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ABSTRACT

This paper addresses the role of information technology (IT) in the new national curriculum for England and Wales. The role of IT is framed by a discussion of translating policy into practice. To this end, four broad issues are addressed: assessment, progression, resources, and staff development. Improving teacher support to facilitate the effective use of IT across the curriculum, including the promotion of independent learning is the primary purpose of effective management of IT in the schools. The report concludes that the issues raised are part of the national development program to support classroom practices directly and to help in the development and implementation of whole-school IT policies and coherent patterns of local support. (JAM)

SUPPORT FOR AND MANAGEMENT OF INFORMATION TECHNOLOGY IN SCHOOLS.

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ABSTRACT

This paper takes as its starting point the guidance about the role of IT in the new national curriculum for England and Wales. This will require management of IT in schools. In particular, four vital areas will need to be addressed: assessment, progression, resources and staff development. The consequence of looking at these will be to argue that support for and management of IT in schools will be a major issue for the next decade. A reminder is then given that this should be seen in the context of, not instead of, a consideration of the quality of learning using IT. Finally, attention is drawn to a major national programme (1988-92), which seeks to improve teacher support to facilitate the effective use of IT across the curriculum, including the promotion of independent learning.

POLICY INTO PRACTICE ?

The educational case for the use of IT across the curriculum looks to be won. I argue elsewhere that in practice a case for breadth in IT education still needs to be made (ref 1), but at the level of policy the recent proposals about the need for IT in the new national curriculum to be cross-curricular received virtually universal assent. The final statutory orders on technology within the national curriculum, with IT as one component, are due around April 1990. IT also figures in the attainment targets of other subjects and it will be important to avoid IT being seen as principally within the province of technology. Indeed the Design and Technology national curriculum working party emphasised that IT should both be taught and assessed across the curriculum. It is unnecessary to go into detail of the national curriculum proposals, recommendations and orders, suffice it to say the IT in schools now will require explicit management. The national curriculum is about assessment frameworks, it is left up to individual schools to decide how the curriculum will be delivered. Hence if policy is to be translated into practice four key areas with implications for the co-ordination of IT will need to be addressed: assessment, progression, resources and staff development.

The assessment, recording of experience and monitoring of achievement in IT will require co-ordination across subjects. Such considerations alone will strongly point to the need for an IT co-ordinator. Issues of assessment naturally lead on to issues of progression: if IT experience is intended to be both assessed and cumulative, then an overview is required of when and

in which subjects particular IT skills will be developed and used. Hence it will be advisable for schools to produce a map of where and when IT is used in order to facilitate both management of and progession in IT. This will require subject teachers to be given support about the application of IT in their subjects, but also guidance about the development of IT in other subjects. This will be a continuing task as the national curriculum is progressively implemented with more subjects and year-groups being covered each year. A further aspect of progession, which will need to be addressed in future, is the need to bridge the `gap' between what happens in IT in primary and secondary schools.

From the above it can be seen that there would be a sizeable task to perform even if staff were trained and competent in the use of IT and there were sufficient resources to implement fully all the requirements for the use of IT associated with the national curriculum. In practice, most schools have a long way to go to meet either criterion let alone both. Resource constraints and the need for a major staff development exercise then add greatly to the work entailed in the management of IT in schools.

In relation to resources, even with an equipment review and a subsequent decision to prioritise resources to implement the most pressing requirements of the national curriculum, there is likely to be a serious shortage of computers in many schools, if pupils are to be given more than shared access for a few hours per year. Statements from the National Curriculum Council that they are confident sufficient resources will be in place by September, 1990 appears to be a triumph of hope over experience. Indeed the compromising of educational innovations through inadequate resource allocation to allow full (rather than pilot) implementation has been typical of a number of recent educational developments (ref 2).

Notwithstanding such problems, however, schools will have to seek to utilise the resources they do have, and this may require reassessments of current practices of siting computers, pupil access, which subjects and curricular applications to support and so on. As the picture builds up it becomes apparent that schools will need a coherent whole-school policy towards IT, if they are to co-ordinate its provision. The policy needs to be supported by a commitment to put it into practice. For example, a school IT co-ordinator is likely to have only limited effect if that person has a heavy teaching load that precludes him or her offering support to subject specialists in the classroom. Similarly such an appointment should not be seen as the end of senior management interest in the subject.

The school should not be considered in isolation, however, and the area in which it is most likely to require external support is in relation to staff development. For reasons detailed elsewhere until fairly recently staff development has been largely confined to either interested individuals and/or a small number of targeted schools (ref 1). The latest Department of Education and Science survey showed that about half the teachers

were confident about basic procedures like loading programs (ref 3). This did not mean they were necessarily able to use IT for educationally worthwhile classroom activities. The scale of the task of getting most teachers, including presumably all primary teachers, to full classroom competence in the use of IT is immense. At the same time the existing pattern of local education authority IT advisory teacher support is being greatly reduced! As a consequence it will be necessary for staff development to take a variety of different forms. Some IT advisory support will continue but it will be thinly spread. More flexible support, including the use of distance learning will be required. IT developments themselves could be utilised here, but their full potential is unlikely to be harnessed because of resource constraints. Another possible avenue of support could come from teams of teachers themselves drawn from a number of schools in a network of mutual support.

The support for and management of IT in schools is therefore set to become a major issue for the next decade simply in order to deliver the IT required by the national curriculum. Just consider though that as well as the organisational issues covered here there are a host of broader educational issues concerning the quality of learning using IT. For example, the dangers of: teaching down to the attainment targets; that the IT parts of particular subjects will be taught in isolation from the rest of the subject curriculum because of lack of teacher support; IT co-ordinators being too busy to support teachers educationally; development of pupils IT capability at the expense of IT being used to enrich the curriculum.

However, to conclude on a positive note many of the issues raised here are being tackled as part of a national development programme to improve teacher support to facilitate effective use of IT across the curriculum, including the promotion of independent learning. That is the programme seeks to offer support for and management of IT in schools, but without overlooking the need to use IT to enhance learning (ref 4). Hence it seeks both to support classroom practice directly and to help in the development and implementation of whole-school IT policies and coherent patterns of local support.

1. A.J. Brown, The case for breadth in information technology education and training for 13-19 year olds, the third European Conference on Technology and Education (1990).

2. A.J. Brown, I. Haffenden, S. Blackman, Resource allocation: the brake on innovation - national vocational qualifications in England and Wales, 16th International Association for Educational Assessment Conference (1990).

3. DES Statistical Bulletin (July 1989).

4. For further details of the programme and the individual projects please contact: Peter Dutton, IT Adviser, TVEI Unit, St. Mary's House, Moorfoot, Sheffield, S1 4PQ