the population.' (A proposed conceptual framework for curriculum development.) *Journal of Educational Research*. 59 Mch, 1966, 327-332 (p. 331). In decentralised systems consensus needs to be achieved at school level at the least.
- 12 Philip W. Jackson, *Life in Classrooms*. New York: Holt, Rinehart and Winston, 1968, p. 165.
- 13 Myron Atkin, Research Styles in science education, *Journal of Research in Science Teaching*. 5, 1968, 338-345 (p. 343).
- 14 Benjamin S. Bloom, in Krathwohl et al. *op. cit.* p. viii.
- 15 W. D. Wall, *Adolescents in School and Society*. Slough, Bucks: National Foundation for Educational Research in England and Wales, 1968, p. 54.

# THE PROCESS OF CURRICULUM INNOVATION

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During the period 1950-70 we have witnessed the use of curriculum development projects on an unprecedented scale as a means of introducing changes in the curriculum. Typically, curriculum development projects involve specially formed groups of people supported by specific funds and resources. Their work follows essentially five stages<sup>1</sup> although there is considerable variation in the emphasis given to each stage and the procedures adopted within them<sup>2</sup>. The stages are:—

1. Determining the *objectives* of the curriculum.
2. *Producing* materials (e. g. books, visual aids, apparatus) and appropriate teaching and learning methods.
3. Conducting restricted *trials* in schools.
4. *Evaluating* and *revising* materials and methods.
5. *Unrestricted distribution* of revised materials and methods.

Curriculum development projects try to achieve a radical change in the curriculum by systematic means. The changes they produce require considerable adjustment by teachers<sup>3</sup>. Although they work *within* the framework of an educational system (especially in the use of schools for trials) curriculum development projects are not *of* the system. Thus they are free of many of the restrictions imposed by it although, for this, they rely very much on the goodwill of those working in the system. Above all a curriculum development project attempts to steer a middle road between dictated curriculum change and a diffused, individual-based, laissez-faire approach. Probably most people working in this field to-day see their efforts as a form of educational self-help organized so that it can be effective on a large scale.

The idea of curriculum development in this modern sense arose in the United States in the 1930's and -40's. R. W. Tyler<sup>4</sup> elaborated a substantial body of theory concerned with it and the Progressive Education Association's Eight-year Study, which commenced in 1933 and involved trials and evaluation in thirty schools with some two thousand pupils<sup>5</sup>, was possibly the most significant of the early curriculum development projects. After the Second World War a large number of development projects was set up in the United States, mainly in the fields of mathematics and the sciences<sup>6</sup>. Subsequently projects covering a wide