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Macro-project and Meta-evaluation - the UNCAL experience.

Barry MacDonald and Stephen Kemmis

Centre for Applied Research in Education: University of East Anglia

UNCAL (an acronym for 'Understanding Computer-Assisted Learning') is an independent four-year educational evaluation study commissioned by the National Development Programme in Computer-Assisted Learning (NDPCAL) in 1973. In the terms devised and defined by Scriven (1969) and Stufflebeam (1975), UNCAL is in part a 'primary' evaluation, collecting and presenting its own data, in part a 'meta' evaluation, assessing the evaluation efforts and reports of those within the National Programme who have evaluation responsibilities. There is no precedent in Britain for the kind of exercise in which UNCAL is engaged, but neither is there any precedent for the National Programme, a macro-project which constitutes an interesting new alternative structure for national investment in curriculum development.

The form of UNCAL was devised as a response to two major considerations, the organisational structure of NDPCAL, and the allegiance of the UNCAL team to the emerging counter-culture of educational evaluation. This counter-culture whose development can be traced through the work of Atkin (1963) Stake (1967, 72 and 76) Eisner (1967 and 75) Smith and Pohland (1974), Parlett and Hamilton (1976) MacDonald (1973 and 76) Kemmis (1976) and Hamilton et al (1976) has mounted an increasingly articulate challenge to the measurement-based agronomic paradigm of evaluation initiated by Ralph Tyler in the nineteen thirties, advocating in its place a shift of emphasis in evaluation from student gain scores to issue-based, process-oriented descriptions of programmes in action. One important element shaping this breakaway tradition has been the increasing consciousness among the evaluation community of the political implications of the evaluation resource (see MacDonald, 1976), a consciousness that now moves evaluators to consider carefully the relationship of their service to the distribution of power within the educational system. Those who recall an American television series called "The Men from Uncle" will realise that the choice of the UNCAL acronym was intended to convey a consciousness of the centre-spy co-option problem that faces evaluations commissioned by those whose own activities are to be the object of the independent scrutiny.

But the major consideration determining what evaluators do is, and ought to be, the nature of the programme to be evaluated. We are aware that, at

least in the recent past, the argument has been advanced that the tail should wag the dog in this particular context, that is, that programmes should be designed in such a way that they lend themselves to evaluation. The argument was popular among those who thought of evaluation as simply a new word for research, who saw therefore a need for evaluators to enjoy the same degree of manipulative power over relevant variables as the educational researcher has traditionally required as the conditions of enquiry. It has since become clear that a critical distinction between research and evaluation rests upon the proposition that the evaluation is 'secondary' to the evaluated activity, whereas research is 'primary'. (Not all research of course - but certainly the tradition of experimental research in psychology is premised on the notion that situations are created by the researcher in order to serve the research purpose). The distinction is one which deserves wider acknowledgement than it has yet received from <sup>educational</sup> researchers who are still inclined to castigate the struggles of evaluators in terms of inappropriate research canons.

Let's begin then by looking at NDPCAL. Curriculum obsolescence has been an overt concern of industrialised societies for two decades now, a period that has been characterised by relatively substantial efforts to accelerate and shape the evolution of educational systems to meet the manpower needs of technology-based economies. In this country the mid-sixties saw the rise, through the negotiated aegis of the Schools Council, of a curriculum innovation system conceived in terms of centralised invention and production followed by dissemination. A wide range of individual, semi-autonomous, mainly subject-based, national curriculum development projects were initiated, with the general intention of galvanising the thinking and transforming the practice of the nation's schools. Not unreasonably, the baptismal mood was one of rational if heady optimism, though it was to wane as quickening awareness of the problematic nature of managing social change through such mechanisms developed. By the early 'seventies a mood of disillusionment replaced the optimism of the 'sixties, at least in some quarters, and some constructive reviews began to appear. With the detachment born of disillusionment, new models were explored as curriculum developers, researchers and theorists sifted the experience of the first decade of systematic reform, models which, though still recognising a continuing need for ad hoc central investment, were inclined to favour more distributed

and collaborative systems of invention and development, systems which would provide more creative roles in the process for those who had previously been defined as 'receivers', 'users', or 'targets', of innovation.

This was the climate in which the Government, after a long period of gestation, announced in 1972 its approval of a 'national development programme in computer assisted learning', which would run for five years from January 1973 on a budget of two million pounds. Now in its fourth year, NDPCAL represents, for students of curriculum reform, a significant departure from familiar practice. In the available space, it is possible only to draw attention to a few salient idiosyncracies of its organisation:

1. The Programme is controlled by an executive committee of civil servants drawn from the seven sponsoring government departments. Aided by a few co-opted advisers, they make all the major decisions and determine policy.
2. Programme Committee is assisted by the small full-time staff of the Programme Directorate which recommends investments, mainly in the form of project proposals. The Directorate manages and monitors Programme investments on behalf of the Committee, bringing them regular reports on progress and problems.
3. The Committee commissioned two independent evaluations, a financial analysis from the management consultant firm of Peat, Marwick and Mitchell, and an educational evaluation from the Centre for Applied Research in Education at the University of East Anglia (the UNCAL evaluation).
4. The Committee invests in computer-based developments in schools, tertiary education, military and industrial training. The main aim of the Programme is "to secure the assimilation of computer-assisted learning on a regular institutional basis at reasonable cost." A subsidiary aim is "to make recommendations about these computer applications to appropriate agencies in the public and private sector".
5. The Committee generally insists on matched funding of projects from the host institutions, on a principle of collaborative sponsorship.
6. Investment is through a system of stepped-funding, which entails periodic evaluation of progress as a basis for continuing, revising, or terminating particular projects insofar as their survival depends upon Programme money.
7. Investment is conditional upon Projects agreeing to evaluate their own work and provide evaluation reports at stipulated points of review.

An organisation as large and as complex as this (there are now thirty projects) raises major problems of evaluation design. Its scale and diversity alone rule out the possibility of a student-learning centred, aims-achievement evaluation. Richard Hooper, the Director of NDPCAL thus offered the first author a one-year consultancy to design the evaluation of the NDPCAL; during that time the "parameters" of the evaluation were clarified. They formed the basis of the UNCAL evaluation proposal.

The central concern of the evaluation was to assist those responsible for making decisions within and beyond the NDPCAL. UNCAL thus adopted the following definition of evaluation:

"Evaluation is the process of conceiving, obtaining and communicating information for the guidance of educational decision-making with regard to a specified programme".

But an evaluation which aspires to serve decision-makers is in great danger of forfeiting its independence and thus its credibility. Especially in evaluation, disinterest is the major guarantee of independence. UNCAL was therefore faced with the problem of defining terms for its independence while acknowledging its service role. As has been pointed out, one way to highlight the problem was to make it explicit through the joke on "the man from UNCLE".

In order to define the possibilities for independence in the context of servicing the needs of decision-makers it was necessary to clarify the ways in which those needs could be served. These are set out in UNCAL's aims:

- a) to encourage the process of self criticism within the National Programme by bringing to bear the perspective of an "institutional outsider".
- b) to advise projects on evaluation procedures appropriate to their needs and preferences.
- c) to help the Directorate by providing independent checks on their observations, additional evidence of the impact of their actions, and alternative perspectives.
- d) to assist the Programme Committee reviews by providing studies of individual projects and general reports on issues which have implications for overall policy.
- e) to disseminate the ideas and display the work of the National Programme in ways which enable the interested community at large to profit from its experience.

The means by which these aims could be fulfilled had to be explicated, however: only by explicitly defining principles of procedure for UNCAL

would it be possible for participants in the NDPCAL (project personnel, the Directorate, Programme Committee) to be protected from the consequences of UNCAL's independence. We have come to realise that, in evaluation if not in conventional research, it must be possible to live with the consequences of being studied. Traditional evaluation, being predicated on the research tradition of educational psychology, has done little to protect those evaluated or the sponsors of curriculum development from the dangers of exposure (usually justified in terms of the public right to know).

In the light of these considerations, UNCAL developed four major principles of procedure which (though flawed) we believe to be the key "inventions" of the UNCAL evaluation. They are

- a) Independence. Although commissioned by the Programme, UNCAL is independent of its sponsors, subject to neither step-funding nor any veto on publications. Furthermore, apart from providing consultancy for project internal evaluations, UNCAL plays no developmental role in the Programme.
- b) Confidentiality. All data gathered by UNCAL is treated as confidential, though no "off the record" data is accepted by the evaluators. The release of reports is always negotiated.
- c) Negotiation of access and release. Access to projects is, in the terms of UNCAL's contract, mandated. However, UNCAL prefers to negotiate access to data with those evaluated. Furthermore, although many of its reports, because of their confidential nature, have restricted circulation, UNCAL's evaluations are open in the sense that they are made available first to those whose work they report for comment on their fairness, accuracy, and relevance. There is no secret evaluation.
- d) The non-recommendatory stance. Although UNCAL plays consultative and advisory roles within the Programme (mainly in evaluation), it does not press particular courses of action and tries to confine its assistance to summaries of accumulating experience and formulations of options.

UNCAL's methods and reports too, depart in style from those of more conventional evaluations. Although eclectic in its response to problems

of evaluation methods at the project level, UNCAL itself prefers to work largely through unstructured interviews and observations towards integrated portrayals of the Programme, believing that educational decision-making requires attention to the interdependence of circumstance, action and consequence.<sup>1</sup>

The most significant challenge to UNCAL's independence is undoubtedly the decision-structure of the NDPCAL itself. This has dictated the structure of UNCAL's evaluation activities, to the point of taxing our resources for independent studies. The National Programme has an unusually prominent commitment to evaluation procedures. Evaluation is a contractual requirement for every project. Through the Directorate and the mechanisms of stepped funding review, the internal project evaluations are linked to Programme Committee appraisals. Alongside this system, UNCAL acts as an additional resource, providing independent accounts of Programme activities for all three parties at prespecified points of policy review, and trying generally to identify and clarify issues and alternatives which face Programme decision-makers. Depending on the phase of the Programme and the concerns of participants and other audiences, UNCAL accounts may focus upon individual projects, or on the aggregate of projects, or on the National Programme as a whole. In addition, UNCAL will seek to offer tentative generalisations about CAL which reach beyond the confines of the Programme. The threat to UNCAL's independence turns out not to be that of administrative dependence, but rather that of procedural interdependence. The complexity of this interdependence has been illustrated in the accompanying figure which sets out UNCAL's role in the pattern of evaluation activities relating to projects funded by the NDPCAL.<sup>2</sup>

(insert figure about here)

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<sup>1</sup> For those interested in more details of the UNCAL evaluation, The Programme at Two (a companion volume to the NDPCAL Director's Two Years On) sets out some of the conclusions and problems of the evaluation up to the mid-point of the Programme. It is available from the Centre for Applied Research in Education, University of East Anglia, Norwich NR4 7TJ.

<sup>2</sup> UNCAL has produced an "insider's critique" of its evaluation design and the principles of procedure. This may also be obtained from the Centre for Applied Research in Education.

Participants

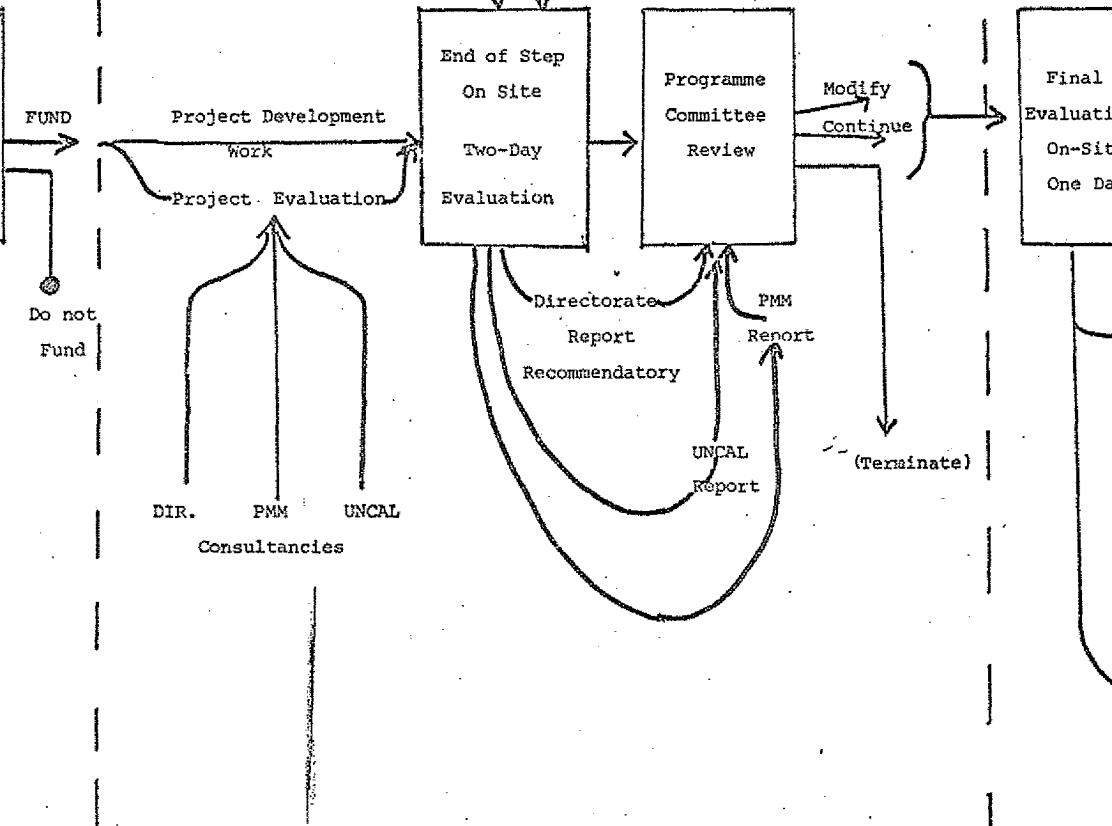
Project Team  
Directorate  
P.M.M.  
UNCAL  
Programme Committee  
Representative  
Invited Experts

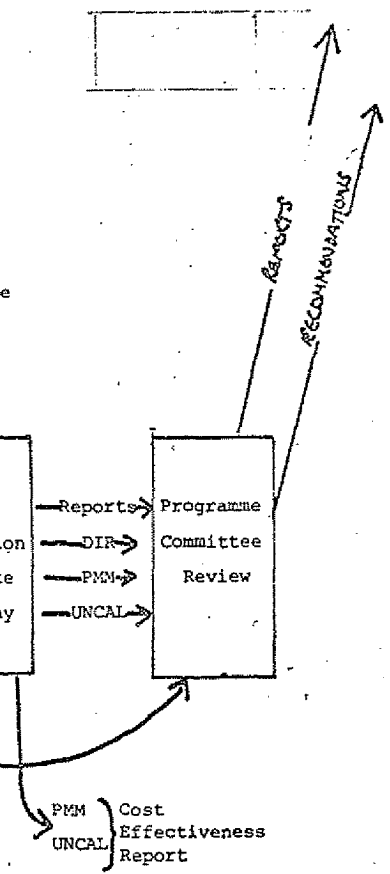
Inputs

Project Documents  
Project Evaluation  
UNCAL Project Portrayal  
UNCAL Meta-Evaluation  
P.M.M. Financial Report

Input

UNCAL  
Critiqu





UNCAL MONOGRAPHS  
(Case-Studies  
Area Studies  
Programme Studies)



We have now been through this process of project evaluation some fourteen times (although we have not reached the final review stage, of course, and most of the monographs are only in an embryonic state). In general, the UNCAL procedures seem workable and acceptable, though some problems of principle and of practice have emerged. The problems of principle, unfortunately, are not susceptible to easy solutions; indeed we occasionally find ourselves trapped by contradictory implications of our aspirations, for example the dilemma between the right to know and the right to be discreet. These dilemmas cannot be resolved in rules of thumb; they are problems of principle. The problems of practice, on the other hand may be resolvable; some of these (for example the problem of maintaining confidentiality) may be resolved simply by carrying out the work of the evaluation more carefully.

The UNCAL evaluation is a response to the complexities of the NDPCAL as a macro-project. Through it, we have begun to explore some of the problems of meta-evaluation within the "alternative" tradition in evaluation. We have treated the NDPCAL as a major experiment in curriculum development and innovation and have begun the task of dissemination of our findings. Some observers have found our reports to be insufficiently sharply focussed on computer-assisted learning as educational technology; we hope that some (but not all) of those criticisms will be dampened as more of our reports are published. More importantly, however we hope to present participants, potential users, policy-makers and the interested public with an account of the problems and prospects of computer-assisted learning as an educational medium in its context of educational policy and practice - at least as this has been realised through the National Programme.

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